

ORIGINAL ARTICLE

- Abstracts of the 2022 American Physician Scientist Association (APSA) Northeast Regional Conference (NERC)
- Abstracts of the Lagos State University Medical Students Association Research Conference
- Abstracts of the Medical University Congress of Mogi das Cruzes, COMUMC
- Abstracts of the Medical Academical Conference of Piauí (COMAPI) 2021
- Abstracts of the 2021 Yorkshire International Imaging and Interventional Radiology Symposium at the University of Leeds
- Abstracts of the Medical Academical Conference of Piauí (COMAPI) 2022
- Editorial: Role of Medical Students in Disseminating Scientific Knowledge - The First IJMS WCMSR
- Abstracts of the first IJMS World Conference of Medical Student Research (WCMSR) 2022



IJMS

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MEDICAL STUDENTS

International Journal of Medical Students

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INTERNATIONAL JOURNAL *of* MEDICAL STUDENTS

The *International Journal of Medical Students* (IJMS)

is an open-access, peer-reviewed scientific journal (ISSN [2076-6327](#)) that publishes original research in all fields of medicine. The Journal was created in 2009 to share the scientific production and experiences of medical students (*i.e.*, MBBS students, MD students, DO students, MD/MSc students, MD/PhD students, etc.) and recently graduated physicians from all over the world. Our objective is to be the primary diffusion platform for early-career scientists, using standards that follow the process of scientific publication.

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Year 2022 • Volume 10 • Supplement 1

Int J Med Stud. 2022; 10(Suppl 1)

Table of Contents

	Page
Abstracts of the 2022 American Physician Scientist Association (APSA) Northeast Regional Conference (NERC)	S17
Abstracts of the Lagos State University Medical Students Association Research Conference	S36
Abstracts of the Medical University Congress of Mogi das Cruzes, COMUMC	S39
Abstracts of the Medical Academical Conference of Piauí (COMAPI) 2021	S50
Abstracts of the 2021 Yorkshire International Imaging and Interventional Radiology Symposium at the University of Leeds	S89
Abstracts of the Medical Academical Conference of Piauí (COMAPI) 2022	S100

IJMS World Conference of Medical Student Research 2022

Editorial

Role of Medical Students in Disseminating Scientific Knowledge - The First IJMS WCMSR S151

Purva Shah, Cesare Mercalli, Adnan Mujanovic, Vincent Kipkorir, Ciara Egan, Arkadeep Dhali, Camila Velandia, Mihnea-Alexandru Găman, Juan C. Puyana, Francisco J. Bonilla-Escobar.

Abstracts

Oral Presentations

Prevalence and Associated Factors of Psychological Distress of Patients with Stroke Attending the Clinics of the National Institute of Neurology of the National Hospital of Sri Lanka, Colombo S156

W.M.P.C. Weerasekara, C.N. Warshawithana, W.M.N.N.P. Weerasinghe, Irshad Mashood.

Morphometry of Placentae of Anaemic and Non-Anaemic Preeclamptic Patients S157

Mohamed Otieno, Bernard Ndung'u, James Kigera, Wycliffe Kaisha, Cyrus Kimanathi, Moses Obimbo.

- Epidemiological and Clinical Characteristics of COVID-19 Related Mortality in Oyo State, Nigeria S158
Uzochukwu Eustace Imo, Chimaobi Ikenna Nwagu, Innocent Chijioke Dike, Ayodeji Jeremiah Abimbola.
- Efficacy of Rectal Misoprostol Versus Oxytocin on Reducing Blood Loss During Cesarean Section: A Meta-Analysis of Randomized Clinical Trials S159
Ebraheem Albazee, Ahmed Soliman, Khaled Albakri, Mohamed Elbanna, Nada Alaa Moussa, Hazem Metwally Faragalla.
- A Cross-Sectional of Syrians' Knowledge of Diabetes Mellitus and Hypertension Management S160
Sarya Swed, Hidar Alibrahim, Haidara Bohsas, Mohammed Amir Rais, Sheikh Shoib, Bisher Sawaf, Basel Abdelazeem.
- Assessment Knowledge, Attitude, and Practice Toward Tuberculosis Among Syrian People: An Online Cross-Sectional Study S161
Yazan Khair Eldien Jabban, Sarya Swed, Haidara Bohsas, Hidar Alibrahim, Bisher Sawaf, Wael Hafez.
- An Extensive Case of Primary Synovial Osteochondromatosis of the Shoulder S162
Joshua Unger, Jacob King, Zachary Leitze.
- The Awareness of Clinical Doctors and Medical Students Toward Monkeypox in Jordan: A National Cross-Sectional Study S163
Ahmed Aljabali, Mohammed Alawajneh, Yazan Alzamer, Mohammed Altal, Sarya Swed, Nedal Alnawaiseh, Mohamed Elsayed, Bisher Sawaf, Amine Rakab.
- Hypercoagulability and Cavernous Sinus Thrombosis Due to Protein C Deficiency. A Case Report S164
Wilson S. Peñafiel-Pallares, Camila Brito-Balanzátegui.
- Adverse Effects of Third-Dose Moderna Vaccination for Healthcare Workers of Udayana University Hospital, Bali, Indonesia S165
Putu Kintan Wulandari, Richard Christian Suteja, I Gede Purna Weisnawa, Jerry, I Komang Hotra Adiputra, Giovanca Verentzia Purnama, Darren Junior, Dewa Ayu Fony Prema Shanti, Cokorda Agung Wahyu Purnamasidhi.
- Syrian Health Providers' Knowledge of Palliative Care: An Online Cross-Sectional Study in Syria S166
Naghm Jawish, Haidara Bohsas, Sarya Swed, Hidar Alibrahim, Bisher Sawaf, Yazan Khair Eldien Jabban, Wael Hafez.
- Macrophage Activation Syndrome in Adult Onset Still's Disease: A Life Threatening Complication S167
Naresh Kumar, Karthikeyan R, Harshita Choudhary.

- Mild Traumatic Brain Injury: What We Can Learn From a Qualitative Study of Patient Perceptions Following Emergency Department Discharge S168
Kate Ziqiu Wang, Marcia Ward, John Macfarlane.
- Safety and Immunogenicity of COVID-19 Vaccines in Patients with Cancer: A Network Meta-Analysis of 11357 Patients S169
Khaled Albakri, Abdulrhman Khaity, Rawan Mustafa Hamamreh, Balqees Mohammad Hanaqtah, Nora AlKhateeb, Eman E. Alshial.
- Determining the Ability of the Vision, Aphasia, and Neglect (Van) Stroke Scale to Identify Large Vessel Occlusion Strokes Within the Prehospital Setting: A Prospective Cohort Study S179
Lydia Leavitt.
- A Case Report of Rare Type of Chorea with Hypoxic-Ischemic Insult S171
Roohi Kolte, Dr Ganna Gnyloskurenko.
- Comparison of Risk Factors for Developing Liver Fibrosis in Subjects With and Without Metabolic Syndrome: A Cohort Study S172
Ana Karen Treviño Morales, Laura Elia Martínez de Villarreal, Geovana Calvo Anguiano, Jesus Zacarías Villarreal Pérez, Sandra Marlen González Peña, Fernando Lavallo González.
- Gender Differences in Attitude and Barriers to Research by Medical Undergraduate Students in Nigeria S173
Okwunze Kenechukwu Franklin, Iyawe Efosa Peace, A gughalam Ifunanya, Aisha Yahya, Awoyomi Priscilla, Metajuwa-kuda Emmanuel.
- Prepectoral Versus Subpectoral Direct-to- Implant-Based Breast Reconstruction: A Meta-Analysis of 3851 Patients S174
Ahmed Aljabali, Mohammad Khader Altal, Yasmeeen Jamal Alabdallat, Abdulrhman Khaity, Khaled Albakri, Jehad Feras Samhuri.
- Prenatal Diagnosis of a Fetus with Partial Duplication and Deletion of Chromosome 18 Due to Maternal Pericentric Inversion 18 S175
Manuel Alejandro Vásquez Salguero, Wilmar Saldarriaga Gil
- Immigrant and Refugee COVID-19 Vaccination Attitudes in South Philadelphia S176
Lauren Posego, Anshel Kenkare, Makala Wang, Omar El Fadel, Morgan Hutchinson.
- Assessment of Syrian Obstetric Care Providers Knowledge, Attitude, and Practice Towards Preconception Care and Associated Factors: An Online Cross-Sectional Study S177
Haidara Bohsas, Sarya Swed, Hidar Alibrahim, Bisher Sawaf, Wael Hafez.

International Journal of Medical Students

Year 2022 • Volume 10 • Supplement 1

Int J Med Stud. 2022; 10(Suppl 1)

Assessment Awareness of Breast Cancer Signs, Risk Factors, and Barriers: An Online Cross-Sectional Study in Syria	S178
Haidara Bohsas, Sarya Swed, Hidar Alibrahim, Bisher Sawaf, Mohamed Elsayed.	
Health-Care Seeking Pathways of Psychiatry Patients in North Karnataka of India – A Hospital-Based: Exploratory Cross-Sectional Study	S179
Harish Kulkarni, Alinawaz Khan.	
Health Care Provider Burnout in Syria During COVID-19 Pandemic's Omicron Wave	S180
Hidar Alibrahim, Sarya Swed, Haidara Bohsas, Hiba Haj Saleh, Safwan Al-Rassas, Noor Hussain, Ayush Kumar, Bisher Sawaf.	
Medical Students' Attitudes and Influential Factors Towards Conducting Medical Research	S181
Bassam AlRajhi, Ibrahim Omer, Reema Abualnaja, Faisal Alqahtani, Alqassem Y. Hakami.	
Unilateral Lower Limb Amputations from Traumatic Events: A Systematic Review and Meta-Analysis	S182
Phyu Htet, Lubna Mohammed, Khushbu K. Patel.	
Peroneal Nerve Injury Due to Hip Surgery Located at the Knee Level: A Case Report	S183
Aleksa Mičić, Stefan Radojević, Lukas Rasulić.	
Cholecystocolonic Fistula: Demonstrating the Need for Further Imaging Assessment Following an Abnormal Ultrasound Exam	S184
Andrew J. Gauger, James Wilcox.	
Harlequin Color Change in a Neonate Positive to COVID-19: Case Report	S185
Esther Pinel-Guzmán, Julián Martínez-Fernandez, Rafael Pinel-Dubón, Olman Gradis-Santos, Mario Santamaría-Vasquez.	
Outcomes of Vascular Intervention in Diabetic Patients with Peripheral Arterial Disease	S186
Mahfujul Z. Haque, Rummyah Rafique, Syeda Reesha, Shahrin Khan, Arif Hussain4, Mashkur Husain.	
Student Perspectives on E-Learning in a Malaysian Medical College One Year into the COVID-19 Pandemic: A Cross-Sectional Study	S187
Sylvia Wei Wei Kong, Jade Lene Yong, Sabrina Pei Yee Cheong, Edmund Liang Chai Ong.	
Authorship Diversity in General Surgery Related Cochrane Systematic Reviews	S188
Arkadeep Dhali, Vincent Kipkorir, Christopher D'Souza, Roger B Rathna, Jyotirmoy Biswas.	
The Role and Impact of Dyslexia Awareness Workshops in the Medical Curriculum	S189
Mitchell Osei-Junior, Mayya Vorona.	

International Journal of Medical Students

Year 2022 • Volume 10 • Supplement 1

Int J Med Stud. 2022; 10(Suppl 1)

- Correlation Between Placental Histomorphology and Umbilical Cord Coiling Index in Preeclampsia S190
Cyrus Kimanthi, Moses Obimbo, Kirsteen Awori, Mohamed Otieno, Talha Chaudhry.
- PMA-Treatment of Human Monocytes Induces a M1 Phenotype in Adherent Macrophages S191
Radu-Marian Marinescu, Elena Codrici, Daniela Ionela Popescu, Ana-Maria Enciu.
- The Impact of COVID-19 on People's Access to Healthcare and Health Behavior in a Sample of Indian Population: A Cross-Sectional Study S192
Shailendra Dandge, Manisha Kanumuri, Akhil Kumar Eppalapally.
- Effects of Anemia on Cognitive Ability in School-Going Adolescents in an Urban Area in India. S193
Devyani V. Pattebahadur, Dipak Patil.
- The Prevalence of Frank's Sign and the Diagnostic Accuracy in Coronary Artery Disease Among Chest Pain Patients at Lampang Hospital, Thailand S194
Kanjaporn Thammasarangoon, Narawish Khanthamoon, Pitsinee Sangphet, Aookrit Pattamapornpong, Yotsawee Chotechuang, Maytinee Srisubin, Somluck Ninwaranon, Jakkrawal Huntrakul.
- A Preliminary Study of Menstrual Changes Among Jordanian Women Following COVID-19 Vaccination S195
Rana Qawaqzeh, Hussam Al-Din Shehadeh, Balqees Al-Hanaqtah, Khaled Albakri.
- Assessment of Work Practices and Health Problems Among Filling Station Attendants in Ile Ife S196
Sodiq O. Lawal, Abdulafeez I. Muhammad, Opeyemi A. Muili, Temitope O. Ojo.
- Toxoplasmosis-Associated Lymphadenopathy: Description of a Series of Cases in a Reference Center S197
Danna Sofía Salazar Bermúdez, María Fernanda Bocanegra Valencia, Humberto Alejandro Nati Castillo, Jorge Enrique Gómez Marín.

Participating Research

- Factors Affecting Depression and Anxiety in Diabetic Patients: A Prospective Cohort Study from a Tertiary Care Hospital in Eastern India S198
Kankana Karpha, Jyotirmoy Biswas, Siddhartha Nath, Arkadeep Dhali.
- Medical & Dental Students' Perceptions of Health and Well-Being S199
Hassan Mumtaz, Manahil Rahat, Nadia Zohair, Mehwish Javed, Shazia Qayyum.
- Assessment of Undergraduate Research Experience in Term of Benefits, Barriers and Mentorship from Student's Perspectives: A Mixed Quantitative-Qualitative Method S200
Hayat Abdoallah Ahmed.
- Association of Reproductive Parameters with Dermatoglyphics in Breast Cancer Patients, Healthy and High-Risk Individuals S201
Rahul Rangan, Swapna A. Shedje, Satish V. Kakade.
- The Effect of Early Movements of Swollen Lymph Nodes Caused by COVID-19/Vaccine of COVID-19 on Recovery S202
Usama A. Aljameey, Stephen R. Bergman.
- Mycosis Fungoides: A Diagnostic Challenge S203
Siddhartha Nath, Arunima Dhabal, Indrashis Podder.
- Knowledge, Attitude, and Perception of Tobacco Harm Reduction Strategies Among Medical Students in Southwest, Nigeria S204
Innocent Chijioke Dike, Uzochukwu Eustace Imo, Jeremiah Adepoju Moyondafoluwa.
- Syrians' Awareness of Cardiovascular Disease Risk Factors and Warning Signs: A Cross Sectional Study S205
Sarya Swed, Hidar Alibrahim, Haidara Bohsas, Mohammed Amir Rais, Sheikh Shoib, Anas Alali, Mohamed Abdelnasser, Hadeel Fuad Alwan Alsharjabi, Bisher Sawaf.
- Monkeypox Awareness Among the Syrian Doctors and Medical Students: A Cross Sectional Study S206
Sarya Swed, Hidar Alibrahim, Haidara Bohsas, Mohammed Amir Rais, Sheikh Shoib, Yazan Khair Eldien Jabban, Lazaward Kazan, Noor Hussain, Bisher Sawaf.

- Awareness, Knowledge, Attitude, and Skills Regarding Telemedicine Among Syrian Healthcare Providers During the COVID-19 Pandemic: A Cross-Sectional Study S207
Hidar Alibrahim, Sarya Swed, Haidara Bohsas, Sheikh Shoib, Shahm Alsakka, Nagham Jawish, Zain Alabdeen Othman, Bisher Sawaf.
- Prevalence of Anemia Among Pregnant Women in Rural Village of Sindhupalchowk District of Nepal – A Cross-Sectional Study S208
Biyas Thapa, Smriti Bohara, Sistu KC, Madan Sapkota, Bibek Dhakal⁵, Binod Gaire.
- Knowledge, Attitudes, and Practice Around HIV/AIDS and other STIs Among Syrians: A Cross-Sectional Study S209
Hidar Alibrahim, Sarya Swed, Haidara Bohsas, Khaled Albakri, Bisher Sawaf, Mohamed Elsayed.
- Psychological Distress and Suicidal Behavior Among Medical Students at Khartoum Universities, 2021-2022 S210
Shima Algam Mohamed Musa, Abeer Mamoun Mohamed, Sozan Mudather Osman.
- Multi-Technique Management of Chronic Subdural Hematoma in a Single Patient: A Case Report S211
Tunde Olobatoke, Chibueze Nwanmah, Somtochukwu Ekwegbara, Temitayo Ayantayo, Oluwafemi Owagbemi, Serge Rasskazoff, Olawale Sulaiman.
- Knowledge, Attitude and Practice of Syrian Mothers' Towards Diarrhea Management and Prevention Among Under-Five Children: A Cross Sectional Study from Syria S212
Haidara Bohsas, Sarya Swed, Hidar Alibrahim, Bisher Sawaf, Mohamed Elsayed.
- Comparison of Multinational Medical School Students Experiences in the Face of the COVID-19 Pandemic: A Qualitative Analysis S213
Alexandra C. Skoczek, Patrick W. Ruane, Cassidy Onley, Torhiana Haydel, Maria Valeria Ortega, H. Dean Sutphin, Alexis M. Stoner.
- The COVID-19 Pandemic. A Psychosocial Approach in Mexican Medical Students S214
Diego Ortega-Moreno, Edgar Botello-Hernández, Rebeca Aguayo-Samaniego, Patricio García-Espinosa.
- Prevalence of Intestinal Coccidia: First Description of Cyclosporidiosis Associated with Diarrhea in Children in Colombia S215
Maria Camila Cortes Montoya, Humberto Alejandro Nati Castillo, Jessica Triviño, Ana Sofia Orozco Cano, Simon Gonzales Naranjo, Juan Felipe Caicedo Olaya, Juan Francisco Amaya Amezcuita, Karen Sofia Ayala Girón, Laura Losada, Davidshon Steven Montes, Yimmi Pinto Valencia, Marcela Fama Pereira, Nancy Yhomara Cabeza, Fabiana Lora Suarez, Jorge Enrique Góme Marín.
- Simulation Based Peer-Assisted Learning: Peripheral Venous Catheterization and Blood Sampling S216
Didina Cătălina Barbălată, Cristian Toma.

International Journal of Medical Students

Year 2022 • Volume 10 • Supplement 1

Int J Med Stud. 2022; 10(Suppl 1)

- The Prevalence of Hypomagnesemia in Critically III Patients Admitted in Medically Intensive Care Unit S217
Maryam Baloch, Azeem Khalid, Kiran Naimat, Muhammad Usman Khalid, Muhammad Abdul Khaliq Khan, Shahzaib Maqbool.
- Neutrophil-Lymphocyte Ratio and its Association with Hyperglycaemia: A Cross Sectional Study S218
Shailendra Dandge, B. PoojaShivani.
- A Students' Perspective on University Education and Well-Being One-Year into the COVID-19 Pandemic S219
Akira Gareeb, Isabella Gavazzi, Natasha Woodman, Chulananda Goonasekera, Antoinette Lombard, Mohammad Omar Faruq, Joanna Ray, Rasika Dhanapala, Sadhani Sandarenu, Mosarrat Mahjabeen, Seema Hashmi, Darshana Kottahachchi, Elmien Claassens, Mirza Naqi Zafar.
- Pycnodysostosis- A Rare Diagnosis Not to Miss S220
Montasir Ahmed A, Swapna R Mondal, Mustaque Ahmed A., Bipin K Shah, Prakash Oli, P. Kuwar Chhetri.
- A Case of Haemorrhagic Herpes Zoster S221
P. Kuwar Chhetri, Ahmed Al Montasir, Renu Gupta, Shamsul Alam, Shafwanur Rahman, Fahim Rahman.
- Evaluation of Water Quality, Urinary Mercury & Arsenic Investigation and Survey of Diseases Associated with Drinking Water Sources S222
Sayan Sarkar, Govind Mawari, Naresh Kumar, Mradul Kumar Daga, Mongjam Meghahandra Singh.
- Knowledge, Attitudes and Practices Regarding Diabetic Neuropathy Among Type-II Diabetics in Jabra Locality, Khartoum, Sudan, in 2022 S223
Saeed Eltahir Saeed Elsiraj.
- Myasthenia Gravis Exacerbation Following COVID-19 Vaccine: A Case Report S224
Thoybah Yousif Ibrahim Gabralla, Hayat Abdoallah Ahmed Bashir, Omaira Abdalla Hajahmed Mohamed.
- The Effect of Oral Magnesium Supplement on Pre-Eclampsia and Perinatal Outcomes in Pregnancy: A Meta-Analysis of Randomized Controlled Trials S225
Abdulrhman Khaity, Khaled Albakri, Yasmeen Alabdallat, Othman Saleh, Hazem. S Ghaith.
- The Effect of the Coronavirus Disease 2019 Pandemic on University Students' Mental Health and Life Quality: A Retrospective Cohort Study S226
Khaled Albakri, Yasmeen Alabdallat, Abdulrhman Khaity, Jehad Feras Samhouri.
- The Effect of Music Intervention on Anxiety and Pain During Cesarean Delivery: A Meta-Analysis of 1513 Patients S227
Abdulrhman Khaity, Mohammed Tarek, Yasmeen Alabdallat, Khaled Albakri, Mohamed Diaa Gabra, Hazem. S Ghaith.

International Journal of Medical Students

Year 2022 • Volume 10 • Supplement 1

Int J Med Stud. 2022; 10(Suppl 1)

- Knowledge and Awareness about Aggravating Factors of the Peptic Ulcer Disease: A Cross-Sectional Study S228
Abdulrhman Khaity, Khaled Albakri, Ruaa E. Taha, Ahmed Mohammed Ali Yousif Abd Alla.
- Rare Manifestation of Diabetes Mellitus in COVID-19 Patient: A Case Report S229
Kahan Mehta, Samir Mehta.
- Anterior Pituitary Endocrine Dysfunctions in Patients with Traumatic Brain Injury in the Neurosurgical Units of the Yaounde Central and General Hospitals: A Cross-Sectional Study S230
A. Tchoussoknou, D.H Atia, Bello F, M. Etoa, V. Djientcheu
- Knowledge of Cancer Among Syrians: A Cross-Sectional Study S231
Mohammad Badr Almoshantaf, Sarya Swed, Hidar Alibrahim, Haidara Bohsas, Mohmad Nour Nasif, Wael Hafez.
- Knowledge of Colorectal Cancer Among Syrians: A Cross-Sectional Study S232
Mohammad Badr Almoshantaf, Sarya Swed, Hidar Alibrahim, Haidara Bohsas, Mohmad Nour Nasif, Wael Hafez, Ahmad Aldaas.
- Knowledge of Cholera Among Syrians: A Cross-Sectional Study S233
Mohammad Badr Almoshantaf, Sarya Swed, Hidar Alibrahim, Haidara Bohsas, Mohmad Nour Nasif, Wael Hafez, Ahmad Aldaas.
- Electroconvulsive Therapy Use in Pregnant Patients Case Report S234
Roxana Nouri-Nikbakht, Dr. Gwen Levitt.
- Assessment Syrian Population Knowledge, Attitudes and Perceptions Towards Stroke: A Cross-Sectional Study from Syria S235
Yazan Khair Eldien Jabban, Sarya Swed, Haidara Bohsas, Hidar Alibrahim, Nagham Jawish, Bisher Sawaf, Wael Hafez.
- Reddit Users' Questions and Concerns about Anesthesia S236
Khalid El-Jack, Korey Henderson, Anietie U. Andy, Lauren Southwick.
- Hearing Loss After COVID-19 Vaccines: A Systematic Review and Meta-Analysis S237
Khaled Albakri, Yasmeeen Jamal Alabdallat, Omar Ahmed Abdelwahab, Mohamed Diaa Gabra, Mohamed H. Nafady, Dr Ebraheem Albazee.
- Effects of Social Distancing and Lockdown Protocols on Fatality Rates of COVID-19 in the U.S During the First Year of the Pandemic S238
Valerie Hardoon, Bryant A. Pierce, Solomon C. Mbanefo, Harin N. Shah, Kanav Markan, Marika L. Forsythe.

International Journal of Medical Students

Y Year 2022 • Volume 10 • Supplement 1

Int J Med Stud. 2022; 10(Suppl 1)

- Case Report: Diagnosis and Management of Long-Standing Essential Hypertension on a Teenager S239
Miguel Moreta
- Guiding Principles for the Conduct of Violence Study of Healthcare Workers and System (Vishwas): Insights from a Global Survey S240
Tanya Amal, Akshat Banga, Umme Habiba Faisal, Gaurang Bhatt, Aisha Khalid, Mohammed Amir Rais, Nadia Najam, Rahul Kashyap, Faisal A. Nawaz.
- Exploring the Disproportionate Impact of COVID-19 in Older Adults in Canada S241
Mujabad Shah, Karan Gupta, Yamini Sharma, Vineeta Singh, Carla Emilia Ibarra, Kajan Kugathanan.

**ABSTRACTS OF
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PHYSICIAN SCIENTIST
ASSOCIATION (APSA)
NORTHEAST REGIONAL
CONFERENCE (NERC)**

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Abstracts of the 2022 American Physician Scientist Association (APSA) Northeast Regional Conference (NERC)

Oral Presentations

01. TRANSCRIPTOMIC PROFILING IDENTIFIES DRIVERS OF INVASIVE LOBULAR CARCINOMA METASTASIS IN MOUSE XENOGRFT MODEL

Nandini Doshi^{1,3}, Laura Savariu^{2,3}, Nilgun Tasdemir^{2,4}, Jennifer M Atkinson^{2,4}, Steffi Oesterreich^{2,4}, Adrian Lee^{2,4}.

¹ Physician Scientist Training Program, University of Pittsburgh School of Medicine. ² Women's Cancer Research Center, UPMC Hillman Cancer Center Magee-Women Research Institute. ³ Department of Human Genetics, University of Pittsburgh Graduate School of Public Health. ⁴ Department of Pharmacology and Chemical Biology, University of Pittsburgh

Invasive Lobular Carcinoma (ILC) is the second most frequently diagnosed subtype of breast cancer, after Invasive Ductal Carcinoma (IDC). Although patients with ILC harbor favorable prognostic and predictive factors like hormone receptor expression and low proliferation, they frequently present with long-term recurrences and metastases to unique anatomical sites. The objective of this study is to utilize a novel human ILC cell line xenograft mouse model to elucidate the biologic underpinnings mediating the distinct organotropism of ILC metastasis. Human ILC cell line MDA-MB-MM134 was injected into the mammary fat pad of estrogen supplemented mice to generate ER+ tumors and spontaneous metastases that closely mirrored the clinical dissemination patterns of ILC. We conducted transcriptomic analysis of the cell line, the primary tumor xenograft and metastatic tumors to the brain and ovary. All samples were mapped to the ENSEMBL human reference genome GRCh38 and ENSEMBL mouse reference genome GRCm39. XenofilterR was used to computationally separate human from mouse sequence reads in the xenograft tumor sequence data. We subsequently utilized featureCounts to generate a count matrix, DESeq2 for differential gene expression analysis, and the Gene Ontology gene set for Gene Set Enrichment Analysis. We demonstrated upregulation of pathways related to granulocyte chemotaxis, pro-inflammatory cytokines, and production of extracellular matrix components in the primary tumor versus host cells. Furthermore, action potential regulatory and synapse assembly pathways were upregulated in brain metastatic tissue compared to the primary tumor, whereas extracellular matrix signaling pathways were downregulated. Pathways related to angiogenesis, cell migration, and organization of cellular components were all upregulated in ovarian metastatic tissue relative to the primary tumor. Collectively, this study not only identifies pathways shared with dissemination of IDC but also distinct pathways mediating the dissemination of ILC metastasis.

02. ASSOCIATION BETWEEN EXPOSOME AND SUBSEQUENT MULTIPLE SCLEROSIS OUTCOMES

Shruthi Venkatesh BS¹, Chirag M. Lakhani PhD², Zahra Shakeri PhD², Yuri Ahuja MS³, Nils Gehlenborg PhD², Claire S. Riley MD⁴, Philip L. De Jager MD, PhD⁴, Chirag J. Patel PhD^{2,#}, Zongqi Xia MD, PhD^{1,#}, the MSReCOV Collaborative.

¹ Department of Neurology, University of Pittsburgh School of Medicine, Pittsburgh, PA. ² Department of Biomedical Informatics, Harvard Medical School, Boston, MA. ³ Department of Biostatistics, Harvard T. H. Chan School of Public Health, Boston, MA. ⁴ Multiple Sclerosis Center and the Center for Translational & Computational Neuroimmunology, Department of Neurology, Columbia University Irving Medical Center, New York, NY

[#]Share senior authorship

BACKGROUND: Environmental factors play an important role in multiple sclerosis (MS) onset and progression, which can be comprehensively assessed through the exposome approach. **METHODS:** We conducted a retrospective, temporal, observational multi-center study incorporating environmental exposures from 2017-2018 and neurological outcomes from 2019-2020. We integrated individual-level demographic and clinical data with area-level climate, air pollution and socioeconomic status (SES) using a published method. Neurological disability was quantified using three interrelated patient-reported outcomes (PROs): Patient Determined Disease Steps (PDDS), Multiple Sclerosis Rating Scale Revised (MSRS-R), and Patient Reported Outcomes Measurement Information System (PROMIS)-Physical Function. We analyzed PROs as continuous outcomes and also dichotomized them based on disease burden (mild, moderate-severe disability). Covariates included demographic, clinical and geo-spatio-temporal features. **RESULTS:** In 2,634 pwMS, aggregate exposures (climate factors, air pollution and SES) were associated with subsequent continuous PDDS (N=2106, R2[95% CI]=0.239 [0.187, 0.255], p<0.001), MSRS-R (N=2279, R2 [95% CI]=0.171 [0.125,0.180], p<0.001) and PROMIS (N=1377, R2 [95% CI]=0.253 [0.193,0.262], p<0.001) scores, after adjusting for covariates. Models containing aggregate exposures performed better than individual exposures in both continuous (aggregate exposures AIC PDDS=9112.52, MSRS-R=14469.61, PROMIS=10640.87; best performing candidate exposure [temperature] AIC PDDS=9556.80, MSRS-R=14740.53, PROMIS=10940.80) and dichotomous regressions (aggregate exposures AUC [95% CI] PDDS=78.8% [76.7%-80.8%], MSRS-R=72.8% [69.5%-6.2%], PROMIS=79.4% [76.6%-82.1%]; best performing candidate exposure [temperature] AUC [95% CI] PDDS=57.5% [54.9%-60.1%], MSRS-R=59.5% [55.6%-3.4%], PROMIS=57.1% [53.3%-60.8%]). **CONCLUSIONS:** Climate factors, air pollution and SES collectively influence subsequent neurological disability over a short time span.

03. **FUNCTIONAL CONNECTIVITY MEASUREMENTS IN APP/PS-1 MICE REVEALED HYPO-CONNECTIVITY WITH TRANSIENT HYPER-CONNECTIVITY**

Christopher Cover¹, Alberto Vazquez, PhD¹.

¹ University of Pittsburgh

Award: Exceptional Graduate Oral Presentation

BACKGROUND: Changes in brain functional connectivity (FC) have gained traction as an early event in Alzheimer's disease (AD), especially reports of increased connectivity in brain networks. In the present study, we characterized changes in network connectivity in AD mice from 3- 12 months of age. **METHOD:** Amyloid precursor protein/presenilin-1 (APP/PS-1) mice (n=8) were injected with AAV-Syn GCaMP6f into cortical regions. Mice were head-fixed and imaged monthly from 3-12 months of age. Simultaneous neuronal and hemodynamic signals were measured using wide-field optical imaging. Plaque characterization was performed via methoxy-04 labelled images. Within (short-range) and between (long-range) cluster resting-state connectivity was calculated via Pearson correlation derived from the average timeseries of functionally clustered brain regions using a K-means algorithm. Differences were determined via Wilcoxon Rank Sum. **RESULTS:** The average short-range neuronal connectivity steadily declined between 3- to 12-mo, with a transient increase in connectivity occurring around 9-mo. Average short-range hemodynamic connectivity decreased between 3- to 12-mo, with no change seen around 9-mo. Average changes in neuronal long-range connectivity patterns occurred until 6-mo and then stabilized. **CONCLUSION:** Changes in network connectivity mirror clinical findings in AD patients. Future work is needed to determine the neurophysiological underpinnings that drive changes in network connectivity.

04. **IS LACTOBACILLUS PHAGE INVOLVED IN THE PATHOGENESIS OF BACTERIAL VAGINOSIS?**

Jacob Elnaggar¹, John W Lammons¹, Evelyn Toh¹, Amy Dong¹, Kristal J Aaron¹, Meng Luo¹, Ashutosh Tamhane¹, Elliot J Lefkowitz¹, David E Nelson¹, Christina A Muzny¹, Christopher M Taylor¹.

¹ Louisiana State University Health Sciences Center New Orleans

Bacterial Vaginosis (BV) is the most common cause of vaginal discharge. Although its etiology remains controversial, a Lactobacillus depletion model is one hypothesis. We used shotgun metagenomic sequencing to investigate longitudinal changes in the vaginal microbiota prior to incident BV (iBV), including the presence of Lactobacillus phage, in women with normal baseline microbiota. African American women ages 18-45 were followed for 90 days using daily self-collected vaginal specimens to detect iBV. DNA was isolated from select specimens and sequenced on an Illumina HiSeq. Sequencing reads were processed using Kraken2 to determine taxonomic composition. Following assembly with the Megahit, contigs were analyzed using VIBRANT and PropagAtE to investigate overall phage origin and activity. Six specimens from four women with iBV were sequenced. Normalized estimated reads originating from the Lactobacillus genus declined while BV-associated bacteria subsequently increased prior to iBV. Lactobacillus phages were detected in 2/4 (50%) women, corresponding with a reduction in reads from *L. crispatus*, *L. gasseri*, and *L. jensenii*. These contigs were found to predominately be of lytic phage origin. A possible interplay between Lactobacillus phage and Lactobacillus spp. may occur prior to iBV in some women. The role of Lactobacillus phage in BV pathogenesis should be further investigated.

05. **IDENTIFICATION OF ATF4 AS KEY UPSTREAM REGULATOR OF ACUTE MYELOID LEUKEMIA CELL METABOLISM**

Jacklyn Huhn¹, Esteban Martinez¹, Joice Kanefsky¹, Daniella DiMarcantonio¹, Yin-Fei Tan¹, Aaron Goldman¹, David Wiest¹, Stephen M. Sykes¹.

¹ Lewis Katz School of Medicine at Temple University

Compared to other cancers, acute myeloid leukemia (AML) has one of the lowest overall 5-year survival rates, at approximately 25%. While the immediate need for more effective AML therapies is clear, developing such therapies relies on first identifying targetable pathways that support AML pathogenesis. The expression of ATF4 is significantly elevated in numerous genetic subtypes of AML compared to healthy hematopoietic stem and progenitor cells and its inhibition impedes AML in vitro and in vivo, which suggests that ATF4 is broadly deregulated in AML and interventions targeting this pathway may be broadly applicable. A gene expression enrichment analysis of genes that were specifically downregulated by Atf4 inhibition in mouse leukemic cells revealed genes associated with amino acid metabolism, specifically serine metabolism, were affected. Furthermore, chromatin immunoprecipitation assays showed that Atf4 localized to the promoters of many of these genes, suggesting that they are direct transcriptional targets. Lastly, a pathway enrichment analysis of total steady-state polar metabolites indicated that Atf4 inhibition reduces de novo serine synthesis, disrupts de novo synthesis of nucleotides, and affected several additional amino acid pathways. Together, these findings reveal the dependence of AML on ATF4-driven metabolic reprogramming, and the ATF4 pathway could be a viable therapeutic target.

06. **ENDOREPELLIN INDUCED AUTOPHAGY AS A MECHANISM OF AGE-RELATED MUSCULOSKELETAL ATROPHY**

Tessa Lavorgna¹, Timothy E. Gressett MS¹, Wesley H Chastain MS¹, Gregory J. Bix MD PhD¹.

¹ Tulane University School of Medicine

The extracellular matrix (ECM) is composed of proteoglycans and is the non-cellular, structural material supporting cells. The proteoglycan perlecan is critical in processes such as angiogenesis, membrane stability, and development. When perlecan's C terminal fragment, endorepellin, is cleaved, it acts via VEGFR2 on endothelial cells and has opposite effects from perlecan, inducing autophagy and inhibiting angiogenesis. Sarcopenia, the process of age-related skeletal muscle atrophy has been linked to capillary dysfunction and dysregulated endothelial cell apoptosis. Here, we review endorepellin's implication in age-related musculoskeletal changes as well as its potential as a therapeutic for Sarcopenia. We found that increased levels of endorepellin were associated with animal model Sarcopenia, increased endothelial cell apoptosis, and fibrosis of the ECM. Intriguingly, these endothelial cells accounted for 75% of all apoptotic cells in aged animal muscle. In addition to inhibiting VEGFR2 receptors crucial for angiogenesis, endorepellin was found to trigger autophagy by activating Peg3 in endothelial cells. Thus, endorepellin may negatively impact skeletal muscle capillary health in aging individuals through both autophagic and anti-angiogenic mechanisms, contributing to symptoms such as atrophy, weakness, and stiffness of skeletal muscles. Thus, inhibiting endorepellin signaling through the VEGFR2 receptor and Peg3 may deter age-related musculoskeletal atrophy.

07. **HIERARCHICAL CLUSTERING BY PATIENT-REPORTED PAIN DISTRIBUTION UTILITY IN DIAGNOSIS AND TREATMENT**

Mark Moses¹, Benedict Alter MD, PhD¹.

¹ University of Pittsburgh

Pain localization and radiation are commonly used in pain diagnosis. The bodily distribution of pain can be measured in the clinic with pain drawings prompting the patient to mark areas of their pain on a "body-map." A previous study found that hierarchical clustering of patients by body-map data alone leads to nine distinct clusters that differ significantly from each other in pain intensity, quality, impact, and treatment outcomes. However, the relationship of body-map cluster to pain diagnosis remains unknown. In this study, chronic pain diagnosis data of 21,423 patients was analyzed to test the hypothesis that cluster membership predicts diagnosis. Data were extracted from a research registry which links patient-reported outcome data with electronic medical record data related to appointments at the University of Pittsburgh Pain Medicine Clinics from 3/17/2016–6/25/2019. Cluster assignment was associated with different diagnoses. Looking specifically at a diagnosis of fibromyalgia, the "Widespread-Heavy" cluster was more likely to receive a diagnosis of fibromyalgia than other clusters, with 47% of fibromyalgia diagnoses belonging to this cluster. Interestingly, only 27% of all patients in the Widespread-Heavy cluster received a diagnosis of fibromyalgia. This study highlights the utility of the pain body-map and suggests that fibromyalgia may be underdiagnosed.

08. **SINGLE-CELL TRANSCRIPTOME ANALYSIS REVEALS DYNAMIC CELL POPULATIONS AND DIFFERENTIAL GENE EXPRESSION PATTERNS IN A MOUSE CEREBRAL ANEURYSM MODEL**

Alejandra N. Martinez PhD¹, Giovane G. Tortelote PhD¹, Crissey L. Pascale MA¹, Isabella G. McCormack MS¹, Kristen D. Nordham BA¹, Natalie J. Suder MS¹, Mitchell W. Couldwell MS¹, Aaron S. Dumont MD¹.

¹ Tulane University School of Medicine

Cerebral aneurysms (CA) form most commonly in the circle of Willis (CoW). The heterogeneity and relative contributions of the different cells in healthy versus aneurysmal vessels have not been well-characterized. Here, we present the first comprehensive analysis of the lineage heterogeneity, altered transcriptomic profiles and functional states of vascular cells from healthy and aneurysmal mouse CoW using single-cell RNA sequencing (scRNAseq). CA was induced in mice using an elastase model and scRNAseq was later performed on CoW samples. Unbiased clustering analysis of the transcriptional profiles identified 19 clusters representing 10 cell lineages. Seurat clustering analysis identified 5 vascular smooth muscle cell (VSMC) subpopulations and 6 monocyte/macrophage subpopulations. Pathways involving ATP generation were found to be downregulated in 2 major VSMC clusters in CA. CA also induced significant expansion of the total macrophage population which further increased with rupture. Both inflammatory and resolution-phase macrophages were identified, and neutrophils massively spiked with CA rupture. The neutrophil-to-lymphocyte ratio (NLR) in CA mirrored that observed in humans. Our data identify CA disease-relevant transcriptional signatures of vascular cells in the CoW. Furthermore, we characterize the heterogeneity and cellular responses of VSMCs and monocytes/macrophages during CA progression, providing insight into their role in CA pathogenesis.

09. **PRRX1 REGULATES ACINAR CELL PLASTICITY IN PANCREATIC ACINAR-TO-DUCTAL METAPLASIA**

Alina Li¹, Kensuke Suzuki¹, Jason R. Pitarresi¹, Anna M. Chiarella¹, Gizem Efe¹, Kensuke Sugiura¹, Rohit Chandwani², Anil K. Rustgi¹.

¹ Columbia University. ² Weill Cornell Medicine

Award: Exceptional Graduate Oral Presentation

Pancreatic acinar cells can de-differentiate after acute injury to a progenitor-like cell type with ductal characteristics in a process termed acinar-to-ductal metaplasia (ADM). In the absence of oncogenic mutations, ADM lesions can resolve and reform the acinar compartment. However, in the presence of oncogenic Kras mutations, the ADM lesions can continue to de-differentiate to a pre-invasive pancreatic intraepithelial neoplasia (PanIN), which has shown to be a precursor of pancreatic ductal adenocarcinoma (PDAC). Our comprehensive and unbiased approach previously identified the Paired-Related homeobox1 (Prrx1) as the most up-regulated transcription factor during pancreatic development, regeneration and evolution of PanIN. We previously showed that Prrx1 expression is upregulated in both ADM and PanIN lesion (Reichert et al.). In the present study, we explore the role of Prrx1 in ADM and PanIN formation using novel mouse models, ex vivo acinar culture systems, and human pancreatitis tissue microarrays (TMA). Our findings suggest that Prrx1 is critical for ADM formation and can facilitate the progression of ADM to PanIN lesions.

10. **GRAFT SUBSIDIENCE IN LATERAL LUMBAR INTERBODY FUSION: A PROPENSITY MATCH ANALYSIS OF POLYETHERETHERKETONE VERSUS 3D POROUS TITANIUM**

Lena Vodovotz¹, Hansen Deng, MD¹, Deepayan Guha Md, PhD¹, Nitin Agarwal MD¹, Alp Ozpinar MD¹, David K. Hamilton MD¹, Adam S. Kanter MD¹, David O. Okonkwo MD, PhD¹, Nima Alan MD¹.

¹ University of Pittsburgh

OBJECTIVE: Lateral lumbar interbody fusion (LLIF) is an effective method of spinal fusion for select spinal disorders. Polyetheretherketone (PEEK) is widely used, though graft subsidence and low biocompatibility are major concerns. This case-matched study aimed to characterize subsidence rates after LLIF and compare PEEK and porous titanium grafts. **METHODS:** Adult patients who underwent LLIF at UPMC from 2016 to 2020 were included in this study. In total, 86 patients (43 PEEK and 43 porous titanium grafts) were matched 1:1 by age, sex, spinal pathology, level of fusion, and staged posterior fusion. Multivariable regression was performed to evaluate for predictors of subsidence while controlling for follow-up duration. **RESULTS:** In 86 patients, mean age was 62.1 Å± 9.9 years old and 52 (60.5%) patients were female. Fifty-four (72.8%) patients had single-level fusion, 18 (20.9%) patients underwent staged posterior fusion and mean follow-up was 20.3 Å± 17.6 months. In patients with PEEK cages, 58 (73.4%) grafts had grade 0 subsidence, 12 (15.2%) grade I, 7 (8.9%) grade II, and 2 (2.5%) grade III. In patients with porous titanium implants, 59 (89.4%) showed grade 0, 4 (6.1%) grade I, 2 (3.0%) grade II, and 1 (1.5%) grade III subsidence. Compared to PEEK, porous titanium implant was associated with lower odds of developing subsidence (OR = 0.23, 95% CI [0.07-0.78], p = 0.018). Patients who underwent staged posterior instrumentation had decreased risk of developing subsidence (OR = 0.16 (95% CI 0.03-0.93, p = 0.041) compared to lateral fusion alone. **CONCLUSIONS:** This institutional case-matched comparison revealed that patients receiving porous titanium interbody for LLIF experienced lower subsidence rates.

11. **THE ROLE OF METABOLISM IN NEUROFIBROMATOSIS 1**Folasade Sofela¹, Amita Sehgal¹.¹ University of Pennsylvania

Neurofibromatosis 1 (NF1) is an autosomal dominant disorder characterized by the propensity to develop benign and malignant nervous system tumors. The disease is also associated with an increased prevalence of sleep disorders and ADHD. A *Drosophila* model of NF1 recapitulates many aspects of the human disease. Specifically, these animals exhibit reduced and fragmented sleep and marked locomotor hyperactivity. Clinical studies suggest that NF1 is associated with an altered state of metabolism. We conducted unbiased metabolomic analysis and discovered low levels of glycolytic intermediates and high levels of TCA metabolites in Nf1-KO *Drosophila*. Furthermore, Nf1-KO *Drosophila* exhibit several markers of starvation, including abnormally enlarged crops, increased ketone bodies, and reduced whole body triglycerides. We also observed that mitochondria in Nf1-KO animals are damaged and exhibit an elevated membrane potential. Nf1-KO animals recover significantly more quickly from cold coma, suggesting excess heat production and inefficient use of metabolic fuel. Finally, a diet consisting of 5 times the typical amount of sucrose rescued hyperactivity and loss of sleep in NF1 mutant animals. These experiments suggest that abnormal metabolism may play a role in sleep behavior in NF1 and may provide paradigms for the use of specific metabolic interventions in its treatment.

12. **TOWARD THERAPEUTIC MODULATION OF P53 ISOFORM $\Delta 133p53\alpha$ IN THE TUMOR-IMMUNE MICROENVIRONMENT**Neha Wali^{1,2,3}, Izumi Horikawa MD, PhD², Curtis C. Harris MD².¹ South Texas MSTP, UT Health San Antonio; ² National Cancer Institute; ³ University of Oxford

Despite successes of immune checkpoint inhibitors and chimeric antigen receptor T cells in some cancers, challenges remain to extend clinical benefits to a majority of patients due to mechanisms of resistance in the tumor microenvironment (TME). To that end, we have shown that p53-mutant cancer cells secrete miR-1246-high exosomes that reprogrammed macrophages into a tumor-promoting phenotype. We have also found that dominant-negative p53 isoform $\Delta 133p53\alpha$ rescued senescent T cells and led to attenuated expression of immune checkpoints PD-1 and LAG-3. Given these data, we hypothesized that $\Delta 133p53\alpha$ (immune cell-autonomously) and tumoral p53 mutations (non-cell-autonomously) regulate macrophage and T cell function and can be leveraged to enhance immunotherapy efficacy. To address this hypothesis, we differentiated monocytic cell lines and primary human healthy donor monocytes into baseline M0, antitumor M1, and pro-tumorigenic M2 macrophages in vitro. RT-qPCR verified macrophage polarization and Western blot analysis suggests decreased $\Delta 133p53\alpha$ in human M2 macrophages. Future directions will consider immune-augmenting manipulation of $\Delta 133p53\alpha$ in TME-recapitulating co-cultures of healthy donor immune cells with cancer cell lines of varied p53 mutational statuses. Single-cell transcriptomics and functional and cytotoxicity assays will exemplify ensuing immune responses. Modulation of $\Delta 133p53\alpha$ to restore cancer-targeting immune function could thus improve immunotherapy response rates.

13. **SEXUAL DIMORPHIC BEHAVIOR IN THE TS65DN MODEL OF DOWN SYNDROME DURING A TIME OF DYRK1A OVEREXPRESSION**Faith Prochaska¹, Laura Hawley¹, Megan Stringer¹, Charles Goodlett¹, Randall Roper¹.¹ Indiana University-Purdue University**Award:** [Exceptional Undergraduate Oral Presentation](#)

Down syndrome (DS) neurodevelopment is influenced by dynamic spatiotemporal expression of proteins in the brain, which is disrupted by the presence of a third copy (aneuploidy/trisomy) of human chromosome 21 (Hsa21). The Ts65Dn mouse model of DS exhibits similar phenotypes to individuals with DS, due to the triplication of approximately one-half of the genes found on Hsa21. Dual-specificity Tyrosine Phosphorylation-regulated Kinase 1a (Dyrk1a), one of these triplicated genes, is an attractive target due to its developmental influence. We hypothesized that DYRK1A expression is dysregulated during early postnatal development, neurobehavioral effects will be seen during development, and that administration of a DYRK1A inhibitor, CX-4945, would normalize aberrant behavior. Our results suggest that increased DYRK1A activity at P15 in male trisomic mice may be associated with observed novel behavior. Administration of CX-4945 had limited beneficial effects on neurobehavioral traits and interfered with growth. This study demonstrates neurobehavioral differences in the third postnatal week in Ts65Dn model of DS, presents a sexual dimorphism of DYRK1A expression at P15 in trisomic mice, and fails to support the hypothesis that CX-4945 treatment can normalize neurobehavioral phenotypes of TS65Dn mice at this age.

14. **IMMUNE MEDIATORS OF INFLAMMATION AND LUNG CANCER RISK IN NESTED CASE-CONTROL STUDY**Umayal Sivagnalingam¹, Pamela L. Beatty¹, Camille Jacqueline¹, Matthew Dracz¹, Daniel Y Yuan¹, Jia Xue¹, Jennifer Adams-Haduch¹, Renwei Wang¹, Jian Min Yuan¹, Olivera J. Finn¹.¹ University of Pittsburgh School of Medicine

Smoking is the leading cause of lung cancer, which is the leading cause of cancer mortality worldwide. Smokers develop multiple lung problems associated with chronic inflammation, which can promote progression to cancer. We hypothesized that smokers who developed lung cancer would have a higher frequency of chronic inflammation induced myeloid-derived suppressor cells (MDSC), regulatory T cells (Treg), as well as higher levels of certain cytokines years prior to lung cancer diagnosis, compared to smokers who remained cancer-free. A case-control study of incident lung cancer was conducted within the participants of the Pittsburgh Lung Screening Study (PLUSS). Live PBMCs were analyzed for MDSC and Treg by flow cytometry. Cytokines were quantified in serum using next generation multiplex immunoassays. There was no statistically significant difference in overall MDSC percentage of PBMC or T reg between cases and controls. CD4 T cells were elevated in cases and were associated with increased risk of lung cancer overall ([OR] = 2.61, 95% [CI] = 0.73-9.32). Cases had significantly higher levels of inflammatory cytokines, IL-17A and IL-12/IL-23p40, at both early (median 84 months) and late time points (7 months prior to cancer diagnosis) (all Ps < 0.05). These cytokines could be used as early biomarkers for risk assessment of lung cancer.

Poster Session

01. **CHARACTERIZING THE MACROPHAGE RESPONSE TO HUMAN METAPNEUMOVIRUS (HMPV)**Amina Adebisi¹, Olivia Parks¹, John William¹.¹ University of Pittsburgh

OBJECTIVE: Human metapneumovirus (HMPV) is a leading cause of acute respiratory illness in children, the immunocompromised, and the elderly. The role of lung macrophages during HMPV infection is incompletely understood. However, CD8+ T cells become functionally impaired during HMPV infection. I hypothesize that macrophages contribute to T cell impairment by expressing inhibitory ligands and producing immunomodulatory cytokines. **METHODS:** Peritoneal macrophages (PMs) and alveolar macrophages (AMs) were harvested from C57BL/6 mice and either cultured for in vitro studies or stained ex vivo for flow cytometry. For select experiments, a fluorescently tagged HMPV virus was used. For co-culture experiments, mice were infected intratracheally with HMPV and lymphocytes were isolated on day 7 post-infection. T lymphocytes and PMs were co-cultured together for 48hrs prior to flow cytometry staining. **RESULTS:** We optimized in vitro and in vivo methods to isolate macrophages with >70% purity. During co-culture, macrophages upregulated the inhibitory receptor, PD-L1, after exposure to HMPV, while T cells decreased expression of CD44 and Ki67. This indicates that macrophages potentially impair T cells during HMPV infection. **CONCLUSION:** This project aims to elucidate the role of macrophages in promoting T cell impairment during HMPV infection

02. **INTERROGATING MICROBIOME-DRIVEN TERTIARY LYMPHOID STRUCTURE FORMATION IN COLORECTAL CANCER**Hannah J. Bumgarner¹, Sowmya Narayanan¹, Abigail E. Overacre-Delgoffe¹, Jennifer M. Holder-Murray¹, Ayana T. Ruffin¹, Caleb Lampenfeld¹, Timothy W. Hand¹, Tullia C. Bruno¹.¹ University of Pittsburgh School of Medicine

Colorectal cancer (CRC) is the second-leading cause of cancer related death with end-stage disease being largely refractory to current treatments. Investigating microenvironment or immune factors that impact immunotherapeutic response is critical in improving treatments for the 70% of patients who develop metastatic disease. Recent literature has demonstrated that specific organisms within the gut microbiome are important for favorable response to PD-1 therapy in melanoma patients. In a mouse model of CRC, we have shown that modification of the colonic microbiome with an immunogenic bacterium activates anti-tumor immunity and drives the formation of tertiary lymphoid structures (TLS). TLS are organized lymphoid aggregates containing T and B cells that can initiate anti-tumor immunity directly at the tumor site. With the opportunity to extend our studies to CRC patients, we are interrogating other immunogenic, mucosal-associated bacteria and assessing how their presence drives TLS formation and maturity. Using 16s microbiome sequencing of the stool and tumor-associated mucous from rectal cancer patients along with flow cytometry to phenotype intratumoral B and T cells and multispectral imaging to assess TLS maturity, we will identify specific organisms associated with mature TLS. Our studies are critical for identifying targets towards microbiome-or TLS-centric therapies to improve survival in CRC.

03. **A RANDOMIZED CONTROLLED TRIAL ASSESSING THE EFFECT OF INTRAOPERATIVE DEXAMETHASONE IN THE MANAGEMENT OF POSTOPERATIVE PAIN CONTROL AND STIFFNESS AFTER DISTAL RADIUS FIXATION**Ishi Aron¹, Kate Nellans¹.¹ Donald and Barbara Zucker School of Medicine

Distal radius fractures are the most common orthopedic injury, making up 17.5% of fractures among adults. Stiffness and opioid use for pain management are common post-operative problems. Thus, there is a need to find an alternative medication that will both reduce post-operative stiffness and provide pain control in order to curb the opioid crisis. Many studies support dexamethasone administration during surgery as a safe way to reduce post-operative stiffness, swelling, pain, and opioid use. However, there is currently no hand surgery literature on the effects of dexamethasone plus a nerve block on post-operative pain and stiffness. This study is a prospective, randomized, controlled double-blinded trial comparing the use of intraoperative dexamethasone along with a supraclavicular nerve block (treatment) versus a supraclavicular nerve block alone (control) for the management of post-operative swelling, pain control and stiffness after open reduction and internal fixation of distal radius fractures. We hypothesize that patients who receive dexamethasone along with a nerve block will have less post-operative pain and stiffness and require less opioids than those who receive a nerve block alone.

04. **CHARACTERIZATION OF LIVER AND LUNG INJURY AND INFLAMMATION IN A HIGH FAT DIET MOUSE MODEL OF NON-ALCOHOLIC STEATOHEPATITIS**Tanvi Banota¹, Alexa Murray¹, Grace L Guo¹, Debra L Laskin¹.¹ Rutgers University

Non-alcoholic fatty liver disease (NAFLD) is a chronic liver condition that affects millions of individuals in the United States, of which ~20% of cases progress to non-alcoholic steatohepatitis (NASH). NASH is characterized by macrovascular steatosis and persistent inflammation, which can lead to fibrosis. Emerging evidence suggests potential effects of NAFLD and NASH on the development of pulmonary pathologies, but the interplay between the liver and the lung remains largely unexplored. In the current study, we assessed the impact of NASH on lung inflammation and fibrosis using a genetically modified mouse model lacking hepatic farnesoid X-receptor (FXR), a nuclear receptor involved in bile acid and lipid homeostasis, and lipocalin-2 (Lcn2), an acute phase protein upregulated in response to stress. Both FXR and Lcn2 are also involved in regulating innate immune responses. Wild type (WT) and Lcn2 hep-/-/ FXR hep-/- (DKO) mice were fed control (10% kCal) or high-fat (HFD) (60% kCal) diets. Liver, lung, serum, and bronchoalveolar lavage (BAL) fluid were collected after 6 months of feeding. Histopathologic evaluation of livers and elevated liver enzymes (ALT, AST, ALP) from HFD-fed mice confirmed the development of NASH. In the lung, we observed histopathologic alterations including inflammatory cell infiltration, lipid-laden macrophages, septal damage, and epithelial thickening; these alterations were most notable in HFD-fed DKO mice. Flow cytometric analysis also revealed increases in BAL inflammatory macrophage populations in HFD-fed WT mice. These results characterize an association of pulmonary complications during simple steatosis to NASH transition, suggesting lung-liver crosstalk.

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05. **EFFECTS OF SLEEP, AGE, AND EDUCATION ON LEARNING AND ANALYSIS OF TECHNICAL AND SCIENTIFIC INFORMATION**

Alexander Adrogué¹, Andrea A. Asher¹, Jennifer C. Anaele-Nwogu¹, Lora Likova¹.

¹ Cornell University, The Smith-Kettlewell Eye Research Institute

INTRODUCTION: Education, age, and sleep have been well documented to affect certain aspects of executive function. However, the effect of these factors on the learning, recall, and processing of technical and scientific information remains largely unexplored. These effects, if any, have ramifications for the preferred level of education, understanding what quantity of sleep optimizes performance, and understanding how an individual's abilities change with age. **METHODS:** Participants (n=100) were recruited through an online platform and were tasked with learning from a nuclear engineering diagram, a biological pathway diagram, and a war tactical diagram, and responding to both functional and structural questions about the diagrams. **RESULTS:** There were strong positive correlations between performance and both degree of education (R=0.536) and hours of sleep (R=0.527). However, subject performance strongly peaked at 8 hour of sleep. There was no significant correlation between performance and age (R=0.118). **CONCLUSION:** The results of this study suggest that both sleep and level of education are significant control factors in the learning and analysis of technical information.

06. **CHARACTERIZING PHYSIOLOGICAL MARKERS OF PREMONITORY URGES IN TOURETTE SYNDROME: A MACHINE LEARNING APPROACH**

Nathan Boyle^{1,2}, Kesley A. Ramsey PhD², Joseph F. McGuire PhD², Joey Ka-Yee Essoe PhD².

¹ University of Maryland, College Park. ² Center for OCD, Anxiety, & Related Disorders for Children (COACH) at Johns Hopkins University School of Medicine

Tourette Syndrome (TS) is characterized by the childhood onset of tics and associated with significant impairment. Patients with TS experience premonitory urges' subjective aversive sensations that precede tics. As urges play a central role in the neurobehavioral model of TS that underlies evidence-based treatment (i.e., behavior therapy), understanding objective metrics of urges can provide new insights into treatment. This study applies machine learning to identify physiological markers of premonitory urges in youth with TS. A custom mobile app collected physiological responses (i.e., skin-conductance, heartrate) from four male participants (11-12y) receiving behavior therapy. Premonitory urges and tics were time-stamped by participants and therapist using Bluetooth buttons. After preprocessing, analysis extracted 8-second data-segments from timeseries (Urges: -5s before, +3s after reported urges; Baseline: randomly sampled 8s without button pushes), then balanced to train a shallow neural network classifier (MATLAB nprtool) within-subject. Although data collection is ongoing, procedures demonstrate the feasibility of measuring physiological markers of urges and tics. Preliminary analyses revealed variable accuracy in physiological urge detection (38-77%), with greater accuracy among treatment responders. While limited by sample size, findings suggest that physiological markers can identify urges among treatment responders. Biofeedback training may prove useful to increase urge awareness for treatment non-responders.

07. **ELECTRICAL BRAIN STIMULATION WITH MINIMALLY INVASIVE ELECTRODES TO IMPROVE SPEECH PERCEPTION**

Serder Akkol¹, Jose L. Herrero¹, Elizabeth Espinal¹, Noah Markowitz¹, Ashesh D. Mehta¹, Stephan Bickel¹.

¹ Elmezzi Graduate School at Northwell Health

Electrical brain stimulation (EBS) will potentially become an important tool to ameliorate impairments in speech perception. While intraparenchymal EBS is invasive and presumably focal, transcranial electrical stimulation is noninvasive and delivers current to wider areas, however it is not portable and much of the current is shunted through skin. Minimally invasive stimulation may address these issues. Here, we tested the feasibility of EBS with two types of electrodes in 5 epilepsy patients undergoing intracranial monitoring: subdermal electrodes and cranial bolts that served as reference electrodes for clinical recordings and holding fixture for depth electrodes, respectively. We used matrix sentence speech-in-noise task. Patients listened monoaurally to 20 sentences per condition (no-stimulation, 50ms or 200ms stimulation onset lag relative to sentence onset) presented randomly. Stimulation electrodes were located above superior temporal gyrus contralateral to the listening ear. Electrical stimulation parameters were 100Hz biphasic, charge balanced square wave pulses where amplitudes were modulated by the speech envelope with about 3mA. We found increased correct word perception accuracy in stimulation conditions, although not reaching statistical significance, but we observed in 4 of 5 patients accuracy increased with longer lag. This study provides feasibility of minimally invasive electrodes for EBS to improve speech perception.

08. **TRENDS IN OPIOID PRESCRIPTIONS FOLLOWING ACL RECONSTRUCTIVE SURGERY FROM 2014 TO 2020**

Sabrina Carrozzi¹, Kathleen Poploski, PT DPT MAS¹, Chukwudi Onyeukwu, BS¹, Volker Musahl, MD¹, Jonathan Hughes, MD¹, James Irrgang, PT PhD FAPTA¹.

¹ University of Pittsburgh

The opioid crisis became a nationwide public health concern in 2017. In the same year, Pennsylvania's Department of Health published guidelines for safe and effective opioid prescribing practices for orthopaedic and sports medicine providers. Anterior cruciate ligament (ACL) tears are common and are increasingly treated with ACL reconstruction (ACLR). The goal of this project was to describe opioid prescribing patterns following ACLR within the UPMC Health System between 2014 and 2020. To evaluate changes in ACLR opioid prescriptions pre/post-guidelines, morphine milligram equivalents (MME), min/max MME per day (MMED), and min/max days' supply were calculated. Statistical analysis indicates that whether the surgery was performed before or after introduction of the guidelines was significantly associated with MME, min/max MMED, and min/max days' supply (p < 0.001 for all) controlling for demographic and surgical factors. Perioperative opioid prescriptions were on average 202 MMEs lower than pre-guideline MMEs (p < 0.001). Likewise, post-guideline min and max MMEDs were on average 26.9 MMEDs and 44.0 MMEDs lower than pre-guidelines (p < 0.001 for both). Min and max days' supply were also significantly lower than the post-guidelines with an average decrease of 2.56 days and 4.66 days, respectively, compared to pre-guidelines (p < 0.001 for both).

09. **ACUTE HEART FAILURE IN A YOUNG PATIENT WITH ACUTE CORONARY SYNDROME: A CASE PRESENTATION**

Jeffrey Chan¹

¹ New York University

Acute heart failure can be induced by acute coronary syndrome even in younger individuals. This case presentation describes a case of acute heart failure in a 20-year-old obese male with acute myocardial infarction. The patient had long-lasting substernal chest pain, tachycardia, tachypnea, and hypotension. Lung auscultation revealed moist rales. His peripheral oxygen saturation dropped to 63%. Electrocardiogram showed ST-segment elevation in I, avL, and V2-V4. Chest X-ray showed bat-wing opacity, a classical sign of pulmonary edema. Echocardiography revealed pleural effusion and a low ejection fraction of 43%, showing evidence of heart failure. Coronary angiography showed complete occlusion of the left main coronary artery. His cardiac troponin I level was elevated to 0.457ng/mL. Clopidogrel, aspirin, and low-molecular-weight heparin were given as antiplatelets and anticoagulants. Beta-blockers were given to counter his tachycardia. Thrombo-aspiration and intra-aortic balloon pump were performed to remove thrombus and improve myocardial oxygen perfusion and cardiac output, respectively. The patient reached remission after the operations and intensive care. This patient suffered from a combination of cardiovascular conditions and hemodynamic alterations, leading to acute heart failure at a young age. His condition was likely preventable by healthy life-style changes; thus these were encouraged to avoid future relapse.

10. **CHARACTERIZING *CANDIDA AURIS***

Diya Cherian¹, Gabriel K. Innes, PhD¹, Reed Magleby, M.D.¹, Adrienne Sherman, M.P.H.¹, Jessica Arias, M.H.L.¹, Jason Mehr, M.P.H.¹, Rebecca Greeley, M.P.H.¹.

¹ New York University

Candida auris (*C. auris*), an emerging resistant yeast, can cause serious infections in healthcare settings and has led to silent but lethal outbreaks worldwide. The New Jersey Department of Health (NJDOH) conducts *C. auris* surveillance in healthcare facilities to assess patient colonization and transmission events. This research aims to summarize demographics, types of facilities reporting cases, underlying conditions, and other risk factors of *C. auris* infection among patients from 2017 to 2020. Information was obtained from 361 case report forms submitted from 44 facilities. 31% of case-patients were male and 23% were female. Most cases had underlying conditions, the most common being cardiovascular and respiratory disease, ventilator dependence, multidrug-resistant organism (MDRO) infections, and diabetes. Among patients with indwelling devices, the most frequent were catheters, abdominal feeding tubes, and tracheostomies. A majority of patients underwent medical procedures, including wound debridements and line/tube placements. Most patients were on systemic antibiotics, and many received antifungals. Of the forms received, 13.4% of cases were fatal. Data analysis suggests a correlation between co-morbidities, indwelling devices, and cases of *C. auris*. Prioritizing active surveillance, education, infection control measures, and continued research are key in preventing the spread of this emerging fungal pathogen.

11. **ERK5 INHIBITION IN PEDIATRIC GLIOBLASTOMA LEADS TO DECREASED ACTIVATION OF PFKFB3 AND GLYCOLYSIS**

Akanksha Chilukuri¹, Casillo, SM¹, Barber, C¹, Gatesman, T¹, Koncar, RF¹, Golbourn, B¹, Agnihotri, S¹.

¹ University of Pittsburgh

Pediatric glioblastoma (GBM) is an incurable brain tumor that is often marked by a shift from aerobic respiration to glycolysis. Overexpression of PFKFB3, an enzyme that produces fructose-2, 6-bisphosphate in the glycolytic pathway, has been implicated in tumorigenesis. We hypothesize that inhibiting upstream pathways of PFKFB3 such as transcription factors that are activated by ERK5/MAPK7, can be a way to inhibit GBM cell growth. We did an in-silico analysis to identify transcription factors phosphorylated by ERK5 using Phosphosite, proteins that interact with MAPK7 using Biogrid and transcription factors that bind to the PFKFB3 promoter using Jaspar. The overlap of these yielded 4 transcription factors of interest, FOS, ETS1, MEF2A, and MEF2C. Using both siRNA and a drug, ERK5-IN-1, we created a knockdown of ERK5 in SF8628 cells, a GBM cell line. We measured levels of activated (phosphorylated) transcription factor versus total in ERK5 knockdown and control cells. Our results showed that the siRNA ERK5 KD cells had decreased levels of p-MEF2A and p-MEF2C compared to total. In addition, the PFKFB3 KD had more p-MEF2A than the PFKFB3 control. Finally, the SF8628 cells with ERK5-IN-1, showed a dose dependent reduction in p-mef2a compared to the control, b-actin.

12. **ATN-161 AND INFLAMMATORY PROGRESSION OF CEREBRAL ANEURYSM**

Mitchell W. Couldwell, MS¹, Viktoriya Grayson, BS¹, Timothy E. Gressett, MS¹, Wesley H Chastain, MS¹, Aaron S. Dumont, MD, MBA¹, Gregory J. Bix, MD, PhD¹.

¹ Tulane University

Cerebral aneurysms (CAs) are prevalent in 2-3% in the general population and upwards of 19% in high-risk populations. CAs may progress by rupturing and producing a subarachnoid hemorrhage (SAH). Increasingly, CAs are being detected before rupture through noninvasive imaging techniques. However, the only currently available treatments for these aneurysms is clipping and coiling/endovascular treatment, which are invasive and carry significant risk. Thus, given the potentially lethal complications of CA, there is a need to establish pharmacological therapy for CAs which does not presently exist. ATN-161 is an anti-integrin peptide that has been shown to decrease inflammation and stabilize the BBB in ischemic stroke but has yet to be thoroughly evaluated for efficacy in aneurysm rupture. In addition to affecting cytokines, chemokines, inflammation, and angiogenesis, integrins have also been implicated in the migration of neutrophils and in reducing edema in vascular injury. Thus, ATN-161 may represent a promising pharmacological therapy for CAs. Here we review the therapeutic potential of ATN-161 in preventing CA rupture via the working model of inflammatory control and preservation of the BBB. We discuss the phenotypic response of vascular smooth muscle cells (VSMCs) to local environmental cues involving inflammation, oxidative stress, proliferation, migration, and matrix remodeling.

13. **CHILDREN WITH CEREBRAL VISUAL IMPAIRMENT CAN BENEFIT FROM BOTH IN PERSON AND REMOTE LEARNING**

Ariana Cray¹, Saeideh Ghahghaei¹, Arvind Chandna¹

¹ Colorado State University

Due to lack of accommodations, inconvenient and embarrassing assistive technology, and lack of support and communication for both parents and teachers, a mainstream classroom is a difficult learning environment for children with cerebral vision impairment (CVI) (Opie 2018) (Blackstone 2021). Students with high-functioning autism reported that remote learning due to COVID-19 actually benefited them (Reicher 2020) and so we hypothesized that aspects of remote learning could also be beneficial to students with CVI. We conducted semi-structured interviews of 6 parents of children with CVI (ages 8-18) who can read print and asked them to share reading difficulties in their children including their view on remote learning. After transcribing and coding the interviews, we found more positive aspects of remote learning were talked about compared to negative aspects. The most talked about theme was material interaction, which included anytime the parents talked about how the child could better engage with and understand the material. We concluded that while remote learning is not the answer, it showed us that by delivering more material in an online/technology based format, it will be naturally more accommodating for children with CVI.

14. **TRENDS IN PEDIATRIC COCAINE EXPOSURE REPORTED TO U.S. POISON CENTERS**

Matthew Fisch¹, Joshua Shulman MD¹

¹ University of Pittsburgh

Cocaine is a central nervous system stimulant responsible for inhibiting the reuptake of biogenic amines. Rise in synaptic concentrations of these neurotransmitters causes euphoria, however, also causes well documented negative effects. Because of the frequency of use/abuse, cocaine has been a commonly studied topic in adults, although, available literature in the pediatric population is scarce. Hypothesis: The number of pediatric patients (ages 0-18) exposed to cocaine is increasing over time, and affected pediatric patients may be at risk for cardiovascular and neurologic toxicity distinct from the adult population. Data for this study was provided by the National Poison Data System database. Data from 2012-2020 was used to analyze trends in incidence rates of exposure. In addition to incidence rates, trends in patient demographics, therapies used, subsequent outcomes, co-ingested substances and geographical distribution was analyzed. Subgroups consisting of two major exposure groups (0-3 y/o & 13-18 y/o) were specifically analyzed. The data indicated a clear bimodal pattern of incidence with two exposure groups of 0-3 y/o and 13-18 y/o. Incidence is increasing, although at a much more alarming rate in younger children. Patients 0-3 y/o presented with increased risk of numerous depressive effects, including respiratory depression, CNS depression, lethargy and drowsiness.

15. **A RETROSPECTIVE REVIEW OF ENDOCRINE MANAGEMENT IN ORGAN DONORS OF THE TRAUMA SURGERY PATIENT POPULATION**

Eden Gallegos¹, Tanner Reed BS¹, Lillian Bellfi PharmD¹, Alison Smith MD, PhD¹

¹ Louisiana State University Health Sciences Center--New Orleans

BACKGROUND: Organ donation in the trauma surgery patient population requires intensive management to sustain organ viability for transplant recipients. Normal regulation of organs by the endocrine system is at risk for disruption in the case of brain death. Endocrine protocols for maintaining homeostasis in transplantable organs of potential donors have been shown to impact organ quality, but controversies remain concerning the best interventions. We investigated the implementation of endocrine protocols at our institution and hypothesized that these interventions would be associated with an increased number of organs donated. **METHODS:** We retrospectively reviewed records of 284 patients from whom organ donation was requested between July 2012 to April 2021. We then identified organ donors and determined if hyperglycemia, hypothyroidism, hypocortisolism, or diabetes insipidus were treated. Finally, we compared the number and type of organs donated when protocols were or were not used. **RESULTS:** Organ donation was completed in 115 of the patients reviewed. Among organ donors, more organs were donated when endocrine protocols were administered relative to when they were not. Administration of multiple endocrine protocols was not associated with a decrease in the number of organs donated. Further study will evaluate how endocrine management relates to post-transplant organ function.

16. **CONCEPTUALIZING OBESITY WITHIN A BIOPSYCHOSOCIAL FRAMEWORK TO ADDRESS ANTI-FAT BIAS**

Sarah Girgis¹, Paavani Lella¹, Ye Kyung Song MD, PhD¹

¹ Duke University

A significant number of physicians and other healthcare professionals hold fat bias, with many conflating fatness with being weak-willed or lazy. Treating obesity has been described as frustrating and technically challenging. We reviewed the literature and found that several themes need to be addressed in an educational program on anti-fat bias. Clinicians must be aware that anti-fatness in the United States has roots in anti-Blackness. Racial scientific literature since at least the 18th century claimed that fatness was savage and black. Because women are typically reduced to their bodies, fat stigma has commonly targeted racial/ethnic Other women. Additionally, despite research that indicates body weight is affected by interactions of biological and environmental factors, people believe being fat is volitional. This leads to overweight and obese patients receiving substandard care that does not take their set of environmental circumstances and lifestyle preferences into consideration. Diet content is only one of the many factors that affects people's weight.

17. **TELEMEDICINE USE BY CITIZENSHIP STATUS IN CALIFORNIA, 2015-2018**

Panagiotis Gourlias¹, Cem Atillasoy², Alexander Adia MPH³, Kristin Ray MD MS¹.

¹ University of Pittsburgh School of Medicine. ² Yale School of Medicine. ³ Filipinx/a/o Community Health Association

Telemedicine use in the US is increasing, a phenomenon amplified by state and federal telemedicine policy changes during the COVID-19 pandemic. Immigrants may face unique barriers to telemedicine use, such as lower English proficiency, higher rates of being uninsured, cultural differences, and privacy concerns. To examine the existing relationship between citizenship status and telemedicine use, we conducted a secondary analysis using data from the 2015-2018 California Health Interview Survey. Bivariate analyses using Pearson's chi-squared test were used to compare rates of telemedicine use by noncitizens and naturalized citizens to US-born citizens overall and for specific health services. Our analysis included 84,419 respondents reflecting an estimated population of 29,406,792, 15.2% of whom were noncitizens, 17.6% naturalized citizens, and 67.2% US-born. Of the estimated population, we found that both noncitizens and naturalized citizens were less likely to have used telemedicine overall than US-born citizens (5.30% and 9.14% vs 13.01%, $P < 0.0001$), as well as for upper respiratory issues (0.8% and 1.7% vs 2.7%, $P < 0.0001$), musculoskeletal issues (0.2% and 0.7% vs 1.2%, $P < 0.0001$), and sick visits (1.4% and 1.5% vs 2.5%, $P = 0.0099$). Noncitizens and naturalized citizens used telemedicine at significantly lower rates than US-born citizens prior to the COVID-19 pandemic.

18. **INTRACELLULAR EPHB KINASE INACTIVATION ATTENUATES MECHANICAL ALLODYNIA FOLLOWING SPINAL CORD INJURY**

David Jaffe¹, Nicolette M. Heinsinger¹, R. Vivian Allahyari¹, Jaime L. Watson¹, Aditi Falnikar¹, Rachel Cain¹, Lan Cheng¹, Wei Zhou¹, Eric V. Brown¹, Brittany A. Charsar¹, Matthew B. Dalva¹, Angelo C. Lepore¹.

¹ Thomas Jefferson University

Spinal cord injury (SCI) patients often suffer from debilitating neuropathic pain (NP). One mechanism underlying SCI-induced NP is the hyperexcitability of CNS pain circuitry neurons via NMDA-type receptors (NMDARs). EphBs are a family of receptor tyrosine kinases which interact with NMDARs, and studies show EphB activation induces NP-like phenotypes in several chronic pain animal models. We hypothesize inactivation of the intracellular kinase domain in EphB1, 2, and 3 will decrease SCI-induced NP-like phenotypes in a rodent SCI model. We find that mice with cervical contusion SCI display increased EphB2 protein and mRNA levels, as well as increased colocalization of EphB2, GluN1 (an NMDAR subunit), and vGlut2 (an excitatory synapse marker) in the ipsilateral dorsal horn, caudal to the injury compared to uninjured mice. We then use transgenic knock-in mice to chemogenetically inhibit EphB1-3 kinase activity. EphB kinase inactivation in cervical contusion SCI mice significantly reverses already-established mechanical hypersensitivity but not thermal hyperalgesia. This suggests a mechanical sensory modality-specific and an injury-selective role for the EphB kinase domain. Overall, after SCI, we observe an upregulation of EphB2 along with increased EphB2-NMDAR colocalization at excitatory synapses in the dorsal horn, and we show that EphB kinase activity is linked to SCI-induced NP.

19. **PERLECAN LG3 RESCUES MOTOR COORDINATION IN A MOUSE MODEL OF CEREBRAL HYPOPERFUSION**

Viktoriya Grayson¹, Joshua Hanna¹, Joachim Biose Ifechukwude¹, Sharon Ogbonna¹, Scott Hawkins¹, Gregory Bix¹.

¹ Tulane University School of Medicine

Vascular dementia is a major cause of daily functional dependence and currently lacks effective therapy. The small peptide fragment Laminin Globular domain 3 (LG3) of the extracellular matrix component perlecan is a potential therapy shown to improve outcomes in experimental ischemic stroke. Using the bilateral carotid artery stenosis (BCAS) model of brain chronic hypoperfusion in mice we examined the hypothesis that LG3 treatment would improve brain pathology and functional outcomes. Ninety-six adult male C57BL/6J mice were randomly subjected to either BCAS using titanium micro-coils (n=48) or sham surgery (n=48). LG3 (6 mg/kg, i.p.) or saline was administered after surgery and every other day for seven or 14 days to determine whether LG3 treatment in the acute phase of BCAS will ameliorate outcome measures. All animals underwent rotarod test. While histological assay performed on brain tissues for myelin-associated glycoprotein, myelin basic protein, and Iba-1 is in its preliminary stage, our behavioral data suggests that LG3 improves motor function by increasing the latency to fall off of the rotarod ($p < 0.05$) when compared to saline and Sham treated groups. Our data suggests that LG3 treatment is neuroprotective in the BCAS model and support its further development as a therapy for vascular dementia.

20. **CASE REPORT: USE OF LURASIDONE IN PREGNANT PATIENT WITH BIPOLAR/SCHIZOAFFECTIVE DISORDER AND COMORBID OBESITY**

Angela Ho¹, Algeny Hernandez¹, Katharine Goebel¹, Agdel Hernandez MD¹.

¹ Touro College of Osteopathic Medicine

We report on a pregnant patient G3P2 with differential diagnosis of schizoaffective disorder and bipolar disorder with psychotic features and comorbid obesity with a significant past medical and mental health history including borderline personality disorder, posttraumatic stress disorder, preeclampsia, and morbid obesity. The patient was in her third trimester of pregnancy with an increased risk for recurrence of preeclampsia. She presented with symptoms of bipolar depression, anxiety, homicidal thoughts, and both auditory and visual hallucinations. She was taking haloperidol 15 mg oral daily; however, it did not control her mood symptoms. Lurasidone has minimal metabolic side effects compared to other SGAs and has lower potential for orthostatic hypertension, hyperprolactinemia, and adverse effects of drug-induced parkinsonism. Therefore, after thorough evaluation and considering the risk/benefit ratio in fetal drug exposure and the degree of severity of maternal psychiatric illness, the treatment team decided to discontinue haloperidol and administer lurasidone 20 mg oral daily. Additional large, controlled studies are needed to determine the safety and efficacy of lurasidone as the treatment of choice for childbearing women with bipolar disorder and/or schizoaffective disorder with comorbid obesity.

21. **REVIEW OF HIV ACQUISITION CASES WHILE ON PREP**Gina Kim¹, Clement Haeck¹.¹ Princeton University

HIV pre-exposure prophylaxis (PrEP) drug regimens have proven to be effective measures of HIV prevention. Of the growing range of PrEP drug formulations, the daily oral emtricitabine/tenofovir disoproxil fumarate tablet is of more common use, but all available PrEP formulations offer a high level of clinical efficacy when taken on a regular basis. However, between the first PrEP formulation approval in 2012 to the present day, a small number of patients have acquired HIV while adhering to consistent drug regimens. To better understand this occurrence, a narrative literature review was conducted that investigates the nature of eleven published cases of HIV acquired while on a stable viral prevention regimen, of which the first U.S. case was documented in New York City. Information on adherence, classes of resistant drugs, treatment regimen types and success, and geographical regions were recorded. Four of the known cases occurred under verified adherence, and the additional seven occurred under self-reported (unverified) adherence. Two of these cases acquired a non-drug resistant HIV strain. With a better understanding of these viral acquisition events, emerging novel methods may provide more effective approaches to HIV prevention and treatment regimens.

22. **A 3-D CELL CULTURE MODEL OF THE NASOPHARYNX REVEALS CELL-TYPE-SPECIFIC SUSCEPTIBILITY TO EPSTEIN-BARR VIRUS INFECTION**Shweta P. Kitchloo¹, Phillip Ziegler¹, Alex S Reznik¹, Yarong Tian¹, Yulong Bai¹, Sanna Abrahamsson¹, Alan Backerholm¹, Eric Wang¹, Stella E Lee¹, Anthony Green¹, Michael M Myerburg¹, Hyun Jung Park¹, Ka-Wei Tang¹, Clare E. Sample¹, Kathy Ho Yen Shair¹.¹ University of Pittsburgh School of Medicine

Epstein-Barr virus (EBV) is a human tumor virus that is associated with nasopharyngeal carcinomas (NPC). The progenitor cell for EBV-associated NPC is unknown; however, both latent and lytic infection are thought to be important in preneoplasia. The nasopharynx is composed of pseudostratified and stratified epithelia, which can be modeled in 3-D cell culture. Latent and lytic infection programs are tied to cellular differentiation and are best studied in a 3-D cell culture model. We have developed two 3-D cell culture methods using conditionally reprogrammed cells from the nasopharynx, that are susceptible to de novo EBV infection: (1) a pseudostratified air-liquid interface (pseudo-ALI) model and, (2) an organotypic raft model to study stratified epithelium. In both models, cells in 3-D culture are exposed to EBV inoculum. We demonstrate that EBV latent and lytic infection can be identified in these 3-D culture models, donor variation exists, and the infection program is distinguished cell types. Furthermore, we demonstrate that pseudostratified cultures can be generated from persons without sinus co-pathology, as well as from patients with sinus co-pathology. Thus, these 3-D cell culture models can be used to identify susceptible cell types, and to study the molecular determinants of EBV pathogenesis in the nasopharynx.

23. **SAFETY OF COVID-19 VACCINES USED IN GAZA STRIP: AN OBSERVATIONAL STUDY**Loay Kanou¹, Hosam Shaikhkhailil¹, Ruba Ismail¹, Nada Abdul Wahab¹, Abd Al-Karim Sammour¹.¹ The Islamic University of Gaza

OBJECTIVE: To assess the safety of COVID19 vaccines used among the Gazan people, Palestine. **METHODOLOGY:** A two-month safety follow-up was conducted for a randomized sample of vaccinated subjects by phone interviews. **RESULTS:** 755 participants completed follow-up with a median age of 37. 477 (63.2%) were males. About half received Sputnik Light vaccine (n= 376, 49.8%), followed by Pfizer BioNTech (n= 344, 45.6%). 54.3% of the overall sample received a single dose, while 45.7% received 2 doses. 79.3% of Sputnik Light vaccine recipients experienced side effects, whereas 79.1% for Pfizer BioNTech after the first dose and 83.8% after the second dose. Pain at injection site (59.5%), fatigue (33.5%), headache (25.2%) were the most frequent adverse side effects after receiving one dose. Similarly, the same side effects were the most reported symptoms after the second one (63.2%, 35.7%, 27.8%, respectively). 2 cases (0.5%) had strokes within 2 months of Sputnik Light administration. Younger adults (age <50) are more likely to develop adverse side effects than those older than 50, p= .000. **CONCLUSION:** Two-thirds of vaccine recipients develop minimal adverse side effects in the first-week post-vaccination. Moreover, more studies with larger samples are needed to assess the safety of the Sputnik Light vaccine.

24. **ASSESSING BIOMARKERS FOR MONITORING CEREBRAL AUTOREGULATION AT THE RESPIRATION FREQUENCY USING NEAR INFRARED SPECTROSCOPY**Nikita Kedia¹, Mohini Banerjee¹, Deepshikha Acharya¹, Alexander Ruesch¹, Jana M. Kainerstorfer¹.¹ University of Pittsburgh School of Medicine

Cerebral autoregulation (CA) is the ability for the brain to maintain a near constant cerebral blood flow despite changes in cerebral perfusion pressure. CA can be impaired in various diseases, thus monitoring CA is important for guiding therapeutic interventions and preventing stroke. Currently, there is no gold standard for evaluating CA clinically because it is difficult to assess global cerebral blood flow. Several methods are being explored that use other biomarkers as a surrogate for blood flow, however, most of these require invasive neurosurgery. An alternative noninvasive diffuse optical modality known as near infrared spectroscopy (NIRS) has been introduced. Previous work has shown that NIRS can monitor CA in response to low frequency changes in pressure that are clinically induced. However, it is still unclear whether CA can be monitored at a higher frequency such as the respiration rate. Monitoring CA at a high frequency is important because inducing low frequency changes is not always practical in clinical settings, especially in surgery where patients may be on a ventilator. In this study, we investigate which NIRS biomarkers can be used to monitor CA at the physiologic respiration rate.

25. **HAPLOTYPIC EFFECT OF MHC ON COMMENSAL COLONIZATION OVER HOMEOSTATIC DEVELOPMENT**

Ming Suet Kwan¹, April Huang BS¹, Wuxing Yuan MS¹, Rashed Shah PhD¹, Jonathan Badger PhD¹, John McCulloch PhD¹, Colm O'Huigin PhD¹.

¹ National Cancer Institute

MHC recognizes microbial peptides to promote immune education as colonization begins at birth. Since MHC polygenicity and polymorphism enable interindividual diversity for peptide recognition repertoires, we investigate whether varying MHC haplotypes are correlated to different microbiome compositions over homeostatic development. We crossed C57BL/6J (B6: H2d) and C57BLKS/J (BLKS: H2k) and homogenized environmental differences between facilities. We generated MIX lineage by crossing females from B6 lineage with males from BLKS lineage. We conducted 16S metagenomic sequencing to examine haplotypic effects among the F2 microbiome. Our results showed that B6 and MIX with shared maternal lineage bore greater similarity in their microbiomes. Both were enriched in Proteobacteria and Verrucomicrobia, whereas BLKS microbiome was enriched in Actinobacteria and Patescibacteria ($p < 0.001$). Lineage-stratified analysis revealed haplotype-associated variations at family level. H2d from MIX had more Tannerellaceae and Christensenellaceae ($p = 0.004$), while Clostridiaceae and Enterococcaceae were primarily found in H2k from BLKS ($p < 0.001$). Richness increased over development and was highest in BLKS ($p < 0.001$). Our study demonstrated the influence of maternal lineage and MHC haplotypes on microbiome, resulting in differences in phyla- and family-level, richness, and diversity. Haplotypic effects were limited to interacting with particular species.

26. **UPREGULATION OF IBD-ASSOCIATED CYTOKINES IN INFLAMED RECTUM BRIDGES CROHNS DISEASE AND ULCERATIVE COLITIS**

Rachel Levantovsky¹, Christopher Tastad¹, Shikha Nayar¹, Nai-Yun Hsu¹, Ling-Shiang Chuang¹, Judy H. Cho¹.

¹ Icahn School of Medicine at Mount Sinai

Award: Exceptional Graduate Poster

Regional involvement in Crohns disease (CD) is an important factor in disease course, with more similarity across IBDs in the colon than within CD comparing ileal and colonic disease. To profile differentially expressed genes between regions, bulk RNA sequencing data were analyzed, comparing biopsies from CD (ileum: $n=161$ infl., $n=201$ non; rectum: $n=116$ infl.; $n=251$ non) and UC (rectum: $n=144$ infl.; $n=168$ non). Mean expression, log₂ fold change (L2FC) and adjusted p -values were the basis of comparison. Differential expression in pro-inflammatory cytokines, receptors, and signaling mediators were identified with greater contrast between the ileum and rectum in CD than in rectal biopsies from patients with CD or UC. In CD, the mean expression of IL12A, IL12B, IL23A, IL17A, and others is similar between ileal and rectal biopsies; however, the upregulation of these cytokines in rectum is several fold higher than in the ileum (e.g. IL23A means ratio: 1.108; L2FC ratio: 5.188). Comparing rectal biopsies from UC vs. CD, the L2FC across all cytokines and receptors were comparable by linear regression ($\hat{r}^2 = 0.98$, $R^2 = 0.85$). The same pattern is observed in the expression of TNF and IFNG. This regional dichotomy in cytokine upregulation must be considered in treatment.

27. **ALDH INHIBITION AS MODULATOR OF OVARIAN TUMOR ASSOCIATED MACROPHAGES**

Julia Knight¹, Bingsi Gao¹, Mainpal Rana¹, Ronald Buckanovich¹, Anda Vlad¹.

¹ University of Pittsburgh School of Medicine

Award: Exceptional Graduate Poster

Ovarian cancer (OC) is the 5th leading cause of cancer death in women. There is a crucial need for novel therapies, especially for recurrent, chemoresistant OC. In cancer cells, increased aldehyde dehydrogenase (ALDH) expression correlates with chemoresistance and poor prognosis. Notably, NR4A1, a nuclear hormone receptor transcription factor, is a potential target downstream of ALDH. In immune cells, ALDH inhibitors (ALDHi) support polyclonal expansion of CD8 T cells. In contrast, tumor-associated macrophages (TAMs) are sensitive to ALDHi. TAMs are functionally defined as M1 (pro-inflammatory) or M2 (anti-inflammatory). M2 TAMs predominate in OC and contribute to immune suppression. High levels of M2-like TAMs are a poor prognostic indicator in patients. We hypothesize that ALDHi reduce M2 TAMs and lower NR4A1 expression in human OC ascites samples. Five ascites samples were treated for 72h with ALDHi or DMSO control. Exposure to ALDHi revealed a significant decrease in CD14+ and CD163+ cells via flow cytometry and chip cytometry (ZellScannerONE), indicating a loss of M2 macrophages compared to control. Western blot showed decreased NR4A1 expression in ALDHi treated ascites. Our data reveal that, in OC, ALDHi decrease immune-suppressive M2 TAMs, promote CD8 T cell expansion, and decrease NR4A1 expression.

28. **INTERACTION OF TIM-3 AND PHOSPHATIDYL SERINE IN THE TUMOR MICROENVIRONMENT**

Srividya Kottapalli¹, Hridayesh Banerjee PhD¹, Lawrence P. Kane PhD¹.

¹ University of Pittsburgh School of Medicine

T cell (or transmembrane) immunoglobulin and mucin domain 3 (Tim-3) is expressed on many immune cells, including T cell subsets like exhausted CD8+ T cells and regulatory T cells (Treg). Among tumor-infiltrating lymphocytes (TIL), 40-60% of Tregs express Tim-3. Tim-3+ Tregs may mediate Treg suppressive function by producing higher levels of suppressive cytokines. In CD8 T cells, Tim-3 and PD-1 co-expression is associated with more aggressive tumor growth. However, the mechanism behind these phenotypes is unknown. One explanation may be found in evaluating the interaction between Tim-3 and phosphatidylserine (PtdSer), one of its four ligands, and which is flipped onto the surface of apoptotic cells. Recent studies showed that wild-type mice injected with the PtdSer-exposing mutant MC38 had significantly less tumor burden compared to Tim-3 germline knockout mice, indicating that PtdSer:Tim-3 interaction may induce immune suppression. We investigated this by introducing PtdSer-exposing mutant MC38 to transgenic mice overexpressing Tim-3 on CD8 T cells or Tregs. PtdSer-exposing MC38 tumor burden was increased in CD8 Tim-3 transgenic mice, and CD8 Tim-3 transgenic T cells exhibited an exhausted phenotype. While tumor progression in wild-type and Treg Tim-3 transgenic mice did not differ significantly, TIL characterization revealed an effector Treg phenotype in transgenic mice.

29. **IMMEDIATE FEEDBACK IMPROVES TASK PERFORMANCE**

Ivonne Morban¹, Zachary Lively¹, Preeti Verghese¹.

¹ Lehigh University

Award: Exceptional Undergraduate Poster

Humans make 2 to 3 saccadic eye movements per second, often to conspicuous items [1]. Studies have shown that these eye movements do not select locations that provide the most information, and are inefficient [2,3,4]. This study investigates the role of feedback in a task where the targets identity is ambiguous, and feedback reveals the true identity of a selected location. We compared two kinds of feedback: immediate feedback following an eye movement and delayed feedback provided at the end of the trial. We hypothesized that immediate feedback would increase eye movement efficiency by helping participants associate motor action immediately with information relevant to the task. Data for 12 participants shows that immediate and delayed feedback had similar effects on eye movement efficiency, although sensitivity (the ability to discriminate target from distractor) was higher for immediate-feedback. We conducted a variant of the original experiment where 3 observers interrogated locations by clicking on them. The click experiment yielded similar results: immediate and delayed feedback had comparable effects on efficiency, although immediate feedback improved sensitivity. The overall efficiency of clicks was higher than that of eye movements, reflecting the longer time required for manual responses compared to eye movements.

30. **TRANSCRIPTOMIC ANALYSIS OF SURAL AND TIBIAL NERVE SAMPLES IN DIABETIC PERIPHERAL NEUROPATHY**

Sanjay Neerukonda¹, Amelia J. Balmain¹, Diana Tavares-Ferreira¹, Theodore J. Price¹.

¹ University of Texas at Dallas

Diabetes mellitus affects approximately 34 million Americans and can cause multiple significant health complications, including peripheral diabetic neuropathy. To investigate the currently unknown molecular mechanisms underlying this complication, which is present in up to half of diabetic patients, paired tibial (n = 13) & sural (n = 5) nerves were collected from advanced diabetic patients who underwent lower limb amputation. Bulk RNA-sequencing of samples was performed with subsequent hierarchical cluster analysis and functional enrichment analysis on differentially expressed genes. Functional enrichment analyses revealed up-regulation of gene ontologies associated with the complement activation cascade and classical pathway as well as associated pathways involving immunoglobulins and other immune cells. Hierarchical cluster analysis revealed multiple distinct patterns of expression. Upon screening differentially expressed genes associated with the complement activation pathway against human dorsal root ganglia nociceptor profiles from utilizing Visium 10X Genomics data, we did not observe significant expression of these genes within specific nociceptor subsets but instead saw increased expression in non-neuronal subtypes. Moving forward, we believe further investigation into the role of the complement system in diabetic neuropathy is warranted. This includes collection and use of qualitative data which would enable us to stratify our analysis and determine how these variables influence neuropathy.

31. **ACUTE TRANSVERSE MYELITIS FOLLOWING SARS-COV-2 VACCINE: A CASE REPORT**

Richard Liberio¹, Mark A. Colantonio¹, Erum Khan¹, Ashish Shrestha¹, Shitiz Sriwastava¹.

¹ West Virginia University School of Medicine

OBJECTIVE: To report a unique case and literature review of post COVID-19 vaccination associated transverse myelitis with abnormal MRI findings. **BACKGROUND:** Coronavirus diseases have been reported to be associated with several neurological manifestations such as stroke, Guillain-Barre syndrome, and meningoencephalitis amongst others. There are only a few reported cases of transverse myelitis associated with the novel coronavirus (n-CoV-2). Here, we identify a post-COVID-19 vaccination patient diagnosed with acute transverse myelitis. **METHODS:** A retrospective chart review of a patient diagnosed with post SARS-CoV-2 vaccination acute transverse myelitis, and a review of literature of all the reported cases of other post-vaccination transverse myelitis, from December 1st, 2010 through July 15th, 2021, was performed. **CONCLUSION:** To our knowledge, this is one of early reported case of transverse myelitis with post SARS-CoV-2 vaccination, who responded well to plasmapheresis. Further studies would be recommended to identify the underlying correlation between COVID-19 vaccination and transverse myelitis.

32. **HOW DOES NUTRITION AFFECT ENDOMETRIOSIS RISK?**

Tamara Marsh¹, Iwona Jasiuk¹.

¹ University of North Florida

Objective: The purpose of this literature review is to analyze key works that investigated how nutrition affects endometriosis development. **Methods:** PubMed was used to find primary literature. The following search terms were used, endometriosis and nutrition and endometriosis risk and nutrition. The following filters were used: free full text and 10 years. The selected research articles included clinical trial results and were published in primary literature. Five primary studies were selected. **Results:** There were mixed results for vegetable and red meat intake and endometriosis risk. Thiamine (B1), folate (B9), vitamin C, and vitamin E supplements were not associated with endometriosis risk, however, these nutrients from foods sources were inversely associated with endometriosis. Poultry (chicken, turkey), fish (canned tuna, dark meat fish, other fish), shellfish (shrimp, lobster, scallops), and eggs were not linked with endometriosis risk. Dairy based yogurt and ice cream as well as fruits especially citrus fruits were linked with reduced endometriosis risk. **Conclusion:** Dietary choices may influence endometriosis risk; however, more research needs to be conducted using a diet record to avoid the limitations of using the food frequency questionnaire (e.g., relies on recall, not quantifiable precise, and does not provide meal pattern information).

33. **NANOSCALE DYNAMIC MECHANICAL ANALYSIS (NANODMA) AND REFERENCE POINT INDENTATION (RPI): A SYSTEMATIC REVIEW OF DIAGNOSTIC TECHNOLOGY USED TO ASSESS THE MECHANICAL PROPERTIES OF BONE**

Pierina Parraga¹.

¹ University of North Carolina at Charlotte

Reference Point Indentation (RPI) and Nanoscale Dynamic Mechanical Analysis (NanoDMA) are novel techniques used to assess the mechanical properties of bones. The first development of RPI technology was through the BioDent then the Osteoprobe. This review demonstrates that the clinical use of the Osteoprobe device in-vivo remains somewhat ambiguous due to a lack of clarity regarding the parameters measured through this methods' assessment of bone. Moreover, past literature demonstrates that the BioDent device can accurately assess fractures in patients. Additionally, this review details the use of NanoDMA through fundamental studies that emphasize its application to assess bone health. Finally, it analyzes the use of NanoDMA in different environmental conditions such as wet and dry testing and its effect on viscoelastic properties. Moreover, this review includes notable trends in moduli observed when examining cross-sections of bone samples in hydrated and desiccated states. This review aims to assess RPI and NanoDMA technology to determine each application's key characteristics, the parameters they measure, and future directions for clinicians. The analysis of bone assessment technology is vital for the development of treatments for bone-related diseases. For this reason, examining different innovations that analyze the mechanical properties of bone is vital for the future of in-vivo studies on the characterization of the bone.

34. **IL-19 ASSOCIATED LYMPHANGIOGENESIS PROMOTES ATHEROSCLEROTIC PLAQUE REDUCTION**

Amanda Peluzzo¹, Tani Leigh¹, Rachel Okune¹, Sheri Kelemen¹, Michael Autieri¹.

¹ Temple University Lewis Katz School of Medicine

Atherosclerosis is characterized by the formation of fatty plaques which can occlude vessels, causing stroke or myocardial infarction which are the main causes of death due to cardiovascular disease. The role of lymphangiogenesis in atherogenesis is currently controversial. Some consider it protective by promoting reverse cholesterol transport (RCT) or detrimental by promoting plaque instability through white blood cell trafficking. Interleukin-19 (IL-19), an anti-inflammatory cytokine, attenuates plaque progression and is pro-angiogenic. This drives our hypothesis that a mechanism whereby IL-19 is atheroprotective is by driving lymphangiogenesis, allowing the attenuation of plaque progression. Angiogenic assays showed that IL-19 induces lymphatic endothelial cell (LEC) proliferation, migration, and tube formation. RNAseq showed that IL-19 induces an angiogenic transcriptional program in LECs, and notably induces expression of Prox1, a master transcription factor of lymphangiogenesis, 6.2-fold. qPCR confirmed IL-19's induction of proliferation and angiogenic markers. We also analyzed aortic root sections of an atherosclerotic mouse model treated with injections of either IL-19 or saline. Preliminary results suggest an increase in lymphangiogenesis with IL-19 injections. Overall, these data suggest that IL-19 increases lymphatic vessel formation, potentially leading to increased RCT and decreased plaque burden. Future studies will confirm RCT and inflammatory cell egression by intravital microscopy.

35. **GASTRO-INTESTINAL SEPSIS WORSENE COGNITIVE AND BRAIN BARRIER FUNCTION IN A MOUSE MODEL OF ALZHEIMER'S DISEASE**

Divine Nwafor¹, Allison Brichacek¹, Sneha Gupta¹, Nina Bidwai¹, Candice Brown¹.

¹ West Virginia University

Emerging studies suggest a link between Alzheimer's disease (AD) and infection, the role of infection in AD/ADRD pathogenesis remains unclear. In this study, we demonstrate a role for sepsis in AD pathogenesis and elucidated the impact of sepsis on neurological and behavioral outcomes. Male and female APPSwDI/Nos2^{-/-}(CVN-AD) mice were subjected to experimental sepsis. Cognitive deficits were assessed via the 2-day radial arm water maze (RAWM). Brain tissue was evaluated for vascular dysfunction (IgG and fibrinogen) and beta-amyloid burden. In a second cohort of mice, we examined neuroinflammation at 21 days post-sepsis. Our results showed significant deficits in spatial memory and learning in female ADCLP compared to ADsham in the RAWM. Brain IgG levels and fibrinogen infiltration were significantly increased in the female ADCLP compared to ADsham. We found that extravasation of IgG and fibrinogen in female ADCLP mice coupled increased beta-amyloid deposition. No differences were observed between male ADCLP and ADsham in all parameters. Quantification of neuroinflammatory indices in female ADsham and ADCLP mice at 21 days post-sepsis revealed a significant increase in microgliosis and astrogliosis. Taken together, our results suggest a novel interaction between infection and sex in exacerbating the mortality, neuropathology, and cognitive deficits associated with AD/ADRD.

36. **AGE-DEPENDENT DIFFERENCES IN THE IMMUNE RESPONSE TO HUMAN METAPNEUMOVIRUS**

Olivia Parks^{1,2}, Jie Lan², Yu Zhang², John V Williams^{1,2,3}.

¹ University of Pittsburgh School of Medicine, Pittsburgh. ² Departments of Pediatrics University of Pittsburgh. ³ Microbiology & Molecular Genetics, University of Pittsburgh

OBJECTIVE: Human metapneumovirus (HMPV) is a leading cause of lower respiratory infections in young children, immunocompromised persons, and the elderly, resulting in high morbidity and mortality. Few studies have investigated why HMPV is more severe in the elderly. We hypothesize that severe HMPV infection in the elderly is caused by impairment of the CD8+ T cell response. **METHODS:** We developed an elderly mouse model of HMPV using 72-week-old mice. Aged mice and 6-week-old mice were infected intratracheally with HMPV and euthanized at different time points to measure viral titer and cellular immune response. **RESULTS:** Aged HMPV infected mice exhibit increased weight loss, higher clinical score, increased lung inflammation, delayed viral clearance, and increased CD8+ HMPV-tetramer+ cells co-expressing inhibitory markers PD-1, TIM-3, and LAG-3. Aged CD8+ HMPV-tetramer+ cells display functional impairment compared to young CD8+ T cells when stimulated with HMPV peptide, leading to decreased production of cytotoxic molecules such as granzyme B. **CONCLUSIONS:** Aged mice have a dysregulated CD8+ T cell response to HMPV, increasing disease and delaying viral clearance. Taken together, this project aims to understand the mechanistic differences in the aged host response to HMPV, which will help elucidate why HMPV infection in the elderly is more severe.

37. **WHAT IS THE PREDICTIVE VALUE OF INTRAOPERATIVE SOMATOSENSORY EVOKED POTENTIAL (SSEP) FOR POSTOPERATIVE NEUROLOGICAL DEFICIT IN CERVICAL SPINE SURGERY?**

Brian Rosario¹, Rajiv P Reddy¹, Jeremy D. Shaw¹, Robert Chang¹, D. Thirumala MD¹.

¹ University of Pittsburgh

INTRODUCTION: Cervical decompression surgery risks spinal cord and nerve root injury. Neuromonitoring with SSEPs is often used, but therapeutic value remains unknown. We hypothesized that significant intraoperative SSEP changes are predictive for postoperative neurological deficit, with irreversible changes indicating higher injury risk. **METHODS:** We conducted a systematic review and meta-analysis of literature for studies with patients undergoing cervical spine surgeries with intraoperative SSEPs. Inclusion criteria: 1) prospective/retrospective cohort studies, 2) elective cervical spine surgery (no aneurysm or trauma) with intraoperative SSEP monitoring, 3) reporting postoperative neurological outcomes, 4) sample size of 20 patients, 5) patients \geq 18 years old, 6) English publication, 7) abstract included. **RESULTS:** Total cohort was 7,747 patients; rate of postoperative neurological deficits was 2.50% (194/7747). 7.36% (570/7747) incurred significant intraoperative SSEP changes. Incidence of postoperative neurological deficit in patients with intraoperative SSEP changes was 16.49% (94/570) while only 1.39% (100/7177) in patients without. Reversible and irreversible SSEP changes had sensitivities of 17.7% and 37.1% and specificities of 97.5% and 99.5%, respectively. **CONCLUSION:** SSEP monitoring is highly specific but weakly sensitive for postoperative neurological deficit following cervical spine surgery. Patients with new postoperative neurological deficits were nearly 27 times more likely to have significant intraoperative SSEP change. Loss of SSEP signals and irreversible SSEP changes indicate higher risk of injury than reversible.

38. **A CRISPR/CAS9-MEDIATED METHOD TO EDIT THE MAJOR ONCOPROTEIN OF EPSTEIN-BARR VIRUS**

Alex Reznik¹, Robert Zhang¹, Kathy HY Shair¹.

¹ University of Pittsburgh

Award: Exceptional Undergraduate Poster

DNA tumor viruses disrupt cellular equilibria and facilitate host cell transformation. Epstein-Barr virus (EBV) is a human tumor virus associated with nasopharyngeal carcinoma (NPC). While EBV infection is ubiquitous, it isn't clear why some individuals are at risk of developing NPC. One possibility may be the genetic variation in EBV's principle oncoprotein, latent membrane protein 1 (LMP1), which is phylogenetically classified into seven strains. Curiously, NPC tumor-derived LMP1 is conserved in comparison to sequences detected in saliva and blood. CRISPR/Cas9 can manipulate the host genome, but has not been exploited as a genetic-editing tool to manipulate herpesvirus genomes. Despite the multi-copy episomal nature of EBV genomes, genetic editing of EBV is in theory possible by repeat transfections of CRISPR/Cas9. We screened a panel of sgRNA candidates targeting the 5 and 3' of *LMP1* and selected efficient sgRNA pairs for generating an LMP1 knock-out (KO). Our goal is to introduce LMP1 mutants into the *LMP1* KO by transient expression of Cas9D10A nickases that encourage homology-directed repair and knock-in (KI) of a donor LMP1 template. This method for generating recombinant EBV with LMP1 mutants is anticipated to facilitate LMP1 functional mapping studies in human cells and elucidate the functional significance of LMP1 polymorphisms.

39. **REGRESSION PATTERNS OF CENTRAL SEROUS CHORIORETINOPATHY (CSCR) USING EN-FACE OPTICAL COHERENCE TOMOGRAPHY (OCT)**

Brian Rosario¹, Supriya Arora¹, Oliver Beale¹, Amrith Selvam¹, Abdul Rasheed Mohammed¹, Jay Chhablani¹.

¹ University of Pittsburgh School of Medicine

OBJECTIVE: We studied subretinal fluid(SRF) regression patterns in central serous chorioretinopathy (CSCR) on sequential en-face optical coherence tomography (OCT) and its relationship to leak locations. **METHODS:** We retrospectively sampled acute CSCR patients. Inclusion criteria: i) data availability, sequential OCT and OCT angiography(B scan and en-face OCT) biweekly until SRF resolution or 6 months, ii) single active leak. Exclusion criteria: i) presence of macular neovascularization or atypical SCR, ii) Diffuse pigment epitheliopathy, iii) multiple leaks. Serial en-face OCT scans were evaluated and SRF area was measured using Image J software. Correlation coefficient was calculated for SRF area regression rate and central retinal thickness(CRT) over first month of follow-up and time of SRF resolution. **RESULTS:** From 25 eyes; 20 eyes demonstrated centripetal regression. 5 eyes demonstrated centrifugal regression. In eyes with leakage point $<$ 1000 μ m from fovea, 86% resolved in a centripetal fashion. In eyes with leak site $>$ 1000 μ m away from fovea, 70% eyes resolved centripetally. There was good correlation ($r = -0.47, p = 0.018$) of NSD area rate regression during first month and resolution timing. In contrast, correlation was absent ($r = -0.16, p = 0.44$) for CRT regression. **CONCLUSION:** En-face analysis of sequential OCTs of regressing CSCR demonstrated tendency for subfoveal SRF to resolve towards the end or a centripetal pattern of regression. 1 month SRF resolution prediction is better with SRF en-face area than CRT.

40. **SURGICAL INTERVENTION AND STENT PLACEMENT FOR PATIENT WITH MAY-THURNER SYNDROME AND DOUBLE INFERIOR VENA CAVA ANATOMY: CASE REPORT**

Brian Rosario¹.

¹ University of Pittsburgh

BACKGROUND: May-Thurner Syndrome (MTS) is caused by left iliofemoral vein compression by the right common iliac artery against vertebral bodies which can cause deep vein thrombosis (DVT) or venous flow obstruction resulting in lower extremity edema and tenderness. Double inferior vena cava (IVC) is a rare congenital anomaly arising from persistence of embryonic venous systems during fetal development. Although normally clinically insignificant, it may have significant implications in treatment of thromboembolic diseases. We report treatment of May-Thurner Syndrome in a patient with double IVC causing bilateral lower extremity edema. Surgical intervention is discussed. **PRESENTATION:** 65-year-old Caucasian male with left lower extremity ulcer and bilateral lower extremity lymphedema with intact valves in greater and lesser saphenous veins. No evidence of DVT. **SURGICAL INTERVENTION:** Venogram showed a double IVC; intravascular ultrasound showed stenosis of right and left iliac veins and left vena cava. Stenosis was treated bilaterally individually using standard angioplasty and stenting techniques. A 16mm x 100mm Venovo stent was placed in the left inferior vena cava. A second 16mm x 100mm Venovo stent was deployed into the left common iliac vein. **RESULTS/CONCLUSION:** Intervention resolved stenosis in affected vasculature. Within one week, venous flow returned to normal. The ulcer healed and lymphedema resolved bilaterally.

41. **HIGH-DEFINITION FIBER TRACTOGRAPHY (HDFT) MAY IDENTIFY TRACT-SPECIFIC OVERLAP WITH TUMORS IN PATIENTS WITH GLIOMAS AND PREOPERATIVE LANGUAGE DEFICITS**

Nikhil Sharma¹, Arka N. Mallela MD, MS¹, J Raouf Belkhir BA¹, Fang-Cheng Yeh MD, PhD¹, Bradford Z. Mahon PhD¹, Nduka Amankulor MD¹.

¹ University of Pittsburgh School of Medicine

INTRODUCTION: While maximum safe resection of glioma is well-established to increase overall survival, the effects and etiology of more subtle language deficits has not been well-established. Utilizing high-definition fiber tractography (HDFT), we sought to investigate the relationship between specific preoperative language deficits and injury to specific white matter (WM) tracts. **METHODS:** We performed a retrospective review of 31 patients who underwent glioma resection and had preoperative concern for language involvement. Patients underwent preoperative HDFT, structural MRI and postoperative MRI. We collected clinical data, demographics, and outcomes. For initial analysis, we examined overlap between tumor volumes and superior longitudinal fasciculus (SLF) I and II and the frontal-aslant tract (FAT). **RESULTS:** 24(77.4%) patients had high-grade glioma, 7(22.6%) had low-grade glioma. Left hemispheric (p=0.009), frontal lobe (p=0.018), and high-grade tumors (p=0.008) were associated with more severe preoperative language deficits. Tract-specific overlap analysis revealed moderate association between preoperative language deficit and higher overlap of tumor volume with left FAT (R=0.279) and left SLF II (R=0.156). Conversely, overlap of tumor with right SLF I and II was negatively associated with the presence of language deficit. **CONCLUSION:** HDFT can reliably identify WM tract-level changes that are associated with preoperative language deficits.

42. **AN EDUCATIONAL SURVEY OF THE CENTRAL PA GREEK AND MEDITERRANEAN DIASPORA REVEALS A NEED FOR INCREASED β -THALASSEMIA CARRIER STATUS SCREENING AND PUBLIC HEALTH EDUCATION**

Rhea Sullivan BS¹, Bridget Rafferty MPH, MD¹, Daniel McKeone MD, FAAP¹, Zissis Chronos PHD¹.

¹ Penn State College of Medicine MSTP

β -thalassemia, a heritable hemoglobinopathy, has high prevalence in people of Mediterranean descent. With the increasing number of immigrants from the Mediterranean region relocating to Central Pennsylvania, the population density of β -thalassemia carriers is also increasing. Without a Pennsylvania state β -thalassemia newborn screening program and robust studies quantifying carrier burden, generations of this at-risk diaspora continue to have a gap in preventative healthcare. In order to address a potentially growing knowledge gap, an educational survey was administered to 141 members of this population to assess perception of disease symptoms, prevalence, inheritance, pathogenesis, treatment, diagnosis, and known carrier status. Overall, the population of participants aged 45 years and older felt more familiar with the disease compared to those that are younger. Unfamiliarity with the disease in younger cohort was prominent, with 25% of participants having never heard of the disease. With 44% of participants between 13-24 yrs having had no educational source contribute to their knowledge of β thalassemia in their lifetime, there is a need to increase educational efforts and sustainable screening access to this at-risk population.

43. **PREDATORY JOURNALS: DO NOT JUDGE JOURNALS BY THEIR EDITORIAL BOARD MEMBERS**

Leon Ruiter-Lopez¹, Sandra Lopez¹, Diego A. Forero¹.

¹ University of Pittsburgh

Award: Exceptional Undergraduate Poster

BACKGROUND: Predatory journals, pseudo-journals, are low-quality scientific journals with an exploitative business model. They fail to provide scientific rigor or transparency, failing to provide adequate quality control, editorial services, peer reviews, or proper indexing. **OBJECTIVE:** Given that often the quality of journals is based on their editors, the objective of this study was to quantitatively describe the profiles of members on editorial boards (MEBs) of predatory journals. **METHODS:** Information was retrieved from 1015 editors found on journals on Beall's list: country, university, position, and degree. The Scopus website was used to identify the number of citations, documents, and h-index. **RESULTS:** Presumed open-access predatory journals include several profiles as MEBs, including fake and unqualified editors, and very high-qualified scientists who are professors, medical doctors and/or had a PhD. Located in 74 different countries, most had an affiliation in the United States of America (USA) (44.4%). The median of publications per editor was 43, citations 664, and h-index 14. **CONCLUSIONS:** The results dispute the common belief that it is possible to identify predatory journals through their editorial boards. Scientists should not rely on editors to determine a predatory journal. If an author has doubt, the editors should be contacted.

44. **TESTING VARIANTS OF UNCERTAIN SIGNIFICANCE IN A HEK293T MODEL FOR VERY LONG-CHAIN ACYL-COA DEHYDROGENASE DEFICIENCY**

Meena Sethuraman¹, Olivia D'Annibale MPH¹, Erik Koppes PhD¹, Al-Walid Mohsen PhD¹, Jerry Vockley MD, PhD¹.

¹ University of Pittsburgh School of Medicine

Newborn screening identifies inborn errors of metabolism, often confirmed by DNA sequencing. Variants of uncertain significance (VUS) result in ambiguity in diagnosis and need for treatment. Mutations in ACADVL result in very long-chain acyl-CoA dehydrogenase deficiency (VLCADD), impairing energy production from long chain fatty acids. Over 300 VUSs have been reported in ACADVL. We developed an ACADVL null HEK293T cell line to determine pathogenicity of ACADVL VUSs. CRISPR/Cas9 genome editing was used to ablate ACADVL with dual guide RNAs targeting the catalytic site. We measured VLCAD protein by Western blot and enzyme activity by electron transfer flavoprotein fluorescence reduction enzymatic assay. Control or variant ACADVL plasmids were transfected into ACADVL null HEK293T. Droplet digital PCR confirmed homozygous deletion of the catalytic site. ACADVL null clones contained no residual VLCAD protein and had 84% reduction in measured enzyme activity (residual activity due to enzymes with overlapping specificity). Transfection of control ACADVL restored normal VLCAD protein. Four mutant alleles produced reduced VLCAD protein and/or activity. We generated an ACADVL null HEK293T that has no residual VLCAD protein and reduced measured enzyme activity. Transfection of plasmids with control or variant ACADVL allows us to perform functional studies to examine variant pathogenicity.

45. **ANTIBIOTIC USE IN ACUTE DIVERTICULITIS: ADMISSION RATES AND ANTI BIOGRAM COMPLIANCE IN A RURAL CENTER**

Niteesh Sundaram¹, Kevin Reilly², Luke Dombert², Robert Behm³.

¹ University of Pittsburgh. ² Binghamton University. ³ The Guthrie Clinic

BACKGROUND: Acute diverticulitis (AD) refers to the inflammation of colonic diverticulum. AD is typically self-limited and managed conservatively with or without antibiotics as an outpatient. The standard outpatient antibiotic regimen for AD involves 7-10 days of ciprofloxacin/metronidazole (Cipro/Flagyl), amoxicillin/clavulanate (Augmentin), or a cephalosporin. Providers must consider local antibiotic sensitivities before choosing a regimen. Our study aims to determine the admission rate for patients treated for AD as an outpatient and if they were on optimal antibiotic regimens. **METHODS/RESULTS:** A single-center retrospective review from January 1, 2016 to December 31, 2018 with 3,105 unique outpatient AD visits. Antibiotics were prescribed for 1,141 (36.7%) patients, with 780 (68.4%) receiving Cipro/Flagyl, 184 (16.1%) Augmentin, 36 (3.2%) Avelox, 24 (2.1%) cephalosporins, and 117 (10.3%) alternative regimens. The admission rate was 6.9% for patients treated with Cipro/Flagyl, 15.8% with Augmentin, and 0% with cephalosporins. There was significant inconsistency between the effectiveness of antibiotics versus our antibiogram: Cipro (93.1% vs 74%; $p < 0.01$) and Augmentin (84.2% vs 57%; $p < 0.01$). **CONCLUSION:** There was a lack of concordance between antibiotic selection and our antibiogram. Furthermore, our low admission rates for those receiving Cipro/Flagyl or Augmentin imply our antibiogram is inaccurate or that AD was misdiagnosed.

46. **IMPACT OF EDUCATIONAL ATTAINMENT, INCOME LEVEL, AND FAMILY HISTORY ON COLON CANCER SCREENING RATES IN A RURAL HEALTH SYSTEM**

Briana Sylvester¹, Giovanni Baiamonte¹, Niteesh Sundaram², Mohammad Yousef³, Swadha Guru³, Robert Behm³, Matthew Lincoln³, Burt Cagir³.

¹ Geisinger Commonwealth School of Medicine. ² University of Pittsburgh. ³ The Guthrie Clinic.

BACKGROUND: Colon cancer remains a significant cause of morbidity and mortality despite updated screening programs and an array of screening modalities. Our study aims to assess the prevalence of colon cancer screening among distinct patient populations in a rural community hospital setting. **METHODS/RESULTS:** A single-center retrospective review of 52,103 patients, of which 36,853 patients (70.7%) underwent colon cancer screening. Our study showed that rates of colon cancer screening were not significantly affected by bachelor's diploma status ($R^2: 0.06$, $F(1,12): 0.78$, $p: 0.39$), high school graduation status ($R^2: 0.12$, $F(1,12): 1.74$, $p: 0.21$), or median household income ($R^2: 0.01$, $F(1,18): 0.29$, $p: 0.59$). Of the 3,417 total patients who had a family history of colon cancer, 2,957 (86.5%) were screened. Individuals with family history of colon cancer were more likely to be screened than those without (86.5% vs 69.6%; $p < 0.01$). **CONCLUSION:** In our population, traditional metrics associated with superior health outcomes were not shown to affect colon cancer screening rates. Patients with family members personally affected by colon cancer correlated with a higher rate of colon cancer screening. Our findings emphasize the responsibility of providers to provide patient education about colon cancer screening as it is an esoteric topic.

47. **UNDERSTANDING THE ETIOLOGY OF INFLAMMATORY BOWEL DISEASE IN A NOVEL LCK VARIANT**

Ngoc Truong¹, Victor Lui², Elena Hsieh².

¹ Cornell University, ² University of Colorado Anschutz Medical Campus

Lymphocyte-specific protein-tyrosine kinase (LCK) is a tyrosine kinase that initiates T cell receptor (TCR) signaling upon T cell activation through a network of cell surface receptors and proteins. A novel LCK mutation (Pro440Ser) was identified in two siblings presented with recurrent viral and fungal infections, failure to thrive, and inflammatory bowel disease (IBD) since infancy. A mouse model harboring the knock-in homologous mutation recapitulated human immunological and clinical phenotype. Our goal is to determine the underlying immunopathology of IBD using Lck mutant mice. We hypothesize that deficiency of regulatory T cells (Tregs) contributes to IBD development. We developed an optimized antibody panel that identifies and measures T cell populations pertinent to disease, such as antigen-experienced (CD44+ CD49d+) and regulatory (CD25+ FoxP3+) T cells. We adoptively transferred wild-type (WT) Tregs into Lck mutant mice and recorded IBD progression to determine whether Treg deficiency is an underlying contributor. 12 weeks after adoptive transfer, Lck mutant mice that received WT Tregs did not develop IBD while those that didn't receive exogenous Tregs did not, though longer incubation periods are needed for definitive conclusions. Future findings will advance our understanding of IBD in the context of disturbed T cell development from defective TCR signaling.

48. **TRIBBLES-1 AND ITS CORRELATION WITH CORONARY ARTERY DISEASE**

Olaya Daki¹, Katherine Quiroz-Figueroa¹, Nicholas J. Hand PhD¹, Daniel J. Rader MD¹.

¹ University of Pennsylvania, Perelman School of Medicine

Coronary artery disease (CAD) is a deadly chronic disease that affects the coronary arteries of the heart. CAD is characterized by the accumulation of fatty deposits in the walls of the coronary arteries that can harden into plaques restricting oxygen flow into the heart. These plaques can rupture, triggering heart attacks that can lead to sudden death. Risk factors include a smoking, poor diet, lack of physical activity, diabetes, hypertension, family history/genetic predisposition, high cholesterol, high levels of lipids and lipoproteins such as total cholesterol, and low-density lipoprotein-Cholesterol (LDL-C), and triglycerides. Genome-wide association studies (GWAS) have been broadly used to identify common genetic variants associated with diseases such as (CAD) and identify novel aspects of disease biology. The most common type of variants examined by GWAS are single nucleotide polymorphism (SNPs), which are biological single nucleotide variations between individuals. In some cases, single variants or combinations that define polygenic risk scores, allow researchers to predict an individual's response to certain drugs, susceptibility to environmental factors such as toxins, and risk of developing diseases. This poster looks at the recent studies which have started to unravel the genetic architecture of CAD as well as CAD response and prevention.

49. **MEDIAN ARCULATE LIGAMENT SYNDROME MASQUERADING AS FUNCTIONAL ABDOMINAL PAIN SYNDROME**

Michael Scharf¹, Kaitlyn Thomas², Shri Jai Kirshan Ravi³, Niteesh Sundaram⁴, Leonard Walsh³, Mustafa Aman³.

¹ Geisinger Commonwealth School of Medicine. ² Lake Erie College of Osteopathic Medicine. ³ The Guthrie Clinic. ⁴ University of Pittsburgh.

BACKGROUND: Median arcuate ligament syndrome (MALS) refers to anatomical compression of the celiac artery and/or ganglion by fibrous attachments of the median arcuate ligament. It typically presents as a vague constellation of abdominal symptoms that are often initially attributed to various other gastrointestinal pathologies; thus, it can be very difficult to diagnose. Surgical decompression is an effective and safe treatment for this condition. **CASE SUMMARY:** We present a case of median arcuate ligament syndrome in a 68-year-old woman. Her diagnosis and treatment were delayed as her symptoms were felt to be the result of functional abdominal pain syndrome. Once the diagnosis of MALS was confirmed, the condition was ultimately treated by laparoscopic release of the median arcuate ligament. **CONCLUSION:** This case demonstrates that surgical decompression of the celiac axis is an effective treatment for median arcuate ligament syndrome and highlights the importance of continuing to reassess the clinical picture of patients labeled with functional abdominal pain syndrome.

50. **STEADY STATE PATTERN ELECTRORETINOGRAM PREDICTS CHANGES IN OPTICAL COHERENCE TOMOGRAPHY IN GLAUCOMA SUSPECTS**

Amanda Wong¹, Daniel Zhu¹, Andrew Tirsi¹, Peter Derr¹, Sofia Tello¹, Celso Tello¹.

¹ Donald and Barbara Zucker School of Medicine at Hofstra/Northwell

BACKGROUND: Steady state pattern electroretinogram (ssPERG) parameters have been shown to be associated with structural changes on optical coherence tomography in glaucoma patients. However, no previous studies have investigated the use of ssPERG parameters in predicting structural changes in glaucoma suspects. **METHODS:** Patient data from glaucoma suspects, identified based on suspicious optic disc features and glaucoma risk factors, were prospectively collected. Statistical analyses were performed using ssPERG parameters Magnitude (Mag), Magnitude D (MagD), and MagD/Mag ratio and OCT measurements. **RESULTS:** A total of 49 eyes of 26 patients were included. ssPERG parameters Mag and MagD were significantly correlated to superior, inferior, and average RNFL thicknesses. All ssPERG parameters were significantly correlated with average and minimum GCL/IPL thickness and the inner macular sector thicknesses. Mag and MagD were found to significantly predict the superior, inferior, and average RNFL thickness. All ssPERG parameters were found to significantly predict GCL/IPL thickness in all sectors as well as all inner macular sector thicknesses. **CONCLUSION:** In glaucoma suspects, ssPERG can predict structural changes in RNFL, GCL/IPL and macular thicknesses on OCT and may serve as a more sensitive screening tool in patients with early glaucoma compared to current methods.

51. **ANNOTATING DATA TO TRAIN MACHINE LEARNING MODELS TO CLASSIFY CITATIONS IN BIOMEDICAL PAPERS**

Tasnia Haque^{1*}, Tiffany Lam^{1*}; Muhammad Rahman^{2*}, Karla González-Cruz^{3*}; PI: Yuanxi Fu⁴, Jodi Schneider⁴.

¹ Cornell University, Ithaca. ² University of Washington, Seattle. ³ University of Puerto Rico, Cayey. ⁴ University of Illinois, Urbana-Champaign.

*Co-First Authors

References provide the foundation and context for new biomedical science. Previous work defined keystone citations as references that logically support a paper's claims. This study aims to test whether methods keystone citations, defined as citations supporting research methods and materials, can be consistently identified by different people (i.e., consensual). Four students annotated citations from biomedical papers using a prior manual. Afterwards, they compared and discussed the results and updated the manual accordingly. Substantial inter-annotator agreement was found for the upper-level categories is methods keystone and not methods keystone (Cohen's kappa = 0.671), supporting that they are consensual. During the process, we discovered several subcategories. For the is method keystone category: used the method, used the material, used output of a paper in methods, and justify decisions made in the design of the methods. For the not methods keystone category: cited as background information, citing/cited agree, citing/cited disagree, used in knowledge synthesis, and qualifying method. This study furthered our understanding about how references were used to support a paper's claims. Future research is required to determine whether the subcategories are consensual and exhaustive, build a training dataset, and train supervised machine learning models to identify methods keystone citations.

52. **MICROSTRUCTURE OF EQUINE HOOF WALL**

Pei Robins, Charul Chadha¹, Iwona Jasiuk¹.

¹ Lawrence University

Equine hoof is highly impact resistant and lightweight, and the ability to absorb high energy is attributed to its hierarchical structure. Tubules are embedded within the lamellar intertubular matrix and have areas made of keratin crystalline intermediate filaments and amorphous keratin cells. The tubular and intertubular regions at the microscale are investigated using micro-computed tomography and image preprocessing with ImageJ. Throughout the hoof walls, tubules have circular cross-sections near the palmar region and become more elliptical near the dorsal region. The elliptical cross-sections closest to the dorsal region are the result of permanently tubule deformation from galloping. Preliminary studies assume that tubules are completely hollow, but with new micro-computed tomography analysis, we observe that the tubules are partially filled. The tubules have multiple bridges, which vary in frequency, thickness, and orientation relative to the length of the whole tubule. We believe that the bridges that fill the tubules are made of soft keratin and that the structural differences between different bridges are correlated to the mechanical properties of the hoof wall.

53. **GETTING A GLIMPSE INTO NEURO-OPHTHALMOLOGY MALPRACTICE: A REVIEW OF THE WESTLAW DATABASE**

Daniel Zhu¹, Amanda Wong¹, Paras P. Shah¹, Howard D. Pomeranz¹.

¹ Donald and Barbara Zucker School of Medicine at Hofstra/Northwell.

BACKGROUND: Neuro-ophthalmologic conditions are at a higher risk of misdiagnosis compared to other ophthalmic conditions. Increased awareness of the most common diagnostic errors in neuro-ophthalmology that lead to malpractice claims can allow ophthalmologists to further improve their diagnostic workup to reduce delays in diagnosis and management, while also mitigating the risk for litigation. **METHODS:** Malpractice trials in the Westlaw Legal Database involving cases of neuro-ophthalmologic diagnostic errors or failures by ophthalmologists were included. **RESULTS:** A total of 44 cases were included, all citing failure to diagnose as the main reason for litigation. The most common diagnoses missed were cerebrovascular pathologies (29.5%), intracranial tumors (27.3%), and giant cell arteritis (25.0%). The majority of verdicts were in favor of the defendants (47.7%). After adjusting for inflation, the average amount awarded was \$1,909,501. **CONCLUSION:** Nearly half of the cases resulted in a defendant verdict. Settlement and plaintiff verdicts were costly, with average awards of approximately two million inflation-adjusted dollars. Failure to diagnose cerebrovascular pathologies was the most common diagnostic error followed by failure to diagnose intracranial tumors and GCA. It is crucial for ophthalmologists to be aware of the most common pitfalls that lead to misdiagnosis or delays in diagnosis of neuro-ophthalmologic conditions.

54. **EFFECT OF CANDIDATE CIS-REGULATORY ELEMENTS ON GENE REGULATIONS**

Yajie Jia¹.

¹ Cornell University

Many studies have been trying to find the possible relations between candidate cis-regulatory elements (cCREs) and their target gene. It still remains unclear how the cCREs influence target genes and if cCREs are corresponding with certain target genes. Based on the benchmark study, we utilize single-cell analysis to categorize the cCREs with the possible target genes using multiple standards. Using the method of clustering, the frequency of cCREs appearing in each category has been analyzed. We found that on certain chromosomes, the cCREs have higher counts in one or few categories than others. The study may help with the development of future regulatory elements and gene prediction models and lead to possible explanations of the role cis-regulatory elements played in gene regulations.

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**ABSTRACTS OF THE
LAGOS STATE
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RESEARCH CONFERENCE**

IJMS

**INTERNATIONAL JOURNAL *of*
MEDICAL STUDENTS**

Abstracts of the Lagos State University Medical Students Association Research Conference

01. KNOWLEDGE AND PREVENTIVE PRACTICES TOWARDS LASSA FEVER AMONG ADULTS ATTENDING PRIMARY HEALTH CARE CENTERS IN MUSHIN LOCAL GOVERNMENT AREA

PAUL JOMBO, Suliat Oluwo, Temitope Lasisi

Lassa fever is an acute viral zoonotic illness caused by Lassa virus, an arenavirus known to be responsible for a severe haemorrhagic, it is endemic in West Africa and has been reported from Sierra Leone, Guinea, Liberia, and Nigeria. Studies indicate that 300,000 to 500,000 cases of Lassa fever and 5000 deaths occur yearly across West Africa. During 2014–2016, around 100 laboratory-confirmed LF cases were reported annually in Nigeria. This study assessed the knowledge, and practice of Lassa Fever Prevention among adults attending PHC in Mushin Local Government Area, Lagos State. A quantitative cross sectional descriptive research was conducted among adults attending primary health care centers in Mushin local government area to determine their level of knowledge and uptake of preventive practices as regards Lassa fever. A total of 315 respondents were utilized in this study with majority of the respondents are males (69.5%), 65.7% are between the ages of 21-30years and most respondents are still single (69.5%). In addition, 72.4% practice Islam, 71.7% reported to have tertiary education. More than half of the respondents 75.2% demonstrated good knowledge of lassa fever while 24.8% of the respondents possessed inadequate knowledge on lassa fever disease. Also, findings from this study showed that 79.4% of the respondents have good practice while 20.6% of the respondents have poor practice towards prevention of lassa fever disease. Identified factors influencing preventive practices against lassa fever were not washing hands regularly, irregular supply of water for hand washing and consumption of foods eaten by rats.

Keywords: Lassa fever, knowledge, prevention practices

02. KNOWLEDGE AND ATTITUDE OF SECONDARY SCHOOL STUDENTS TOWARDS SICKLE CELL DISEASE IN IKEJA LOCAL GOVERNMENT AREA

OLADUNJOYE MICHAEL OLUDARE, Okoka Elile Monisola

Sickle cell disease (SCD) is an autosomal recessive genetically transmitted group of disorders that affects hemoglobin. People with this disorder have atypical hemoglobin molecules called hemoglobin S. West African countries report the highest prevalence of the disease and Nigeria bears the highest-burden with 25% of the population possessing the sickle cell gene, and 2-3% living with the disease. The study design was a descriptive cross-sectional study carried out among senior secondary students of Ikeja Local Government Area, Lagos (n=272). Multi-stage sampling method was used and the questionnaire was self-administered. The information obtained was analyzed using Epi-info Statistical Software. A total of 272 questionnaires were administered. Majority of the respondents were between ages 15 – 16 years (59.9%). Majority of the respondents had heard about sickle cell disease (78.3%) and knew sickle cell disease to be an inherited disorder (66.2%). Majority had poor knowledge of sickle cell disease (63.2%). Almost half of the respondents strongly disagreed to marry someone with sickle cell disease (45.2%). A greater proportion of the respondents agreed to genetic counseling before marriage (46.7%). Most of the respondents had a positive attitude towards sickle cell disease (62.1%). This study concludes that despite the good awareness of the disease, the majority of the participants do not have full knowledge about SCD and are at risk of marriage to someone not genetically compatible.

Keywords: sickle cell disease, haemoglobin, students, Nigeria

03. AND PREVENTIVE PRACTICES AGAINST LASSA FEVER AMONG PEOPLE ATTENDING PHC IN MUSHIN LOCAL ADEWOLE OLAJUMOKE, Ndu-Esekea Theodora, Sangosanya Gbotemi

BACKGROUND: Promoting research interest among medical students at an early stage before they make career choices is vital in ensuring the availability of physician scientists within the African continent to take up the role of carrying out research to improve healthcare in Africa. Hence, this study seeks to determine the knowledge and attitude of undergraduate Nigerian medical students towards research and research oriented careers. **METHODS:** A cross-sectional study design was conducted among all medical students in 200 – 600 levels of study at Lagos State University College of Medicine. Their knowledge of research, analytical tools and research biomedical search engines and their attitudes to research was examined with the aid of self-administered questionnaires. **RESULTS:** The data were obtained from 187 medical students of whom 25.7% had a prior involvement in research, and 16.7%, 75% and 8.3% assisted in a research, conducted a final year project and currently learning on how to conduct a research respectively. Less than half of the respondents (42.8) plan to specialize in research oriented careers, while 50% wanted a research career in fellowship. Most of the respondents had a poor knowledge of research (69.5%) and more than half of the respondents (54.5%) had a good attitude to research. **CONCLUSION:** Our study highlights the need for adequate training and mentored supervision to improve their knowledge of research and an overall interest in research and research oriented careers.

04. KNOWLEDGE, ATTITUDE AND UTILIZATION OF ANTE-NATAL CARE SERVICES AMONG WOMEN OF REPRODUCTIVE AGE IN IKEJA LOCAL GOVERNMENT AREA

ODEYEMI JOSHUA, Njokanma Dennis, Olabisi Victoria

BACKGROUND: Maternal mortality refers to any loss of a woman's life resulting from pregnancy complication or death within 42 days after childbirth. Nigeria is ranked as one of the countries with high rate of maternal mortality with an estimated maternal death of 54,000 accounting for 19% of global maternal deaths in 2015. Ante-natal care (ANC) could help improve the survival and health of babies and mothers directly by reducing pregnancy complications also it indirectly help to provide health contacts with the woman at a key point in the continuum of care. A study was done which suggests that if 90 percent of women received ANC up to 14 percent newborn and mother lives could be saved in Africa. However, the benefits of ANC are greater than mortality reduction alone, it is also a cost effective public health package. **AIM:** The aim of the study is to assess the knowledge, attitude and utilization of ante-natal care services among women of reproductive age in Ikeja local government area. **METHODS:** The study is a descriptive cross sectional study that would be carried out to assess the knowledge, attitude and utilization of ante-natal care among women of reproductive age in Ikeja Local Government, the sample size calculated using Cochran formula which was 264. Multi-stage sampling method was used, the respondents from each primary health care will be chosen by simple random method. Data will be collected using an interviewer-administered structured questionnaire. The information obtained will be analyzed using Epi-info Statistical Software.

05. RESEARCH PROPOSAL – A SURVEY OF HEPATITIS B POSITIVE INDIVIDUALS; DEMOGRAPHIC DATA, DIAGNOSIS, CLINICAL SEQUELAE AND THERAPY USING LAGOS STATE UNIVERSITY TEACHING HOSPITAL

DAWODU OLUWANANUMI JOSHUA, Okoka Elile Akingbola Adewunmi

INTRODUCTION: Hepatitis B (HB) virus infection is a global public health problem. It is an infectious disease caused by the hepatitis B virus (HBV) that affects the liver. Transmission of the virus is by exposure to infectious bodily fluids. The diagnosis is usually confirmed by testing the blood for parts of the virus and for antibodies against the virus. **PROBLEM STATEMENT AND CONTRIBUTION TO KNOWLEDGE:** Hepatitis B infection is still one of the deadliest infectious diseases in Nigeria, contributing a very large percentage to mortality. This is largely due to the insufficient awareness about the virus and its transmission as well as availability of the vaccine as vaccination programs in Nigeria have not received the required attention or funding by the government. **PROPOSED RESEARCH DESIGN AND METHODS:** A descriptive cross-sectional study conducted will be conducted at the Lagos state University Hospital (LASUTH), Lagos state. Hepatitis B positive persons after an informed consent will complete a self-administered pretested questionnaire. Data will be kept anonymous and discarded after the completion of the research. SPSS statistical software will be used for data entry and analysis. Descriptive analysis of the sociodemographic characteristics will be performed and the results expressed as numbers and percentages. The level of statistical significance will be set at $P < 0.05$.

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**ABSTRACTS OF THE
MEDICAL UNIVERSITY
CONGRESS OF MOGI DAS
CRUZES, COMUMC**

IJMS

INTERNATIONAL JOURNAL *of*
MEDICAL STUDENTS

Abstracts of the Medical University Congress of Mogi das Cruzes, COMUMC

Poster Session

CASE REPORTS AND EXPERIENCE REPORTS

01. ANALYSIS OF THE IMPACT OF THE TYPE OF DELIVERY ON THE NEWBORN MICROBIOTA: AN AGGREGATIVE REVIEW

ROSSI, P.A.¹; SARTORI, C.G.P.¹

¹-Universidade de Mogi das Cruzes.

INTRODUCTION: Microbiota or human microbiome are terms used to represent a collection of microorganisms belonging to a part of the body, such as skin, hair, oral cavity, airways, gastrointestinal and urogenital tracts. Briefly, it is the first line of defense against pathogens, aids digestion and matures the immune system (BELKAID, 2015). The microbiota formed by contact with the mother's vagina in the newborn varies, mainly, according to physiology, culture and environmental factors such as gestational age versus birth date, maternal diet and lifestyle before, during and after delivery (this includes if the baby's lifestyle too), and the type of delivery (GREGORY et al, 2015). Babies born through normal delivery are soaked in the maternal vaginal flora from the very first moment outside the uterus, which constitutes the main difference from cesarean delivery. This review assesses the impact of the type of delivery on the child's postpartum life, on the immunological maturation and development of chronic diseases such as allergies, asthma, diabetes and obesity..

OBJECTIVES: To produce an aggregative literature review on the impact of the type of delivery on the newborn microbiota.

MATERIALS AND METHODOLOGIES: Databases such as Scielo, PubMed, academic google and health journals were used to collect scientific articles on topics related to intestinal microbiota and type of delivery, maturation of the immune system in perinatal life according to type of delivery, microbiota and starter culture and impact on nutritional status up to 2 years according to their type of delivery.

DISCUSSION: The discussion is developed about the type of delivery that the newborn comes to be born interferes with the formation of its microbiota. When born through a normal delivery, the newborn goes through the mother's vaginal flora, causing him to have the first contact with some microorganisms that are located in the vaginal region. A newborn born by cesarean section, on the other hand, has his first contact with microorganisms that are present on the mother's skin, especially in the abdominal region where the incision and passage of the newborn occur. Brazil has increasingly increased the number of cesarean deliveries, now occupying the second position in the ranking made by the UN, which is of great concern to researchers who already relate the increase in this delivery to the increase in diseases the newborn goes through the mother's

vaginal flora, making him have the first contact with some microorganisms that are located in the vaginal region. A newborn born by cesarean section, on the other hand, has his first contact with microorganisms that are present on the mother's skin, especially in the abdominal region where the incision and passage of the newborn occur. **CONCLUSION:** Studies have shown that vaginal delivery favors the formation of a good microbiota for the newborn. When passing through the entire vaginal canal, the newborn is bathed by microorganisms present in the vaginal flora, having the development of its own microbiota, with some microorganisms present in the region where it travels during normal delivery.

KEY WORDS: Microbiota, Parturition, Newborn.

02. ASSOCIATION BETWEEN MAJOR DEPRESSIVE DISORDER AND POST-OPERATIVE HEART SURGERY MORTALITY: A REVIEW

HAMBERGER, Y. V.¹; FREITAS, P. V. C.¹; NOGUEIRA, A. M. P.¹; SILVA, R. J.¹; BISOL, L.W.¹; SOUZA, F. G.M.¹

¹-Universidade de Mogi das Cruzes.

INTRODUCTION: Major depressive disorder is an important risk factor for death from cardiovascular disease, and this association is attributed both to biological dysregulation and altered health habits.

OBJECTIVE: To research the relationship between depression and prognosis after cardiac surgery. **METHODOLOGY:** Articles were searched in EMBASE, Academic Google and PUBMED databases, in Portuguese and English, published from 2016 to 2021. The descriptors used were "depression", "cardiac surgery" and "mortality". 4 articles met the description.

RESULTS: Drudi et al (2018) investigated the association between depression, frailty and mortality, analyzing the presence of depressive symptoms post transcatheter myocardial revascularization (ART) and surgical (SARV) procedures, including the follow-up after 6 and 12 months. Their analysis showed that depression is highly prevalent among elderly people with aortic stenosis undergoing both procedures, being present in 1 in 3 patients. They also observed an association between depression and increased mortality from all causes in the short and medium term after adjustments for clinical and geriatric risk factors. Bucker et al (2019) analyzed a group of 141 patients who had heart transplantation and depression assessed, on average, 5 years after transplantation, using the Beck Depression Inventory (BDI) scale. Demonstrating increased mortality in patients with a high BDI score compared to patients without this disorder. Furthermore, clinically

significant depression was also an independent predictor of mortality in the multivariate analysis. The assessment of the cognitive-affective and somatic subscales showed that neither of them was an independent predictor of mortality. Duerinckx et al (2021) evaluated the correlation between depressive symptoms scanned 1 year after heart transplantation with long-term mortality in 190 patients. Identifying that a BDI score > 10 increased the risk of death by 2.95 times, with each added 6 points on the scale, the risk elevated by 31%. Geulayov et al (2018), applied the Hospital Anxiety and Depression Scale (HADS) before and 1 year after coronary artery bypass graft surgery in patients who were followed up in the long term. They found a higher proportion of women with high scores on the HADS. Furthermore, high HADS scores before and after surgery were associated with increased all-cause mortality during the 11-year study. On the other hand, preoperative anxiety symptoms influenced overall mortality and postoperative symptoms predicted higher mortality in women. **CONCLUSION:** Evidence indicates that depressive symptoms are predictive of long-term mortality after cardiac surgery. The review presented may encourage similar research in Brazil, seeking the early identification and treatment of major depressive disorder among patients undergoing cardiovascular surgery.

KEYWORDS: Cardiac surgery; depression; mortality.

03. ATYPICAL ANGINA PECTORIS IN PATIENT WITH COVID-19: A CASE REPORT

HUSZCZ, G.B.¹; LEMOS, L.S.¹; RODRIGUES, C.G.¹; SUARTA, M.W.¹; CAMARGO, S.M.¹

¹ Universidade de Mogi das Cruzes.

INTRODUCTION: Infection by SARS COV-2 has brought different symptomatic manifestations, mainly respiratory. Many cases related to cardiac manifestations have been reported, including cases of acute coronary disease, Heart Failure and Arrhythmias. This article reports a cardiac manifestation in a patient after the infection with the new Coronavirus. **OBJECTIVE:** A case report of an obese patient with subclinical hypothyroidism who contracted the new coronavirus and evolved with subjective cardiac alterations. **METHODS:** Case report of a patient from medical records, together with an interview and report of the information described. A total of 7 articles were selected from Scielo, Pubmed and Lilacs platforms, including a guideline from the Brazilian Society of Cardiology, a case report and 4 research articles. **RESULTS:** A 30-year-old male patient, Grade 1 obese (BMI=31 kg/cm²), personal history of subclinical hypothyroidism and COVID-19 infection in May 2020. Patient reports constant and constriction, non-exertion-related and non-ventilation related retrosternal pain, on the 16th day of infection. In the first 7 days without respiratory symptoms, in the following 7 days the patient presented fever, cough, adynamia, tiredness, headache. On the 16th day, the patient had a syncope while taking a shower, and was admitted to a hospital service. Computed tomography (CT) performed, showed involvement of <10% of both lungs; CT angiography (Pulmonary Thromboembolism (PTE) protocol) Negative; Negative Ultra Sensitive Troponin and Transthoracic Echocardiography without alterations. With an increased anticoagulant dose (0.5 mg/kg 12/12), the patient was discharged. The patient developed tachycardia (140-150 bpm on small efforts, such as taking a shower), retrosternal pain, constant, without fever. Dizziness on small movements, and was again referred to the hospital for tests. Cardiac magnetic resonance imaging indicating minimal

pericardial effusion and anterior and anteroseptal hypokinesia of the left ventricle (LV). CT of coronary arteries without calcification or reduction in the caliber of the arteries. HOLTER, Electrocardiogram and Two-dimensional Echocardiogram with color Doppler without alterations. The patient was discharged, using Carvedilol (25g 12/12), with persistent precordial pain, dyspnea and limitation to great efforts. Repeat examinations are scheduled one year after the onset of cardiac symptoms. **DISCUSSION:** The current literature has shown many case reports of cardiomyopathy associated with SARS COV-2 infection. According to current guidelines, heart disease has shown greater morbidity and mortality in infected patients. Our patient did not have a myocardial or any other significant disease of the heart, with normal parameters such as ejection volume and mass of the ventricle. Also, Carvedilol, as a drug choice for Angina pectoris, did not alleviate all the patient's pain. **CONCLUSION:** It is an Atypical angina, not related to breathing and exertion, with minimal pericardial effusion, without any other significant clinical finding.

Key words: Atypical angina, Cardiomyopathy, COVID 19.

04. BILATERAL COMPLETE URETERAL DUPLICATION IN A WOMAN WITH RECURRENT URINARY TRACT INFECTION (UTI): CASE REPORT

FIGUEIREDO, B. Q.¹, OLIVEIRA, R.C.¹

¹ Centro Universitário de Patos de Minas.

INTRODUCTION: The ureters are bilateral thin tubular structures (3 to 4 mm) that connect the kidneys to the urinary bladder, carrying urine from the renal pelvis to the bladder. The muscle layers are responsible for the peristaltic activity that the ureter uses to move urine from the kidneys to the bladder. **CONTEXT AND OBJECTIVE:** Thus, we present a clinical case of a patient with bilateral complete ureteral duplication, associated with frequent episodes of urinary tract infection, which was approved by the Research Ethics Committee of the University Center of Patos de Minas (UNIPAM) under protocol number 4,982,290. **CASE EXPOSURE:** This is a female patient, 18 years old, with frequent episodes, since the age of 14, of urinary tract infections and complaints of feeling of incomplete bladder emptying, under treatment with a urologist. At 15 years of age, he was diagnosed with bilateral complete ureteral duplication, by means of computed tomography of the total abdomen, with subsequent intravenous administration of contrast. **EVOLUTION:** It is reported that after infections, the presence of constant vaginal discharge is intensified, in large quantities, with a strong odor, however, without burning. **DISCUSSION:** Bilateral complete ureteral duplication is most often associated with vesicoureteral reflux, ectopic ureterocele, or ectopic ureteral insertion, all of which are more common in women, as well as persistent urinary tract infections, which is often treated with antibiotic therapy prophylactic. **FINAL CONSIDERATIONS:** Many of the ureteral morphological changes can be evaluated using computed tomography, due to its most modern technological advances, it has contributed in recent years to a better characterization of morphological changes, being essential in the diagnosis of congenital anomalies, better guiding clinical and therapeutic decisions surgical procedures and acting as an essential tool in the identification of associated complications.

KEYWORDS: Uretes, Anomalies, Urinary Tract, UTI.

05. BREAST CANCER IN YOUNG WOMENSILVA, J.C. N.^{1*}, PEREIRA, A. M. ¹, PEREIRA A. M. ¹, VIZOTTO, I. D. ¹, SILVA, A. R.²¹Universidade Brasil. ²Faculdade de Medicina de Catanduva

INTRODUCTION: Breast cancer (CM) most often affects women over 50 years of age who have already entered menopause, on the other hand, the number of young women who get sick represents a small portion of all cases. It is estimated that 2 to 5% of cases occur before the age of 35. The studies are still divergent, however, what is known is that most of the time in young women the CM is associated with a worse prognosis, as they may present in their clinical and pathological association a more biologically aggressive disease. In young women, CM tends to be hereditary, with mutations such as brca 1 and 2 genes. Because it is of a less favorable prognosis, treatments tend to be more aggressive, while malignant diseases of secondary causes are more common. **OBJECTIVE:** This study aims to review the scientific literature on Breast Cancer in Young Women. **METHODOLOGY:** This work is a review of bibliographic literature. The data extracted in the research were from the US National Library of Medicine (PubMed) and Scientific Electronic Library Online (SciELO) with the descriptors: Breast Neoplasms, Young Adult, Adolescent and Immunophenotyping, according to the Descriptors in Health Sciences (DeCS). A total of 235 articles were found and after inclusion and exclusion criteria, 6 articles were used. Those used for inclusion: articles in English, Portuguese, or Spanish, between 2009 and 2021, and that were available in full and for free online access. **DISCUSSION:** The clinical characteristics of breast neoplasms in younger women differ from those that arose later, so age in the diagnosis of breast cancer remains the most important variable in determining prognosis. These tumors in patients under 40 years of age have a higher histological degree, an unfavorable immunohistochemical profile, and a high mortality rate compared to older women, and are more often classified as a triple-negative breast cancer (TNBC), i.e., estrogen receptor (RE), progesterone receptor (PR), and human epidermal growth factor receptor-2 (HER2-) negative. In addition, young women are more likely to have local recurrences, be diagnosed at a more advanced stage, and have a 5-year survival worse compared to their older premenopausal counterparts. **CONCLUSION:** Breast carcinomas of young women have more aggressive clinical, pathological, and molecular characteristics, when compared to women over 50 years of age. This large-scale genomic analysis illustrates that breast cancer that arises in young women is a unique biological entity driven by the unification of oncogenic signaling pathways, is characterized by lower hormonal sensitivity and greater expression of HER-2 / epidermal growth factor receptor (EGFR) and justifies additional studies to offer this group of women better prognoses and preventive and therapeutic options.

Keywords: breast neoplasms, young adult, adolescent, immunophenotyping.

06. CHANGES IN EATING HABITS AND LIFESTYLE OF CHILDREN AND ADOLESCENTS IN QUARANTINEHITZSCHKY L.B¹; MIOTO E.B¹; NAKAMURA; G.S.G¹; ROSSI, P¹; YEUNG, W.K.C¹; NAUFEL, H.G¹.¹Universidade de Mogi das Cruzes.

INTRODUCTION: The COVID-19 pandemic has impacted different spheres of human life worldwide. In children, the disease in its symptomatic form is uncommon, and when it occurs, it usually has a

mild clinical picture, although more severe cases have been reported in the scientific literature. In this light, disease prevention measures were implemented in order to contain the spread of the virus. As a result, more than 2.6 billion people have been subjected to home confinement. Such circumstances motivated individuals in quarantine, including children and adolescents, to change their lifestyles and eating habits. **OBJECTIVE:** To identify the main changes in eating habits and lifestyle in children and adolescents in quarantine at national and international level. **MATERIALS AND METHODOLOGY:** this is a narrative review carried out according to research involving changes in eating habits and lifestyle of children in quarantine. The electronic databases used were: Scientific Electronic Library Online (SciELO) and PubMed, and Europe PubMed Central. The keywords used were: covid-19, children, sedentary behavior, dietary intake; physical activity; obesity; behavior changes; quarantine; food habits. Inclusion criteria: national and international journals published between 2018-2021 and that studied individuals in the age range: 1 month to 21 years of age. Exclusion criteria: articles that do not establish any relationship with the proposed topic, that did not meet the inclusion criteria and review articles. These were analyzed by 5 researchers and discussed later. **DISCUSSIONS AND RESULTS:** there was an increase in the weight of children and adolescents; decreased time and frequency of physical activities; increased consumption of high-calorie and unhealthy foods; increased sleep time; change in sleep pattern; visual impairments; increased screen time; behavioral and psychological changes; increased consumption of healthy foods; decreased compliance with World Health Organization (WHO) movement guidelines; relationship between caloric and unhealthy eating and weight gain; increased screen time and anxiety and visual impairments; existing contradiction between BMI and the risk of a more serious infectious condition of COVID-19; similarity between changes in eating habits and lifestyle during the pandemic between children and adults. **CONCLUSION:** Based on the changes found, it is recommended that policies be created that mitigate the high mitigation restrictions, ensuring more open spaces for children to move. The importance of participating in the distance learning program, conducting PE online and the relevance of parents in structuring a healthy routine for the child, with rules for the use of screens, is highlighted.

Keywords: COVID-19; kids; teenagers; eating habits, lifestyle.

07. COMPARISON OF THE KNOWLEDGE OF LAY PEOPLE ABOUT BASIC LIFE SUPPORT IN A 10-YEAR PERIODALMEIDA, L. P. ¹; RAVAGNANI, A. R. ¹; RIBEIRO, B. O.¹; SOUZA, M. R. P¹.¹Universidade de Mogi das Cruzes.

INTRODUCTION: Deaths related to diseases of the cardiorespiratory system correspond to approximately 31% of deaths in the world. From this current context, it is known that sudden cardiac arrest (SCA), define as the absence of the heart's effective mechanical activity and that Basic Life Support (BLS) actions are essential to reverse this clinical condition with minimal sequelae. The justification for this is the direct relationship between time and the preservation of myocardial and cerebral functions, as well as the reduction of morbidity and mortality rates and the influence on prognosis. The stages of the BLS include an acknowledgment of the arrest, the absence of thoracic movement and air noise during breathing, and cardiopulmonary resuscitation (CPR) maneuvers. Two studies show that good care in an extra-hospital environment decreases the

chances of neurological sequelae and deaths resulting from SCA by two to three times. However, only about 30% of these victims are effectively assisted, since few individuals know how to correctly recognize and provide the first care. **OBJECTIVE:** To assess whether the lay population is qualified to perform the first aid to a SCA victim. **MATERIALS AND METHODOLOGY:** Selection of articles in the Scielo database based on the keywords: Basic Life Support; First Aid; Cardiorespiratory Arrest. Of these, two publications with an interval of 10 years were chosen to assess whether there was an increase in the level of knowledge of the laity about the procedures of Basic Life Support. **DISCUSSION:** Through these data, a descriptive-exploratory study in which 385 people over 18 years of age were interviewed about their knowledge of BLS. Of these, 75.8% knew to verify the presence of respiratory movements correctly, however, only 16.4% fully knew the maneuvers to facilitate breathing and only 9.9% answered correctly to the question about the ventilation technique. Another survey with university employees showed that 67.7% of respondents did not know the meaning of BLS, being somewhat more evident in men, black, with completed higher education, with up to three minimum wages and post not related to teaching. This study also pointed out that 61.5% of this population does not feel properly oriented to perform the procedures. This study demonstrated the need for greater orientation of the population in relation to CPR techniques, and it is more appropriate to start teaching at school. **CONCLUSION:** If a SCA occurs in an extra-hospital environment, the first measures will be taken by laymen, in most cases, they have no training on BLS at the level of course or graduation. In this scenario, it is important that the population is able to carry out this care, since they are the first to reach the victim. From the elaboration of this review, it is identified the need to reinforce the dissemination of the importance of Basic Life Support of SCA victims to the adult population in general, since the two articles analyzed, one from 2009 and the other from 2020, demonstrate that there has been no progress of this knowledge in more than a decade.

08. COVID-19 AND PREMATURETY: A NARRATIVE REVIEW

BRAGA, B. S.¹; CASTRO, J. F. R.¹; CORREIA, C. V.¹; PRADO, J. C. F.¹; ROSSI, P. A.¹; NAUFEL H.G.¹.

¹Universidade de Mogi das Cruzes

INTRODUCTION: In December 2019, a new type of coronavirus, called SARS-CoV-2, which causes COVID-19 and the current pandemic, was detected. This virus can cause severe lung diseases, mainly affecting people with comorbidities, immunocompromised and pregnant women. One of the possible complications in pregnancy is prematurity (a baby born with less than 37 weeks of gestation), and this condition can have a considerable impact on children's life, as a preterm child is clinically fragile and can develop several health problems and severe complications. Considering this scenario, researchers have been trying to establish a possible relationship between SARS-CoV-2 infection during pregnancy and preterm birth. **OBJECTIVE:** To analyze if there is, until this moment, a relationship between the cases of pregnant women with Covid-19 infection and premature births. Describe the consequences to the children of mothers infected by COVID-19. **MATERIALS AND METHODOLOGY:** Articles from the Scielo and PubMed databases were analyzed for this narrative review. The descriptors "covid" and "premature" were chosen in Scielo, and in Pubmed the descriptors were "Preterm Birth" and "COVID-19" with full free publication filter, resulting in 29 articles. After the titles and abstracts were analyzed, five articles were selected and used in the results and discussion.

Review articles or articles that did not address the topic covid and/or prematurity were not included in the analysis. **DISCUSSION AND RESULTS:** Nowadays, a possible correlation between cases of pregnant women with COVID-19 and prematurity has been studied, as children in this condition are more susceptible to developing various diseases and, in the future, may have impaired neuropsychomotor development. Among the five articles that fit into this narrative review, one points to the existence of a relationship between maternal infection by COVID-19 and premature birth; one claims that there is no relationship; and two articles describe that the pandemic had consequences on child development and monitoring of the health of these children. A survey found prematurity rates of 26.4% among newborns of infected mothers. While in another study there was no correlation between infection and prematurity. Considering that, the existence of a relation between maternal infection by COVID-19 and premature birth cannot be affirmed. **CONCLUSION:** From this narrative review, a correlation between the cases of pregnant women with COVID-19 and prematurity cannot be concluded. However, the articles analyzed show that the absence of guidance, interrupted care, delayed vaccinations, financial difficulties, reduced social support and emotional stress during the COVID-19 pandemic caused damage to the development of premature babies, highlighting the importance of pregnant women to maintain their protective measures against the coronavirus and follow up with prenatal care and childcare after the child's birth. Considering that the topic analyzed is very recent and studies are still being carried out, the proposed analysis is based on articles published until this moment, which does not exclude the possibility of evidence in future studies.

KEYWORDS: SARS-CoV-2; Premature Birth; Child Development

09. COW'S MILK PROTEIN ALLERGY: FROM DEFINITION TO TREATMENT

BRITO, J. F. B.*; LEAL, G. G; ORSO, V. C. E. S. A.

INTRODUCTION: Cow's milk protein allergy, the most common cause of allergy during the first year of life, with an increasing prevalence of 2.5% in children, is an abnormal immune response, mediated by antibodies and/or cells, being: IgE mediated, unmediated IgE or mixed type reaction. According to the pathophysiological mechanisms involved, adverse reactions to food can be classified as immunological or non-immunological, and are described as a multifactorial pathology. The non-immunological reactions depend mainly on the ingested substance (for example: bacterial toxins present in contaminated food) or on the pharmacological properties of certain substances present in food. Immunologic reactions depend on individual susceptibility. **OBJECTIVES:** To describe the definition, classification, pathophysiology, diagnosis, and treatment of cow's milk protein allergy, in view of its increasing prevalence. **MATERIALS AND METHODOLOGY:** For this study, searches were conducted in 2 bibliographic databases - PubMed and SciELO. From these platforms, a systematic review of the collected data was carried out, using scientific articles from the last 5 years, in Portuguese and English versions. Concomitantly, the research was based on the 2018 Brazilian Consensus on Food Allergy (Part 1 and 2). **DISCUSSION:** Cow's milk protein allergy is determined by genetic inheritance (40-80% increased risk) linked to dietary factors (early weaning, vitamin D insufficiency, reduced consumption of omega-3 polyunsaturated fatty acids) and behavioral factors (higher incidence in children of

pregnant women who smoke and/or alcohol during pregnancy). The diagnosis is validated from the clinical history, prick test and specific IgE serum dosage (ImmunoCAP® System). In some situations, oral provocation test and atopic food contact test are performed. The clinical manifestations were shown to vary according to the immunological mechanism involved: IgE mediated - urticaria, angioedema, flushing, bronchospasm, nasal coryza, oral allergy syndrome, diarrhea, and anaphylactic shock (the latter with a frequency of 10%, with greater severity in asthmatics); mixed reactions: atopic dermatitis, asthma, eosinophilic esophagitis, eosinophilic gastritis/gastroenteritis; non-mediated IgE - herpiform/contact dermatitis, gastroesophageal reflux, Helner's syndrome, food protein-induced enterocolitis/protocolitis syndrome. As for treatment: exclusion diet, use of hypoallergenic antihistamines (IgE mediated reactions) and systemic corticosteroids. Currently, oral and sublingual immunotherapy are areas of active investigation. **CONCLUSION:** Although 80% of patients with Cow's milk protein allergy in the first year of life develop tolerance by five years of age, there is a need for early diagnosis so that hypersensitivity is identified, treated, and comorbidities are avoided. Moreover, prevention is extremely valuable: use of hydrolyzed or partially hydrolyzed formulas (when exclusive breastfeeding is not possible), and introduction of solid foods not delayed beyond 4-6 months of age.

KEYWORDS: Milk hypersensitivity; Classification; Diagnosis; Behavior.

10. FAILURE TO ADHERE TO THE TREATMENT OF SYSTEMIC ARTERIAL HYPERTENSION IN FAMILY HEALTH UNITS

BERNARDES, I. P.¹; GRAZZIOTIN, G. N.¹; AUGUSTO, G.G.¹; COSTA, M. F. N.¹; PANICO, C. T.¹.

¹Universidade de Mogi das Cruzes

INTRODUCTION: Systemic arterial hypertension (SAH) is a pathology defined by high levels of systemic blood pressure (above 120/80 mmHg) and is considered a setback in primary care, as it is associated with metabolic and functional changes in target organs. **OBJECTIVE:** Analysis and identification of possible causes of failure to adhere to the treatment of SAH among people over 60 years enrolled in the territory of the Airport II Family Health Unit (FHU). **METHODOLOGY:** Observational cross-sectional study based on the analysis of data through the application questionnaire in a group of 30 people aged 60 years or more, carriers of SAH, attended at the Family Health Unit Aeroporto II in Mogi das Cruzes. Results: The prevalence was observed among the following groups of elderly people carriers of SAH: patients between 61 and 70 years, white, women, people with a low education level sedentary and who have an incorrect diet. The medication forgetfulness was the main cause of treatment interruption. Diabetes was the most prevalent disease associated with SAH among patients. **DISCUSSION:** The failure of SAH treatment can be related to several factors, among them most are behavioral and are associated with habits acquired during life, such as unhealthy eating and sedentary lifestyle. The low education level of the population in question also harms the treatment, as it makes it difficult to understand the disease and the care to be taken. **CONCLUSION:** The effectiveness of the treatment of SAH is closely linked to healthy habits and understanding about the disease.

Key words: Systemic arterial hypertension; Treatment; Elderly.

11. IMPACT OF RESPONSIBLE SELF MEDICATION OF ANALGESICS AND ANTI-INFLAMMATORY ON DIFFERENT POPULATIONS

SUARTA, M.W.¹; HUSZCZ, G.B.¹; LEMOS, L.S.¹; RODRIGUES, C.G.¹; CHAN, M.R.L.S.¹

¹Universidade de Mogi das Cruzes

INTRODUCTION: Self-medication is the consumption of medication without a proper medical prescription. Its practice can cause individual and collective problems, since it increases the costs of the health system and can cause injuries due to the erroneous consumption of the medicine. Self-medication is due to the combination of easy access to medicines, not prescribed by the doctor, added to the purchasing power of patients, especially anti-inflammatory and analgesics, which can lead to drug abuse and, therefore, more recurrent in populations of countries more developed. Several drugs are freely marketed, without the need for a prescription, this factor linked to the "marketing" of drugs, can contribute to self-medication and harm to the patient. Elderly people may be more susceptible to the polypharmacy process (daily consumption of 4 or more medications), especially due to senescence, which contributes to the higher consumption of medications, ranging between 2 and 5 per day, which is a reason for warning since it may pose health risks. **OBJECTIVE:** Analysis of the impact of self-medication on the population. **METHODOLOGY:** This is a literary review, using filters: Portuguese and English, complete and corresponding to the last 5 years. The platforms Scielo, Medline, Academic Google and Lilacs and the descriptors "Self-medication", "Analgesics" and "Anti inflammatory" were used. A total of 4,731 articles were identified and, after the filters, 104 were identified, after reading the titles and abstract 10 were selected at the end of the research, which covered the subject, 05 articles in English and 05 in Portuguese. **RESULTS AND DISCUSSION:** Polypharmacy can vary between populations. In the selected studies, the age range ranged from 11 to 69 years, from different countries and ethnicities. Some surveys have shown a higher prevalence of self-medication in the female population. There was no report of a higher prevalence of self-medication in the male population compared to the female population in the studies. Much of the population studied practiced self-medication, especially the elderly, which could cause long-term damage such as gastric ulcers, kidney and liver problems. **CONCLUSION:** The use of over-the-counter medications entails unnecessary social and economic harm. The most used anti-inflammatory and analgesics are acetaminophen and dipyrone. The use of such medications must follow medical advice.

Keywords: Self-medication, Analgesics and Anti-inflammatories.

12. LACK OF EFFECTIVE TREATMENTS FOR SPORADIC CREUTZFELDT-JAKOB DISEASE: A SYSTEMATIC REVIEW

SANTOS, A.G.E.¹; HUSZCZ, G.B.¹; HENRIQUES, D. A.¹

¹Universidade de Mogi das Cruzes.

INTRODUCTION: Prion Diseases, or Transmissible Spongiform Encephalopathies (TSE), are rare and fatal diseases that affect the Nervous System and are caused by the accumulation of the abnormal protein, Prion Scrapie (PrPsc). The modified form of a protein in brain tissue called Normal Cellular Prion (PrPc) is called PrPsc. PrPc is converted to its altered form, PrPsc, which causes it to accumulate in brain tissue, causing spongiform lesions that result in death. Several disorders are found in the TSE group, with Creutzfeldt-

Jakob Disease (CJD), in its sporadic form, being the most common and prevalent. **OBJECTIVE:** Identify possible treatments for Sporadic CJD. **METHODOLOGY:** Systematic literature review, using the following descriptors: "Sporadic Creutzfeldt-Jakob disease" and "Treatment" in the Pubmed and Cochrane platforms. A total of 330 articles were identified and after applying the filters: Articles in English and opting for clinical trials, 4 were selected. **RESULTS:** CJD is the most common form of prion disease, with an annual incidence of 0.5 to 1 case/million. Its sporadic form represents 85% of CJD cases, being lethal in the absolute number of cases. Several studies are being carried out in order to improve the quality of life and increase the survival of patients with CJD. Four clinical trials were carried out, 2 evaluating Quinacrine and 2 Doxycycline, but without satisfactory results compared to the control group. **DISCUSSION:** The studies carried out with the two drugs did not have favorable results regarding survival and quality of life, although they were well tolerated by patients. Other drugs are being tested, with good results in vitro, and some in clinical trials, such as Flupirtine in a randomized double-blind clinical trial, which reduced cognitive deficits and dementia in patients with CJD by a consequent decrease in apoptotic neuronal deterioration caused by PrPsc. Even with the observed results, it is necessary to formulate larger trials, with a larger number of patients. **CONCLUSION:** Sporadic Creutzfeldt-Jakob Disease has a fatal and rapid progression. In this sense, many medications were analyzed with the aim of extending the patient's survival or regressing the disease. Some studies showed good results in vitro, using quinacrine and doxycycline, but unfavorable results in clinical trials.

Keywords: Sporadic Creutzfeldt-Jakob disease. Treatment, Prion

13. NEURAL PLASTICITY AND PHYSICAL EXERCISE

RIVA, G.N.¹; CRUZ, R.C.S.A.¹; FREITAS, V.A.S.R.¹; SOARES, I.L.¹
¹Universidade Nove de Julho

INTRODUCTION: The Central Nervous System (CNS) is composed of a neural network with specialized cells that receive and transmit nerve impulses at all times. When an injury occurs, this neural network becomes disorganized and the CNS starts a process of regeneration and reorganization of these cells, called neural plasticity, where, in the presence of this injury, it uses this capacity to try to recover the lost functions. Studies show that the brain and some excitable tissues are malleable and change their response according to their interaction with the environment and that physical exercise can induce the plastic effect in the CNS, which may have a beneficial effect. **OBJECTIVE:** The objective of this work is to emphasize the importance of regular physical exercise and how much it can help positively in neural plasticity and also in the quality of life of individuals. **METHODS:** Literature review on the importance and benefits of physical exercise and neural plasticity. For the preparation of this work, a survey of scientific articles published in the last 10 years (2011-2021) was carried out on the SCIELO, BVS, and scientific journals platforms. **RESULTS:** Twenty articles were selected that specifically corresponded to the intended theme and that were used to compose this review. **DISCUSSION:** Plastic changes occur in the brain after an injury to compensate for the loss of some function in impaired areas, and may occur in regions other than the cortex, and may occur in regions such as the thalamus and brainstem. Cellular mechanisms may be responsible for this plasticity through an intensification or decrease of synapses. However, these processes can take place over several periods, but not always mutually. Studies show that the practice of regular physical exercise can induce neural plasticity in motor areas,

such as the basal ganglia, cerebellum and red nucleus. This increase in cellular and synaptic plasticity mechanisms promoted by physical exercise contributes to a beneficial effect by reducing degeneration and promoting recovery from brain damage. Another mechanism in which physical exercise is involved is the action of neurotrophic factors, which is associated with increased release and synthesis of some factors, such as the Brain Derived Neurotrophic Factor (BDNF), which can have its levels increased under the effect of a single exercise session. BDNF exerts several effects on the central nervous system, such as neuron growth, differentiation and repair. It is produced throughout life in order to preserve essential functions such as memory and learning. It is believed that the elevated BDNF level may be related to better brain health and its decrease with some illnesses such as depression, schizophrenia, Parkinson's disease and so on. Studies show that regular physical exercise increases BDNF production resulting in improved memory, executive functions and overall health. **CONCLUSION:** Our brain is constantly undergoing changes, thus there is a need for specific studies to better understand the topic and consequently the plastic changes during the reorganization and recovery of nervous functions in human beings.

14. OMEGA-3 IN THE TREATMENT OF GESTACIONAL HYPERTRIGLYCERIDEMIA: CASE REPORT

SOUZA, B.C.¹; SILVA, G.C.B.¹; COSTA, M.F.N.¹; SCATIGNA, M.R.¹; GONZALEZ, N.A.P.¹; FRANCO, N.E.S.¹; RUDGE, C.Z.M.¹

¹Universidade de Mogi das Cruzes

INTRODUCTION: During pregnancy, increased levels of triglycerides, cholesterol and phospholipids are common, due to the metabolic demand during pregnancy and the hormones involved in it. Familial gestational hypertriglyceridemia (FGH), however, is usually associated with obesity and gestational diabetes and has an increased risk for acute pancreatitis, pre-eclampsia and preterm birth. Aiming at reducing the levels of fatty molecules, omega-3, an essential polyunsaturated fatty acid, has been shown to be effective in the treatment of this pathology according to literature, reducing the risks surrounding the mom and her baby. **CASE EXPOSURE:** Patient, pregnant woman, with a family and personal history of hypertriglyceridemia, was followed up with a gynecologist-obstetrician and referred to a neurologist due to the diagnostic hypothesis of FGH. She underwent treatment with docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA), with positive follow-up of her condition and cesarean section without complications. **CONTEXT AND OBJECTIVE:** FGH has serious implications for the woman and the fetus, and may lead to serious and irreversible pathologies. The traditional therapy used for the treatment of this condition can bring risks to the gestational development, therefore, omega-3 appears as an alternative to reduce serum levels of triglycerides and risks during and after pregnancy. Thus, the case report aims to assess the clinical relevance of omega-3 in the treatment of FGH and encourage discussions on the use of alternative treatment. In addition, discuss the possibility of introducing triglyceride tests in the prenatal routine. **EVOLUTION:** The patient had pre pregnancy triglyceride values of 376 mg/dL. In the medical attempt to control, she started using supplementation with 250 mg of DHA and 50 mg of EPA, 1 tablet a day. In the first trimester of pregnancy, the patient was prescribed 200mg of DHA in 1.2g capsules. Although the request for triglycerides is not part of routine prenatal exams, in the second trimester of pregnancy, the values of vitamin D and thyroid stimulating hormone (TSH) requested, could

not be evaluated by the laboratory, due to the lipemia presented in the test results. Then, with this incidental finding, new tests collected attested triglyceride values equal to 1131 mg/dL. With this result, there was a referral to the nutrologist, who prescribed a low-calorie and low-fat diet and increased the supplementation to 2180 mg of DHA and 2970 mg of EPA. The next exam showed a triglyceride value equal to 596 mg/dL, without further increases until the end of pregnancy. The other values of LDL, HDL and VLDL remained unchanged during the 3 gestational trimesters. **DISCUSSION:** In the 26th week of pregnancy, the patient presented a condition classified as severe with FGH, with a triglyceride value of 1131 mg/dL, thus having a high risk of developing acute pancreatitis and other complications already mentioned. Thus, supplementation with 2180 mg of DHA and 2970 mg of EPA was introduced, since the traditional treatment for this pathology is with fibrates and inadvisable for pregnant women due to the high incidence of adverse events. Supplementation with omega-3 was successful in reducing triglyceride levels and preventing serious and irreversible pathologies. **CONCLUSION:** Based on the case reported, it is possible to conclude that supplementation with omega-3 was effective in the treatment of FGH, reducing serum triglyceride levels and preventing the occurrence of acute pancreatitis, pre-eclampsia and preterm birth. Thus, further studies and discussions about the use of alternative treatment to reduce triglycerides during pregnancy are necessary.

Keywords: hypertriglyceridemia; pregnancy; ômega-3; prenatal care.

15. PENECTOMY: A LITERATURE REVIEW IN THE SCIELO DATABASE

Grandjean-Thomsen P.B.¹; Rodrigues, B. H.¹.

¹Universidade de Mogi das Cruzes

INTRODUCTION: Penectomy is characterized as penile amputation surgery, which can be partial, total or emasculation. It is a non-preserving treatment for different cases of deep cancers, penile necrosis and burns, emphasizing that early diagnosis, especially in cases of cancer, when there is a better prognosis, the tumor can be treated with antibiotics or chemotherapy, without need for removal of the penis. In addition, it can be used to remove the organ in sex reassignment surgeries, preceding vaginoplasty. **OBJECTIVE:** It is expected to observe the correlation of data obtained in the previous study, with articles available in the literature, presenting articles on the various reasons for performing penectomy. **MATERIALS AND METHODOLOGY:** The study is characterized as a literature review without any type of intervention by the researchers. Thus, only the analysis of data contained in academic articles on penectomy in humans will be carried out, in the SciELO database, in Portuguese, Spanish and English. The number of articles that refer to penectomy on the SciELO platform is 19, with 1 article per year of publication being excluded, 3 articles for dealing with penectomy in animals, 1 article for dealing with another surgical technique, leaving 14 for analysis. **DISCUSSION AND RESULTS:** Of the 14 articles analyzed, 11 had some type of cancer, including squamous cell carcinoma of the penis (the most reported cancer - 7 articles), penile melanoma (2 articles), sarcoma (1 article), leiomyosarcoma (1 article), it was observed that conservative therapeutic methods are the most chosen, however, due to late diagnosis and the infiltration of cancers in patients, physicians resorted to penectomy in order to obtain greater therapeutic success and avoid recurrences. In addition to the articles that cited cancer; 2 mentioned necrosis and 1 mentioned burn. **CONCLUSION:** the research on penectomy, initially, sought to search

in the literature for the presence of articles on this surgical procedure in the process of sexual reassignment, but no article was found about it, showing an important and current gap for the performance of studies. The number of articles about cancers shows the importance of an early diagnosis, for a better prognosis and therapy that maintains the patient's quality of life, even though it is a cancer of low incidence. As for necrosis and burns, when not associated with cancer, it shows a deficiency in the search for a medical evaluation and also the application of safety standards, thus aggravating cases that could be treated without penectomy, or even do not exist.

KEY WORDS: Penectomy, Penile câncer, Penile necrosis, Penile burn.

16. PHYSICAL ACTIVITY AT OLD AGE: A NARRATIVE REVIEW

TAKAHARA, M.A.¹; AMORIM, G.B.¹; HITZSCHKY, B.L.¹; PAES, B.A.¹; PRADO, J.C.F.¹; SOUZA, G.V.¹.

¹Universidade de Mogi das Cruzes

INTRODUCTION: With the growing increase in the elderly group, greater attention to preventive medicine is needed, since in this age group there is an increase in the predisposition to Chronic Non-Communicable Diseases (NCDs), which are the main cause of morbidity and mortality in the world and about 80% of these pathologies could be avoided with changes in behavioral factors. According to the World Health Organization's health promotion guidelines, the practice of physical exercise is more relevant to the promotion of a healthier lifestyle and a better quality of life. However, there is still an increase in physical inactivity in the elderly group, which predisposes to the emergence of disabilities and, therefore, reduces the quality of life and favors the growth of CNCDs. **OBJECTIVE:** To relate the incidence of diseases in the elderly who practice and do not practice physical activity. **MATERIALS AND METHODOLOGY:** This is a narrative review article, with a survey carried out in national and international journals published from 2016 to August 2021, available in the PubMed database. The following descriptors were used: physical exercise, aging, life style and elderly, with the help of the Boolean marker AND. The inclusion criteria for the selection of articles were: they are national and international journals published in the established period, that are published in the database and that deal with the benefits of physical exercise in the quality of life of the elderly. Those who did not establish any relationship with the proposed theme, did not meet the selection criteria and those that were not found in full were excluded from the research. 119 articles were analyzed, selecting 19 articles to be part of this review after the relevance test, as they met the established criteria. **DISCUSSION AND RESULTS:** The regular practice of physical exercise is essential for the maintenance of health, functional independence and quality of life in old age. Healthier behaviors lead to improvements in aspects of physical and emotional well-being, describing improved confidence in exercise and greater independence. Furthermore, physical training is recommended to improve sleep quality and modulation of low-grade systemic inflammation in the elderly, and to increase muscle strength. In addition to reducing risk factors for dementia, motor impairment, sarcopenia, mortality rate from cardiovascular disease, changes in fasting serum insulin and the rate of increase in body fat. **CONCLUSION:** It is concluded from this narrative review that the practice of physical exercise is essential for the elderly in order to improve their muscle strength, mobility and quality of life, in addition to reducing inflammation, body fat and the risk of common diseases

in old age. The importance of further studies on the influence of physical activity related to other diseases that have not yet been studied is also highlighted. It is essential to implement public policies that encourage the practice of physical exercise for the elderly in order to promote healthy aging.

KEYWORDS: Physical Exercise; Aging; Quality of life

17. POSTPARTUM HEMORRHAGE IS THE SECOND MAIN CAUSE OF MATERNAL MORTALITY IN BRAZIL: HOW TO CHANGE THIS REALITY?

CORREIA C.V.¹; FERRAZ N.J.¹; NAGAHAMA G.¹

¹Universidade de Mogi das Cruzes

INTRODUCTION: Postpartum Hemorrhage (PPH) is the second main cause of maternal Mortality in Brazil, and is responsible for 140.00 deaths every year worldwide. The PPH is an important direct obstetric death cause, and is classified as a blood loss beyond 500 mL in the first 24h after the child's birth in vaginal delivery, and 1L in case of C-section. Considering that is usually a preventable death cause, it is concerning that PPH represents a high morbidity and mortality in Brazil, characterizing a scenario that needs to be understood and changed. **OBJECTIVES:** Understanding possible causes of the high mortality due to Postpartum Hemorrhage in Brazil, and suggesting possible management ways to solve this problem. **MATERIALS AND METHODOLOGY:** Narrative literature review, based on official documents, one from Pan American Health Organization and World Health Organization, and another from Oswaldo Cruz Foundation with the Ministry of Health, and articles available on Scielo platform. The research on Scielo was carried out using the keywords "Postpartum Hemorrhage" and "Maternal mortality", with the s of publication in Brazil in the last 20 years, resulting in 65 articles. A total of 5 references were chosen. **DISCUSSION AND RESULTS:** Based on this literature review, it was possible to observe that the high mortality caused by PPH in Brazil has multifactorial causes, from the insufficient training of the multidisciplinary team to the inadequate hospital structure. Previous identification of risks and diseases can avoid hemorrhage or reduce its severity, indicating that prenatal care is essential and agility in the diagnosis and correct management of PPH by the medical team is critical for maternal survival. It is also necessary that the hospital has an appropriate infrastructure; otherwise, postpartum women have a higher mortality chance. The PPH is identified usually based on the visual estimation of blood loss by the compresses used during the delivery and/or the patient clinical manifestations, and its main causes are known by the mnemonic of the 4 T's: Tone, Trauma, Tissue and Thrombin; generally, conservative management is the first option in PPH for uterine atony, based on uterine massage and uterotonic medications (oxytocin, methylergonovine or misoprosthol). If they're not effective, invasive non-surgical (intrauterine balloon tamponade) or conservative surgical techniques (B-lynch compression suture) are chosen, and in last case, hysterectomy. Nowadays, some public policies and guidelines were created in Brazil to reduce maternal mortality, like the "Estratégia Zero Morte Materna por Hemorragia Pós-Parto" and "Rede Cegonha" policy, but were not sufficient to change this scenario, because they still need to be widespread and integrated. **CONCLUSION:** It is possible to infer that the high maternal mortality by Postpartum Hemorrhage can be attributed to the lack of adequate infrastructure in hospitals, including supplies (blood bank, medication, etc.), and training of the multidisciplinary team in many Brazilian regions, being necessary financial investments in these

factors, and ensuring a prenatal care to every woman. A fast and efficient management is decisive to stabilize the patient's clinical condition and to preserve maternal life. Every woman has the right to an integral healthcare in every phase of life.

KEYWORDS: Postpartum Hemorrhage, Maternal Mortality and Women's Health.

18. SELECTION OF SURGICAL APPROACH IN THE CORRECTION OF ABDOMINAL AORTIC ANEURYSM ASSOCIATED WITH HORSESHOE KIDNEY: OPEN OR ENDOVASCULAR REPAIR

ROSSETTI P,¹ PEDRO FSF,¹ SANTOS RHP,¹ CAMPOS ALM.¹

¹Universidade de Mogi das Cruzes

INTRODUCTION: The Abdominal Aortic Aneurysm (AAA) is a focal and permanent dilatation of the abdominal aorta, with an increase of at least 50% of the normal artery diameter, or when the diameter of the affected segment is greater than or equal to 3cm. Its screening process is important because there is a high mortality rate with its rupture and a low mortality rate after elective surgical correction. The majority of AAAs are infrarenal and the common iliac arteries are often involved. The horseshoe kidney (HK) is the most common fusion abnormality in the population and affects 0,25% of it. The degree of renal fusion is variable and the majority is fused by the lower poles of the kidneys. The isthmus and its outstanding characteristics are: ectopias, malrotation and vascular alterations. Before any intervention procedure, a good functional evaluation of the renal isthmus is necessary, as it may contain a functioning parenchyma or correspond to fibrous tissue. The Association of AAA and HK occurs in about 0,12% of AAAs and play an important role in preoperative planning, with a lot of factors to be considered in the treatment. **OBJECTIVE:** Analyse the surgical techniques used to correct AAA associated with HK and demonstrate the difficulties to choosing one of them based in the literature. **METHODS:** This is a literature review using articles from SciELO, PubMed, Lilacs and Google databases, in addition to the use of bibliographical references, such as the books: C. J. Brito, Cirurgia Vascular, Endovascular e Angiologia e Sobotta, Atlas de Anatomia Humana. **DISCUSSION:** AAA repair in open surgery corresponds to several types of approach. The transperitoneal approach promotes good exposure of the kidneys and aneurysm and the possibility of reimplantation of arteries of more than 2mm in diameter from the anomalous renal irrigation directly into the body of the prosthesis or by making the Carrel patch, but the renal isthmus makes the aneurysm exposure inadequate. The retroperitoneal approach avoids manipulation of the isthmus and the urinary tract, but hinders and limits access to the right common iliac artery. The endovascular approach, on the other hand, has the advantage of avoiding anatomical complexity, but due to the highly variable renal vascularization, with the placement of an endoprosthesis, renal arteries important for the supply of the renal parenchyma may be excluded, with a greater risk of postoperative renal infarctions and consequent loss of kidney function. **CONCLUSION:** No ideal technique for correction has been established, and the lack of literature is a great difficulty. In the few cases reported in the world, there is a great diversity of techniques used and each case must be analyzed in a unique way, in order to receive the best surgical approach.

Keywords: Abdominal Aortic Aneurysm, Horseshoe Kidney, Endovascular Surgery.

19. THE DOWN SYNDROME THE MOST FREQUENT OPHTHALMOLOGIC CHANGES ASSOCIATED: A LITERATURE REVIEW

THOMSEN, P. B. G.¹; AUGUSTO, G. G.¹; CANDELARIA, B. A.¹; DIAS, V. S. B. C.¹; FARNEZI, M. A. P. F.¹; BOUCAULT, F. C.¹

¹Universidade de Mogi das Cruzes

INTRODUCTION: Down Syndrome (DS) corresponds to one of the most common genetic disorders in humanity, being characterized by an error in the distribution of cell chromosomes during gametogenesis, resulting in trisomy 21. Among the various phenotypic characteristics, ocular alterations are of greater importance in the sense of the study, with a higher occurrence of small, oblique eyes with oblique eyelid folds upwards and existence of an epicanth. They are also more susceptible to: refraction errors such as hyperopia; strabismus; crystalline accommodation; cataract and keratoconus. **OBJECTIVE:** the present study proposes a bibliographic review whose objectives are: to analyze and correlate Down syndrome with the main ocular alterations found, and to compare these alterations in individuals with Down syndrome with individuals without genetic disorder. **METHODOLOGY:** The research was a study conducted in an analytical, qualitative, cross-sectional and bibliographic way through the review of articles from the Scielo and Pubmed databases, and among the key words used are: "ophthalmology down syndrome syndrome" (14 results); "Down syndrome and ophthalmology" (329 results); "Down syndrome" (688 results); and "down syndrome" (30,701 results). Twenty-three articles were selected in Portuguese and English. No additional filters were included. Moreover, the inclusion criteria evaluated were to contemplate content that added to the discussion about the theme "Down syndrome and eye changes". **DISCUSSION:** Down syndrome is associated with ophthalmologic symptoms that are not addressed in an integrative manner, such as refractive errors, anatomical anomalies and the variety of visual disturbances. The literature study showed a higher prevalence of refraction errors - such as myopia, astigmatism, hyperopia and strabismus - in patients with the syndrome, especially in preschool and school ages. In relation to eye pathologies, cataracts, keratoconus and blepharitis are the most common. There was also a higher incidence when relating to typical individuals of DS. In addition, there were some anatomical anomalies of higher occurrence in down carriers: in cases of anatomical obstruction of the lacrimal pathways, there is a greater presentation of bilateral epiphore symptoms. **CONCLUSION:** The prevalence of ophthalmologic alterations associated with Down syndrome was shown by the articles. This interferes in the way of living of these individuals, so it is essential to meet their needs to better insert them into the social spheres. In addition, it is important to identify the most frequent pathologies to improve knowledge about it, and in order to treat them early and avoid complications.

Key words: Syndrome. Down. Alterations. Disorders. Ocular.

20. THE RELATIONSHIP BETWEEN CLIMATE CHANGE AND THE INCREASE OF DIARRHEAL DISEASES IN BRAZIL.

SILVA, E. I. R.¹; SANTOS, A.G.E.¹; CLIVATTI, N.F.¹; BASTOS, S.A.F.¹; HENRIQUES, D.A.¹

¹Universidade de Mogi das Cruzes

INTRODUCTION: Diarrheal diseases are characterized by a reduction in the consistency of the fecal bolus and/or by a greater number of bowel movements per day, which leads to dehydration and

electrolyte imbalance, which can lead to death. It is observed that climate change has a minor influence on the incidence and spread of diarrheal diseases, and that these diseases have more impact in underdeveloped countries, such as Brazil. Complex to the vast national territory, the relationship between diarrheal diseases and climate change involves a particular dynamic that influences the health situation of Brazilians. **OBJECTIVE:** To study the correlation between diarrheal diseases and climate change. **MATERIALS AND METHODOLOGY:** Literature review study, using Capes Journal and Academic Google platforms. In Capes Journal, the following descriptors were used: "Diarrheal Diseases", "Climate" and "Hospitalizations"; and in Academic Google, the descriptors were used: "Diarrheal Diseases", "Climate", "Hospitalizations" and "Climate Changes". A total of 307 articles were identified and, after applying the filters (articles in Portuguese between 2011 and 2021) and reading the titles and abstracts, 4 articles were selected. **DISCUSSION:** Infectious diarrheal diseases are caused by pathogens such as viruses, bacteria and protozoa, and their main physiological effects are dehydration and malnutrition. Rotavirus is considered the most common viral etiological agent that affects children and young people. Among the most observed bacterial causes are: Escherichia coli and Salmonella and Shigella species. Parasitic infections present species of Giardia and Entamoeba histolytica. Climate change can have an impact on human health, as the effects of heat waves encourage bacterial multiplication in food and water, combined with poor population hygiene, increasing the number of cases. It is estimated that diarrhea ranks first among diseases that are caused by environmental and climatic factors, and that 94% of the burden of diarrheal diseases is attributable to environmental conditions, resulting in more than 1.7 million deaths per year. According to the World Health Organization, diarrhea is the second leading cause of death in low-income countries. In Brazil, diarrheal diseases pose a serious public health problem, with high rates of deaths from these diseases being recorded, especially in children under 1 year of age and, mainly, in the North and Northeast regions of the country. It is evident that the spatial patterns of periods with the highest number of hospitalizations for diarrheal diseases in Brazil are mostly associated with variation in the distribution of precipitation between regions. **CONCLUSION:** From the analysis of the articles, it is inferred that diarrheal diseases are related to climate variability. Heat pockets favor the multiplication of pathogenic microorganisms in food and water. Such factors are enhanced by precipitation and greater social vulnerability. Thus, due to the Brazilian climate being tropical, the high summer temperatures and humidity provide an ideal environment for the proliferation of protozoa, viruses and bacteria. Thus, poor sanitation of the population, meteorological variations and precipitation contribute to the increase in cases of diarrheal diseases in Brazil.

KEYWORDS: Diarrheal Diseases. Climate. Climate Changes. Admissions

21. THE USE OF PROBIOTICS IN THE HEALING OF SKIN INJURIES: LITERATURE REVIEW

LALUCE, J.C.¹; CANDELARIA, B.A.¹; SANTANA, V.L.M.¹

¹Universidade de Mogi das Cruzes

INTRODUCTION: The stratum corneum is a shield against external aggression and a biological barrier, full of microorganisms that make up the skin microbiome. These microorganisms, play a key role in the healthy functioning of the skin. Disruption of this skin barrier causes

a mismatch in the skin microbiome, and the prolonged inflammation that can occur after a skin lesion can result in delayed wound healing. Probiotics and other therapies have been studied as alternative treatments for various skin diseases. According to the Food and Agriculture Organization of the United Nations, probiotics are defined as "live microorganisms that, when administered in adequate amounts, confer benefits on the health of the host". One of the main benefits of probiotics for dermatology is the modulation of the inflammatory response and limitation of the pathogen's colonization, thus contributing to the healing of skin lesions. **OBJECTIVE:** The main objective of this article is to elaborate an overview of the use of probiotics in skin lesions, seeking to assess their effectiveness in healing. **MATERIALS AND METHODOLOGY:** The present study is a bibliographic review based on a systematic review of data obtained in the literature, with the following keywords "probiotics"; "skin"; "healing"; "microbiota". Publications containing studies with animals were excluded from this study, and only those involving human beings were selected. **DISCUSSION:** By analyzing the data obtained in TABLE 1, diabetic patients who used oral probiotics with *Lactobacillus* species showed significant reductions in the length, width and depth of the ulcer, in addition to a decrease in the levels of inflammatory markers when compared to patients who did not use the use of these probiotics. Topical applications of *L. plantarum* for the treatment of diabetic foot caused a reduction in the bacterial load and induced the healing of diabetic ulcers through the regulation of IL-8 and recruitment of phagocytic cells and fibroblasts. On the other hand, topical applications of *L. plantarum* in chronic ulcers of non-diabetic patients led to a reduction of more than 90% in the area with chronic ulcers. Patients with second and third degree burns who made the topical use of *L. plantarum* had results as effective as the application of silver sulfadiazine in reducing the risk of infection and bacterial load, while promoting the granulation tissue and wound healing. **CONCLUSION:** Bacterial infection impairs the healing process. Traditional treatment protocols involving antibiotic therapy do not eradicate bacteria, especially those in the form of biofilm, making it necessary to use new therapeutic modalities. Although studies on the effects of probiotics on wound healing in human studies are scarce, especially in the long term, through this study it was possible to verify that the use of probiotics combined with traditional treatment protocols for the lesions presented, resulted in a significant improvement in parameters of the following lesions: diabetic foot ulcers, chronic ulcers from nondiabetic patients and burns.

KEY WORDS: Probiotics; skin; healing; injuries; microbiota;

22. USE OF ERITOCOXIB IN SPORTS INJURIES: AN INTEGRATIVE LITERATURE REVIEW

FIGUEIREDO, B. Q.¹; OLIVEIRA, R. C.¹

¹Centro Universitário de Patos de Minas.

INTRODUCTION: Ankle sprains are one of the most frequent conditions in emergency orthopedic consultations, mainly corroborated by sports injuries. One of the fundamental criteria to verify the evolution of the treatment is the reduction of pain, both during walking and with active and passive mobilizations. For this, adequate analgesia is necessary, for which non-steroidal antiinflammatory drugs (NSAIDs) are usually prescribed, especially in cases of grade I and II sprains. Although it is a matter of debate, its use can be beneficial in the first days after a muscle or tendon injury

in the context of sports practice. **OBJECTIVE:** To explain the evidence on the use of erythocoxib in sports injuries. **MATERIALS AND METHODOLOGY:** This is a descriptive research of the integrative literature review type. The bibliographical research was exploratory in nature, starting from the identification, selection and evaluation of works and scientific articles considered relevant to provide theoretical support for the classification, description and analysis of results. The search was carried out in August and September 2021. Studies published in the period between 2017 and 2021 were considered, using the following keywords: "erythocoxib"; "sports injuries"; "orthopedics"; "NSAID", "athletes". **RESULTS AND DISCUSSION:** Although the inflammatory process that originates from tissue damage is initially part of the healing process, this inflammation can lead to decreased healing. NSAIDs act by competitively inhibiting cyclooxygenase (COX), an enzyme linked to the biotransformation of arachidonic acid into prostaglandins. While the COX-1 isoform is constitutively expressed in several tissues, COX-2 is expressed as a consequence of induction by stimuli such as pro-inflammatory cytokines, lipopolysaccharides and mitogens. Eritocoxib is a COX-2 selective NSAID, whose antiinflammatory efficacy has been confirmed in clinical studies with patients with different conditions associated with pain, and its 100% bioavailability after oral administration allows the indication of a single daily intake. It is interesting to note that erythocoxib is one of the drugs suggested by the International Olympic Committee (IOC) for the management of sport-associated acute pain, as well as for the return to physical activity on the same day. In addition, under the concept of sports injury, the IOC defines new or recurrent musculoskeletal discomforts that arise during sports practice or in the context of training. The IOC report adds that selective COX-2 inhibitors, such as erythocoxib, do not worsen bleeding in the case of bleeding lesions. **CONCLUSION:** Therefore, its use is considered a treatment with good tolerability, and although it is generally prescribed for patients with chronic pain, the drug also seems to be extremely effective in people with acute pain associated with injuries resulting from sports practice.

KEYWORDS: Erythocoxib; Lesion; Orthopedics; NSAID

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Poster Session

CASE REPORTS AND EXPERIENCE REPORTS

01. REFLECTIONS OF THE COVID-19 PANDEMIC: A COMPARATIVE ANALYSIS OF THE NUMBER OF TUBERCULOSIS CASES NOTIFIED IN THE STATE OF PIAUÍ IN THE FIFTHDAYS OF 2016 to 2020

Ludmila Carvalho de Araújo¹; Marcos Castelo Branco de Deus¹; Mariana de Souza Arêa Leão¹; Maria Adelaide Duarte Claudino¹; Maria Carolina Cavalcante Colares¹; Antonio de Deus Filho.

¹ University Center Faculty Integral Differential

INTRODUCTION: Tuberculosis (TB) is an infectious disease caused by *Mycobacterium tuberculosis*. TB is a relevant public health problem worldwide. In 2020, Brazil registered 66,819 new cases of TB, being one of the endemic diseases with the highest incidence in the country. In this context, considering the COVID-19 pandemic, it is relevant to analyze the number of notifications of the disease in Piauí.

OBJECTIVES: To perform a comparative analysis of the fluctuation in the number of tuberculosis notifications after the onset of the COVID-19 pandemic. **METHODS:** The present work is an analytical-comparative study, with a quantitative focus on the analysis of confirmed cases of Tuberculosis in Piauí. Data were obtained from the DATASUS Information System for Notifiable Diseases database, with a time frame considering the years 2016 to 2020. **RESULTS:** The survey revealed that Piauí had 761 cases in 2016; 756 cases in 2017; 842 cases in 2018; 832 cases in 2019, and 729 cases of Tuberculosis in 2020. Comparing the years 2016 to 2019, it was found that there was an upward trend in the number of registered TB cases in the state until the year 2019. However, comparing -if 2019 is the year 2020, it appears that this trend has not been maintained, as there was a significant decrease in the number of notifications of the disease in Piauí. The city of Teresina registered 439 cases in 2016; 357 cases in 2017; 395 cases in 2018; 415 cases in 2019; and 338 cases in 2020. Therefore, in the state capital, there was initially a decrease in the number of confirmed TB cases reported in the period 2016 to 2017, followed by an increase between the years 2018 to 2019. However, there was a sharp decrease in notifications in 2020, the year in which the COVID-19 pandemic spread. **CONCLUSION:** Confirming a trend in the Americas, it was found that in 2020 there was a reduction in the number of notifications of Tuberculosis cases compared to 2018 and 2019. As this was the year in which the COVID-19 pandemic spread throughout the world, such panorama may have hampered the diagnosis of new cases of the disease in Piauí, a situation that puts progress in combating the transmission of the disease in the state at risk.

02. EVALUATION OF THE QUALITY OF PRENATAL CARE IN PRIMARY HEALTH CARE IN THE CITY OF BURITI DOS LOPES/PI

Ana Lia dos Santos Sousa¹, Sarah Nilkece Mesquita Araújo Nogueira Bastos¹, Guilherme Augusto Silva de Moraes¹, Andressa Carvalho Pereira¹, Karina Rodrigues dos Santos¹.

¹ Federal University of Delta do Parnaíba - UFPI

INTRODUCTION: Prenatal care is a tool that makes it possible for pregnant women to protect themselves from most pregnancy problems. **OBJECTIVES:** To evaluate the quality of prenatal care provided in primary health care in the town of Buriti dos Lopes/PI.

METHODS: Descriptive and documentary study with a quantitative approach. Data collection took place in the period from November 2020 in medical records that were made available, from pregnant women assisted from December/2019 to October/2020. The data collection instrument followed the quality indicators based on the 4th level of complexity suggested by Anversa, *et al* (2012) and the Ministry of Health. A descriptive analysis of the data was carried out in the Statistical Package for the Social Sciences (SPSS) Program. The project was authorized with the protocol number: 4,372,734.

RESULTS: 43 (100%) pregnant women aged between 15 and 36 years old participated in this study. Of these, 60.4% started prenatal care in the 1st quarter and 39.6% in the 2nd quarter. Regarding consultations, the average was 1 to 3 appointments in all quarters. As for the mode of delivery, 55.8% were normal and 16.3% cesarean. All pregnant women (100%) were offered vaccination, vitamin supplementation, in addition to requesting laboratory and imaging tests. The average number of home visits during prenatal care was 2 to 7 visits and all who gave birth (31 pregnant women) received a puerperal visit. There were no puerperal or neonatal complications. **CONCLUSION:** The assistance offered in the Family Health Strategy achieved a good performance when meeting the minimum criteria established by the Ministry of Health for quality and safety in prenatal care.

03. CLINICAL-EPIDEMIOLOGICAL PROFILE OF NEWBORN CHILDREN SUBMITTED TO LAPAROTOMY BY ACUTE ABDOMEN AND CORRELATION WITH THE LITTLE LEG TEST SUGGESTIVE OF CYSTIC FIBROSIS IN MATERNITY OF TERESINA-PI

Lucas Palha Dias Parente¹; Elayne Ester Nogueira Santos Policarpo¹; Gilvan de Sousa Sampaio¹; Kalyne Rodrigues Marques¹; Soraya Macêdo Uchôa¹; Rogério de Araujo Medeiros².

¹Academic student of the Medicine course at Uninovafapi – Teresina, PI. ²Pediatric Surgeon Physician at the Maternity Dona Evangelina Rosa – Teresina, PI; Professor of Pediatric Surgery at Uninovafapi – Teresina, PI.

INTRODUCTION: Cystic Fibrosis (CF) is an autosomal recessive, chronic and progressive disease that induces the body to produce thick secretions. CF involves multiple organs, especially the gastrointestinal and pulmonary systems, in addition to causing high levels of chloride in sweat. Meconial ileum (MI) is the earliest clinical manifestation of CF patients and occurs in 10 to 20% of cases. Ileal obstruction may appear in intrauterine life with polyhydramnios, meconium peritonitis, and ileal distension, as evidenced by prenatal USG. After birth, it manifests as the absence of fecal elimination in the first 48 hours of life, accompanied by abdominal distension and vomiting, thus considering an obstructive acute abdomen. It is known that confirmation of CF can be difficult during the first days of life, but in the presence of MI, this differential diagnosis must necessarily be considered. **OBJECTIVES:** To analyze the clinical-epidemiological profile of neonates who underwent exploratory laparotomy (LE) for the treatment of acute abdomen (AA) and its correlation with HR with MI. **METHODS:** From July 2018 to July 2020, 56 patients diagnosed with AA who underwent LE in a reference maternity hospital in Teresina-PI were analyzed retrospectively. The study was previously approved by the ethics committee of Uninovafapi, opinion n. 4,244,574. **RESULTS:** It was observed that the average age of pregnant women was 25.5 years, 25% of which did not have prenatal care. At delivery, 75% progressed to cesarean delivery, with an average of 33S and 6D GA. The mean apgar was 6 on the 1 and 9 on the 5 and most evolved with abdominal distension, vomiting and absence of bowel movements. After performing the LE, 50% progressed to death, the main cause being early neonatal sepsis (53.5%), followed by pulmonary hemorrhage (28.5%). Was there a prevalence of 12.5? positivity of the immunoreactive trypsinogen of the heel prick test (PT), characterizing suspicion of CF, but not diagnosed, due to its low specificity. Among the LE, 16 ileostomies were performed, 5 by IM. **CONCLUSION:** It was observed that patients with clinical aspects of MI during surgery presented changes in PT. The high prevalence (12.5%) associated with clinical findings lead us to confirm the suspicion of MI due to CF. However, advances are needed in terms of early diagnosis in the pre- and postnatal period, in order to improve the management and evolution of these cases.

04. SCREENING OF UTERUS CANCER IN PIAUÍ: EPIDEMIOLOGICAL ANALYSIS

Francisco Pereira de Miranda Júnior¹, Giovana da Rocha Leal Dias¹ and Ana Flávia Machado de Carvalho¹.

¹ Uninovafapi University Center

INTRODUCTION: Cervical cancer is an important public health problem. In Brazil, mortality rates from cervical cancer remain high, being considered the 3rd type of cancer with the highest incidence

among women, a reality that is aggravated in the state of Piauí, where it ranks 2nd in cancer prevalence in women. **OBJECTIVES:** To verify the prevalence of cervical cancer and the epidemiological profile in the state of Piauí. **METHODOLOGY:** This is an epidemiological, exploratory, descriptive study with a quantitative approach. The database used was the Cervical Cancer Information System (SISCOLO), made available by the Information Technology Department of the Unified Health System (DATASUS), from 2016 to 2020. The following were analyzed: age group, municipality of residence, year competence, reason for the examination and cellular alterations detected in the cytopathological exam, determining the prevalence. The data used in the preparation of this research are freely accessible, which justifies the absence of the opinion of the Research Ethics Committee. **RESULTS:** Between 2016 and 2020, 167,541 cytopathological tests were registered in the state of Piauí. Of these, the year with the highest prevalence was 2019 with 77,705 exams. The age group was concentrated from 35 to 39 years old, with 22,084 cases (13.1%), followed by 30 to 34 years old, with 21,017 cases (12.5%). 88,196 cases (52.8%) resided in the city of Teresina, followed by Parnaíba with 15,496 cases (9.2%). As for the reasons for the consultation, 167,005 cases (99.6%) for screening, 412 cases (0.24%) for follow-up and 373 cases (0.22%) for repetition. Furthermore, in the cytological reports, the negative result was found in 160,809 cases (95.9%), Squamous or squamous cell abnormalities were portrayed in two ways: ASC-US (Atypical squamous cells of uncertain significance) in 2,778 cases (1.65%) and ASC-H (atypical squamous cell cells in which high-grade squamous cell intraepithelial lesion cannot be excluded) in 696 cases (0.41%). In squamous cell intraepithelial lesions, the following were found: low-grade intraepithelial squamous cell lesion (CIN1) in 153 cases (0.09%), followed by high-grade intraepithelial lesion (CIN 2 and CIN 3) in 459 cases (0.27%). Invasive squamous cell carcinoma was observed in 28 cases (0.016%), presence of atypical glandular cells of indeterminate significance possibly non-neoplastic in 168 cases (0.10%) and adenocarcinoma in situ in 2 cases (0.001%) **CONCLUSION:** Cervical precancers are diagnosed more often than invasive cervical cancer, and mortality rates have been reduced with screening. The findings of this study contribute to the situational diagnosis, helping health managers in planning primary prevention and early detection activities, in an attempt to minimize the mortality rates attributed to this pathology in the state of Piauí.

05. EPIDEMIOLOGICAL OVERVIEW OF MALARIA IN THE STATE OF PIAUÍ

Francisco Pereira de Miranda Júnior¹, Giovana da Rocha Leal Dias¹ and Ana Flávia Machado de Carvalho¹.

¹ Uninovafapi University Center

INTRODUCTION: Malaria is an infectious and parasitic disease, currently more frequent in developing regions, caused by parasites of the Plasmodium genus, transmitted by mosquitoes of the Anopheles genus or popularly known as the capuchin mosquito. The state of Piauí borders the Amazon region, however it is not endemic for malaria. **OBJECTIVES:** Determine the epidemiological situation of malaria in the state of Piauí. **METHODS:** This is a descriptive, exploratory epidemiological study with a quantitative approach. The database used was the Notifiable Diseases Information System (SINAN), made available by the Information Technology Department of the Unified Health System (DATASUS), between the years 2016 to 2021. The following were analyzed: year, municipality of notification, race, sex, age group and parasitological result. The data used in the

preparation of this research are freely accessible, which justifies the absence of the opinion of the Research Ethics Committee. **RESULTS:** Between 2016 and 2021, 61 cases were confirmed in the notification information system – Piauí. Of these, the year with the highest notification was 2019. Of the profile characteristics listed by the study on the occurrence of malaria in the state of Piauí, it points out that the most frequent cases were male (88.52%), of mixed race. (62.29%), confirmed *Plasmodium vivax* in (81.96%). As for the notification cities, the cities of Teresina and Luzilândia correspond to 65.57% of the total notifications in the state, and the most prevalent age group was between 20 and 59 years old (90.16%). **CONCLUSION:** It is concluded that the prevalence of notifications occurred in the year 2019, in which the cities of Teresina and Luzilândia had the highest number. Predominantly male, brown, and aged between 20 to 59 years, with parasitological result referring to the species *P. Vivax*. The study results contribute to the situational diagnosis and can help health managers on the planning and reformulation of prevention and treatment strategies for Malaria.

06. PERSISTENCE OF THE ONFALOMESENTERIC CONDUIT ASSOCIATED WITH ONFALITE

Renata Guerra Elvas¹; Anna Letícia de Sousa Marinho¹, Marceley Juliana Silva de Meneses¹, José Lucas Talles Ferreira Luz², Rogério de Araújo Medeiros³, Bruno Pinheiro Falcão⁴

¹ Academic of the Medical course at Uninovafapi - Teresina, PI;

² General Surgeon, Pediatric Surgery Resident;

³ Pediatric Surgeon at Maternity Dona Evangelina Rosa - Teresina, PI; Professor of Pediatric Surgery at Uninovafapi - Teresina, PI

⁴ Pediatric Surgeon at Maternity Dona Evangelina Rosa - Teresina, PI; Professor of Pediatric Surgery at Uninovafapi - Teresina, PI; Holder of the Brazilian Society of Pediatric Surgery;

INTRODUCTION: In the period of embryonic development, some failures in the absorption of the ophallus duct may favor the installation of onfalitis (Moore et al., 2016). The ofalomesenteric duct is a vitellinic duct that promotes communication of the primitive intestine with the calf sac and the persistence of the ofalomesenteric conduit (COM) results from the non-involution of the ofalomesenteric duct and results in persistent tubular fixation between the ileum and the abdominal wall. Definitive treatment is always surgical, but depending on the presence of infection (severe or not) it can be necessary to drain the site and antibiotic therapy preceding the surgical procedure. **CASE REPORT:** Term NB, 39 weeks, birth weight of 3552g, with 20 days of life, referred from another service due to onfalitis associated with the protrusion of structures by umbilical scar, was diagnosed with possible persistence of ofalomesenteric duct, performing abdominal USG and exploitative laparotomy that was performed on the 22nd day of life, having as surgical finding the persistence of the ofalomesenteric conduit. After the surgical procedure, NB evolved without complications. **FINAL CONSIDERATIONS:** In this case, it was evidenced the permanence of the COM, and the presence of an onfalitis that is common in neonates and infants and is the main cause of umbilical discharge in the NB. Early diagnosis and treatment are essential to avoid complications such as Meckel's diverticulitis.

07. HOSPITALIZATIONS AND CHILD DEATHS DUE TO CONDUCTION DISORDERS AND CARDIAC ARRHYTHMIA IN PIAUI FROM 2015 TO 2020

Taís Souza da Silva¹, Ester Almeida de Souza¹, Guilherme Augusto Silva de Moraes¹, Andressa Carvalho Pereira¹ and Karina Rodrigues dos Santos¹.

¹ Federal University of Parnaíba's Delta

INTRODUCTION: Conduction disorders and cardiac arrhythmias (CDCA) are abnormalities in the conduction of nerve impulses responsible for myocardial contractions. They can cause dysrhythmia, tachycardia, bradycardia, and are responsible for approximately 10% of deaths among children up to 9 years old suffering from circulatory system problems in Piauí, Brazil. **OBJECTIVES:** To characterize the epidemiological profile of children up to 9 years old hospitalized due to CDCA, in Piauí, between 2015 and 2020. The parameters analyzed were: sex, age group, race, the mean length of stay, mortality rate, health macro-region, and year of admission. **METHODS:** A quantitative and descriptive epidemiological study based on data obtained by consulting the Hospital Morbidity Information System (SIH-SUS), available in the DATASUS system. **RESULTS:** Thirty-five hospitalizations of children up to 9 years of age due to CDCA were recorded in Piauí during the period analyzed. The most affected age group was up to 1 year of age (40%), followed by 1 to 4 years of age (37%) and 5 to 9 years of age (22.8%). The majority of hospitalizations were female children (57.1%). Only 16 cases had their race specified in the medical records, limiting the study, with the majority of those recorded as mixed race (45.7%). The mean length of stay was 4.3 days, and the mean length of stay for females (5.7) was more than twice as long as the mean length of stay for males (2.5). Of the 35 children admitted to the hospital, 5 of those had died, resulting in a mortality rate of 14.3%. This rate was 15% for females and 13% for males. The health macro-region with the highest number of hospitalizations was the Mid-North (37.1%), followed by the Cerrado (31.4%), the Semi-arid (17.1%), and the Coastal region (14.3%). Besides, the year 2017 had the highest number of hospitalizations (25.7%), and 2020 had the highest mortality rate (40%). **CONCLUSION:** The data analyzed show an epidemiological profile of children hospitalized for CDCA in Piauí between 2015 and 2020, most of them female, of mixed race and age group up to 1 year old. There was a predominance of cases in the Mid-North macro-region, where most of the state's population is concentrated. Besides the higher number of hospitalizations, females had a longer mean length of stay in the hospital and a higher mortality rate, so future research on this topic may be pertinent.

08. VIRAL MENINGITIS AMONG CHILDREN IN THE NORTHEAST REGION: HOSPITALIZATIONS AND MORTALITY RATE FROM 2015 TO 2019

Taís Souza da Silva¹, Ester Almeida de Souza¹, Guilherme Augusto Silva de Moraes¹, Andressa Carvalho Pereira¹ and Karina Rodrigues dos Santos¹.

¹ Federal University of Parnaíba's Delta

INTRODUCTION: Viral meningitis is inflammation of the meninges, the membranes surrounding the brain and spinal cord. The contamination can be caused by Enteroviruses, mainly through fecal-oral and close contact, or by Arboviruses, through the bite of contaminated mosquitoes. It is a syndrome characterized by fever, neck stiffness, and nausea. The viral form is less severe but represents 48.5% of hospitalizations among children up to 9 years old in the Northeast Region due to meningitis. **OBJECTIVES:** To analyze the epidemiological profile of children up to 9 years old hospitalized in

the Northeast region due to viral meningitis between 2015 and 2019. The criteria evaluated were: sex, age, race, federative unit, mean length of stay, and mortality rate. **METHODS:** A quantitative and descriptive epidemiological study based on data obtained by consulting the Hospital Morbidity Information System (SIH-SUS), available in the DATASUS system. **RESULTS:** During the period analyzed, 1,458 children up to 9 years of age were hospitalized due to viral meningitis in the Northeast region, accounting for 20% of the country's hospitalizations. The most affected age group was 5 to 9 years of age (40.3%), followed by 1 to 4 years of age (36.3%) and children under one year of age (23.4%). There were more hospitalizations among male children (61.4%). Considering that race/skin color was not specified in 48.1% of the medical records, there was a predominance of mixed-race children (44.1%) requiring medical care. The federative unit with the highest number of hospitalizations during the studied period was Pernambuco (49.4%), followed by Bahia (17.6%). The mean length of hospital stay was similar between females and males, being 6.9 and 6.6, respectively, and was higher among children under 1 year of age. Twenty-five of the hospitalized children died, revealing a mortality rate of 1.71%, of which 1.42% were female and 1.9% male. This rate is higher among patients under 1 year of age (2.35%) and whose skin color is yellow (2.27%). Besides, 2018 recorded the highest mortality rate (4.15%), followed by 2019 (1.66%). **CONCLUSION:** The research showed an epidemiological profile of children hospitalized due to viral meningitis in the Northeast region, between 2015 and 2019, predominantly male, of mixed race, aged 5 to 9 years old, and in the state of Pernambuco, due to its larger population. The viral meningitis mortality rate and mean length of hospital stay were higher in children younger than 1 year of age, thus raising concern for the age group.

09. IMPACT OF THE COVID-19 PANDEMIC ON AIDS DIAGNOSIS IN BRAZIL: AN EPIDEMIOLOGICAL ANALYSIS

Ester Almeida de Sousa¹, Andressa Carvalho Pereira¹, Guilherme Augusto Silva de Moraes¹, Taís Souza da Silva¹, Karina Rodrigues dos Santos¹

¹ Federal University of Parnaíba's Delta

INTRODUCTION: The Acquired Immunodeficiency Syndrome (AIDS) is a disease caused by the Human Immunodeficiency Virus (HIV), causing chronic and progressive immune dysfunction due to the decline in the levels of CD4 lymphocytes. The earlier the diagnosis of this disease is made, the greater the patient's quality and life expectancy. **OBJECTIVES:** To quantitatively analyze the impact of the COVID-19 pandemic on the diagnosis of AIDS in Brazil. **METHODS:** This is an epidemiological, quantitative, descriptive and cross-sectional study with secondary data obtained from the Notifiable Diseases Information System (NDIS) available on the DATASUS platform. The numbers were worked from the comparison of the average of annual diagnoses in Brazil in the period of 2015 and 2019 with the year 2020, the first year of the COVID-19 pandemic. Data analysis was performed using the Microsoft Excel program. **RESULTS:** There was a significant decrease in the total number of AIDS diagnoses in Brazil and in all its regions compared to the period prior to the pandemic, in which numbers were regular. There was a 69.4% drop in total diagnoses in 2020 compared to the average for the period among 2015 and 2019, from 38,861 to 11,880 diagnoses. The Northeast region showed the greatest percentage drop (70.6%), followed by the South (70.5%), Southeast (69.5%), North (68.5%) and

Central-West (63.7%) regions). There was also a significant drop in all federative units in Brazil. Maranhão presented the biggest drop in this parameter (77.8%), followed by Acre (75.9%), Pará (74.4%) and Rio de Janeiro (73.5%). **CONCLUSION:** There was a significant reduction in the total number of AIDS diagnoses throughout Brazil in the year 2020 compared to the average for the period among 2015 and 2019. This data highlights the strong impact of the COVID-19 pandemic in the identification of AIDS cases in Brazil.

10. EPIDEMIOLOGICAL PROFILE OF HOSPITALIZATIONS FOR MALNUTRITION IN PIAUÍ FROM 2016 TO 2020

Ester Almeida de Sousa¹, Andressa Carvalho Pereira¹, Guilherme Augusto Silva de Moraes¹, Taís Souza da Silva¹, Karina Rodrigues dos Santos¹

¹ Federal University of Parnaíba's Delta

INTRODUCTION: Malnutrition or subnutrition is a clinical condition characterized by the compromised supply of one or more essential nutrients or by the inadequate physiological use of the consumed foods. Protein-calorie malnutrition contributes to increased mortality and vulnerability to infections, besides the decreasing quality of life. In most cases, this situation originates from socioeconomic factors, ranging from children to the elderly. **OBJECTIVES:** To characterize the epidemiological profile of hospitalizations for malnutrition in Piauí from 2016 to 2020 in terms of gender, age and race/color. **METHODS:** This is a descriptive epidemiological study with secondary data obtained from the Hospital Information System (SIH/SUS), in the Hospital Morbidity category, available in DATASUS system. The sample of this study consisted of all data on admissions due to malnutrition in the State of Piauí among 2016 and 2020, taking into account the place of residence of these patients. **RESULTS:** During the analyzed period, there was a total of 2,172 hospitalizations for malnutrition in the State of Piauí. Of these, 49.03% (1,065) were male and 50.97% (1,107) were female. Regarding age, there was a higher prevalence in the age group of 80 years or more (15.75%), followed by the age groups from 70 to 79 years (15.61%), 60 to 69 years (12.61%) and 50 to 59 years (11.88%). As for race/color, only 1,163 (53.54%) had this information registered, and in this group there was a higher prevalence of brown people (77.39%), followed by yellow people (13.16%), white (4.9%), black (4.47%) and indigenous (0.08%). **CONCLUSION:** The data analyzed reveal a negligible difference between males and females in the number of hospitalizations for malnutrition in the state of Piauí among 2016 and 2020. The age groups most affected by this condition include people aged 50 or over, accounting for more than 50% of admissions in the period. As for race/color, the high underreporting of this information stands out, which was no longer registered in almost half of the admissions. Among people who had this information registered, there was a large predominance of browns, with more than three quarters of admissions.

11. EPIDEMIOLOGICAL ANALYSIS OF CONGENITAL SYPHILIS CASES IN NORTHEASTERN BRAZIL FROM 2010 TO 2020.

Lohanna Maria Silva Moreira¹, Augusto César Evelin Rodrigues¹

¹ State University of Piauí

INTRODUCTION: Syphilis is a systemic infectious disease with chronic evolution. Congenital syphilis is an infection of the fetus by

Treponema pallidum, transmitted by the placenta, at any time of pregnancy or clinical stage of the disease in an untreated or inadequately treated pregnant woman. This type of syphilis is estimated to be a complicating factor in about 1 million pregnancies each year worldwide. Contamination of the fetus can lead to abortion, fetal death and neonatal death in infected fetuses or the birth of children with syphilis. **OBJECTIVES:** The objective was to analyze the epidemiological profile of congenital syphilis cases in the Northeast region, from 2010 to 2020, in pregnant women aged between 10 and 40 years or more. **METHODS:** This is an epidemiological, cross-sectional and descriptive study with a search in secondary databases. Data collection was performed through the Notifiable Diseases Information System (SINAN) at DATASUS. Initially, the Northeast region was selected, with a filter for the year, age group and maternal education, prenatal care, treatment regimen and final diagnosis in the period from 2010 to 2020. **RESULTS:** 54,324 cases of congenital syphilis were observed in children under one year of age during the period evaluated. Among these ones, there was a greater predominance in 2018, with 7,849 affected and a smaller one in 2010, with 2,313 notifications. Against this, there is a prevalence of the maternal age group from 20 to 29 years old, with 28,231 notifications (52%); in which 34,816 women are illiterate/have not completed high school (64%); 7,772 women did not receive prenatal care (15.4%); 46,237 carried out the treatment in appropriately or did not do it (96.1%); as for the final diagnosis, there was a predominance of 50,630 with recent congenital syphilis (93%), 2074 stillbirths due to syphilis (3.8%), 1683 abortions due to syphilis (3%), and 109 with late congenital syphilis (0.2%). **CONCLUSION:** Thus, the impact and increase in congenital syphilis cases in the Northeast region in the last 10 years is notorious. According to this, it can be proved that, in fact, the lack of information and adequate assistance for prenatal care and the treatment of syphilis, especially among young people, associated with the low levels of education of the population are risk factors that contribute to the growth of these numbers, evidenced by the exacerbated rates of newborns with recent congenital syphilis, stillbirths and miscarriages.

12. ANALYSIS OF THE RELATIONSHIP BETWEEN NEWBORNS WITH MICROCEPHALY AND RASH DURING PREGNANCY IN PIAUÍ FROM 2015 TO 2020

Martha Laura Leão dos Santos Silva¹; Livia Rocha Santos¹; Igor dos Santos Cavalcante¹; Ana Vitória Meireles Veiga¹ and Caroline Camargo Bandeira da Silveira Luz¹.

¹ Federal University of Delta do Parnaíba

INTRODUCTION: In Brazil, in 2015, there was a considerable increase in cases of microcephaly related to Zika virus. Among the symptoms of this infection, headache, rash, edema and arthralgia stand out, and its diagnosis is difficult due to symptoms similar to dengue fever and chikungunya fever. In the case of suspicion in pregnant women, it is essential that they be tested for adequate follow-up due to possible neurological complications in the child. **OBJECTIVE:** To assess the relationship between the presentation of rash during pregnancy and newborns with microcephaly in Piauí between 2015 and 2020. **METHODS:** This is a descriptive epidemiological study in which information was extracted from the database of Notification of Suspicious Cases of Congenital Zika Virus Syndrome made available by DATA-SUS/e-SUS, with public domain database. The variable analyzed was the presence or absence of rash, specifying the trimester of pregnancy in which the manifestation occurred, if considered present. **RESULTS:** 325 cases of microcephaly were

reported in Piauí and 2016 was responsible for 56.6% of these. Of the microcephaly notifications, in 23.69% of the cases the mothers had a rash during pregnancy, 50.4% of the mothers had no rash and in 24.9% such information was ignored or not informed. Of the cases in which the rash occurred, 70.1% manifested in the 1st trimester of pregnancy, 18.18% in the 2nd trimester, 5.1% in the 3rd trimester and 10.3% of the mothers were unable to specify the period in which the rash has set in. From 2015 to 2020 there was a 95% reduction in newborns notified with microcephaly. **CONCLUSION:** There was rash during pregnancy in 23.69% of mothers of children with microcephaly, possibly due to the cutaneous manifestation of Zika virus infection. It is important to highlight the numerous times that this information was ignored or not reported, which hinders data analysis. More than half of mothers who had children with microcephaly did not have a rash during pregnancy, which does not exclude the possibility of Zika virus infection, as there are other symptoms such as headache and arthralgia. In cases where there was a rash, most occurred in the 1st trimester of pregnancy, which may indicate greater susceptibility of mothers to infection in early pregnancy. The reduction in cases may have occurred due to campaigns to encourage the use of repellents by pregnant women and other preventive measures against the mosquito.

13. FEMALE GENITAL PROLAPSE: ANALYSIS OF THE PROFILE OF HOSPITALIZATIONS IN THE STATE OF PIAUÍ BETWEEN 2015 AND 2019

Martha Laura Leão dos Santos Silva¹; Livia Rocha Santos¹; Igor dos Santos Cavalcante¹; Ana Vitória Meireles Veiga¹ and Caroline Camargo Bandeira da Silveira Luz¹.

¹ Federal University of Delta do Parnaíba

INTRODUCTION: Genital prolapse is the descent of pelvic structures which can be the vaginal walls, uterus and vaginal vault in patients who underwent hysterectomy. Some risk factors are: vaginal delivery, especially in mothers over 40 years old, use of forceps and multiparity. This morbidity negatively affects women's quality of life and sometimes manifests itself in association with urinary disorders. The diagnosis can be made on clinical examination using the Valsalva maneuver and clinical or surgical treatment, depending on the prolapse staging and the woman's general symptoms. **OBJECTIVE:** To analyze the profile of hospitalizations for female genital prolapse in Piauí between 2015 and 2019. **METHODS:** Descriptive epidemiological study, whose data were obtained through the database on Hospital Morbidity provided by DATA-SUS/e-SUS, with public domain bank. The variables age group, character of care and hospital expenses of patients hospitalized for female genital prolapse in Piauí during the considered period of time were considered. From the results, graphs were constructed in Microsoft Excel. **RESULTS:** There were 3589 hospitalizations for female genital prolapse in Piauí, corresponding to 0.64% of the causes of hospitalizations in women aged 10 years and over. With regard to age group, 10.6% occurred with women aged 10 to 29 years, 35.76% between 30 and 49, 37.9% between 50 and 69 and 15.9% aged 70 or over. As for the nature of care, 86.06% were elective and 13.93% urgent. Regarding hospital expenses, out of the total invested in women aged 10 and over, 0.33% were due to genital prolapse. **CONCLUSION:** Although the condition occurs more frequently in women of advanced age, there were records between 10 and 14 years old, which may be due to a mistaken diagnosis. The greatest number of hospitalizations was concentrated between 30 and 69 years old, which can be explained by the increase in the frequency of female genital prolapse with aging. Most

admissions were elective, probably because the surgery does not trigger, in most cases, severe acute complications. Regarding hospital expenses, it is necessary to understand that adequate training is necessary for the correct management of patients, in order to avoid unnecessary procedures and reduce wasted resources.

14. HOSPITAL MORBIDITY OF TUBERCULOSIS IN BRAZIL: AN EPIDEMIOLOGICAL ANALYSIS

Yan Lucas Piauilino Benvindo Teixeira¹, Adélia Almendra Siqueira Mendes¹, Ayana Cavalcante da Paz¹, Giovana da Rocha Leal Dias¹ and Otávio Lucas Tajra Assunção e Silva¹.

¹ University Center Unifacid.

INTRODUCTION: Tuberculosis (TB) is one of the most lethal infectious diseases in the world, remaining one of the main health problems to be faced. The severe forms of the disease are associated with chronic post-infectious sequelae, loss of organic function and are responsible for approximately 1.5 million deaths annually.

OBJECTIVES: To determine the prevalence of hospital morbidity and epidemiological profile among people diagnosed with Tuberculosis notified in the state of Piauí from 2016 to 2021. **METHODS:** This is a descriptive epidemiological study with a quantitative approach. The database used was the Notifiable Diseases Information System (SINAN), provided by the Informatics Department of the Unified Health System (DATASUS). We analyzed: age group, sex, year of notification and municipality of notification. The data used in the preparation of this research are freely accessible, which justifies the absence of the opinion of the Research Ethics Committee. **RESULTS:** Between 2016 and 2021 there were 411 cases of hospitalizations for Tuberculosis in Piauí state, 290 which were male, corresponding to 70.5% of the cases. Among these, 133 admissions (32.36%) were made in Teresina, with 10 deaths. As for the age group, most were concentrated in the 40- and 59-year age group, with 303 cases (39.9%), followed by people between 20 and 39 years, with 297 cases (39.1%). In addition, most of the cases registered in recent years were concentrated in 2017, with a prevalent age group between 30 and 39 years old. As for the clinical outcome, the mortality rate increased from 6.67% in 2016 to 14.29% in July 2021, totaling 40 deaths, reaching the male population aged between 75 and 79 years.

CONCLUSION: During the analyzed period, there was an increase in the in-hospital mortality rate, with the main risk factors being age between 75 and 79 years, with a predominance of males. It is interesting to note that the prevalence of deaths occurred in 2017, however it was not possible to establish a pattern growth in the absolute rate of deaths. Thus, the disclosure of data in this study contributes to the situational diagnosis and can help health managers and workers in the planning and reformulation of prevention and treatment strategies to reduce the incidence of tuberculosis in Piauí.

15. EPIDEMIOLOGIC PROFILE OF OBESITY DEATHS IN PIAUÍ BETWEEN THE YEARS OF 1996 AND 2019

Mariana Fonseca Mendes Soares¹, Francisco Aldo Rodrigues Júnior², Francisco Yves Gadelha Pitombeira³ and Marcela Fonseca Mendes Soares².

¹ University Center Uninovafapi

² State University of Piauí

³ University Center FACID

INTRODUCTION: Obesity is part of the Non-Communicable Chronic Diseases (NCCD) axis; that being diseases that constitute the biggest cause of death in the world. Its cause is multifactorial, depending on

the interaction between genetic, metabolic, social, behavioural and cultural factors. It's needed, for scientific purposes, the acquirement of epidemiologic profiles on obesity deaths. **OBJECTIVES:** To map the epidemiologic profile of obesity deaths in Piauí between the years of 1996 and 2019. **METHODS:** The research was done through the data platform TABNET from Unified Health System Database - DATASUS, by sorting the "deaths by preventable causes from 5 to 74 years old" subgroup and geographic coverage in Piauí. The items "row" and "content" were respectively set in "CID-10 category" and "occurrence deaths". The "column", on the other hand, alternated between the variables "sex", "age range", "education" and "marital status"; and the "available time frames" varied from 1996 to 2019. The gathering was restricted to the E66 results. **RESULTS:** Between 1996 and 2019, there were 210 deaths by obesity in Piauí. It was noticed a growing rise over the 24 assessed years. Splitting into two-time frames of 12 years each, there were 53 obesity deaths in the first half (1996 to 2007), while in the second half (2007 to 2019) the total number more than tripled, reaching 162. With regard to sex, the mortality difference was insignificant: 47.1% on males and 52.85% on females. Regarding the age frame, the ones who died the most from obesity were between 40 and 69 years old (67.1%), while the age extremes had smaller participation. About education, the dominance was zero years of schooling (27.6%). In relation to marital status, a substantial portion (42.5%) was married, followed by bachelors (27.6%). **CONCLUSION:** There was an exponential growth in the number of deaths from obesity along the years on Piauí, reinforcing the modern lifestyle influence, tending to sedentarism and poor diet in this disease. The most frequent age frame and marital status reflect an economically active population, which reinforces the interference of a busy routine and weaker healthcare. The prevailing schooling was of zero years, which speaks for how socioeconomic characteristics interfere with the access to appropriate health assistance.

16. EPIDEMIOLOGIC PROFILE OF SELF POISONING DEATHS CAUSED BY THE INTENTIONAL USE OF SUBSTANCES IN PIAUÍ BETWEEN 2015 AND 2019

Mariana Fonseca Mendes Soares¹, Ilane Louisse Araújo Gonçalves², Joanna Cândida Costa Morais¹, Francisco Yves Gadelha Pitombeira³ and Marcela Fonseca Mendes Soares⁴.

¹ University Center Uninovafapi

² Federal University of Pampa

³ University Center FACID

⁴ State University of Piauí

INTRODUCTION: According to the World Health Organization (WHO), intoxications are an aggravation to Public Health. It is estimated that 1.5 to 3% of the population gets poisoned every year, accidentally or intentionally, so that self-poisoning, until 2020, took up the second place in mortality statistics in Brazil. **OBJECTIVES:** To map the epidemiologic profile of self-poisoning deaths caused by the intentional use of substances in Piauí between 2015 and 2019.

METHODS: The research was made through the data platform TABNET from Unified Health System Database - DATASUS, on the category "deaths by external causes" and area of influence in Piauí. The items "CID-10 category" and "occurrence deaths" were fixed. The variables applied were "sex", "age range" and "marital status"; and the "available time periods" varied from 2015 to 2019. The gathering was restricted to the results corresponding to CID-10 from X60 to X69. **RESULTS:** In the delimited time period, 158 deaths by intentional exogenous poisoning were identified, 58.23% of them corresponding to the male sex. According to the age range, 28.48% were between 30 and 39 years old, 22.74% between 20 and 29 years old and 17.72%

between 40 and 49 years old. Concerning the marital status, 49.37% deaths corresponded to bachelors, 22.78% were married people, 3.16% were widowed, and 2.53% were divorcees. The most used ways of intentional self-poisoning that progressed to death were, in decreasing order: exposure to pesticides (41.77%), exposure to other chemicals and non-specified harmful substances (24.6%), drug use, medication and biological substances (15.82%), anticonvulsant drug use, hypnotics, antiparkinsonians and psychotropic substances (11.39%). **CONCLUSION:** The male prevalence supports the fact that, since men choose more lethal methods, they accomplish suicide attempts more frequently. Being young adults and adults the dominant age range, it is possible to correlate this occurrence to the instability that is common in an age that deals with strong social demands. Furthermore, bachelors were the most affected, reflecting the marital relationship's protective factor on suicide. The most used way of self-poisoning was pesticide exposure, so it is possible to infer its correlation to the high rates of agricultural production, therefore the easiest access to pesticide in comparison to the other substances.

17. EPIDEMIOLOGIC PROFILE OF OBESITY DEATHS IN PIAUÍ BETWEEN THE YEARS OF 1996 AND 2019

Mariana Fonseca Mendes Soares¹, Francisco Aldo Rodrigues Júnior², Francisco Yves Gadelha Pitombeira³ and Marcela Fonseca Mendes Soares².

¹ University Center Uninovafapi

² State University of Piauí

³ University Center FACID

INTRODUCTION: Obesity is part of the Non-Communicable Chronic Diseases (NCCD) axis; that being diseases that constitute the biggest cause of death in the world. Its cause is multifactorial, depending on the interaction between genetic, metabolic, social, behavioural and cultural factors. It's needed, for scientific purposes, the acquirement of epidemiologic profiles on obesity deaths. **OBJECTIVES:** To map the epidemiologic profile of obesity deaths in Piauí between the years of 1996 and 2019. **METHODS:** The research was done through the data platform TABNET from Unified Health System Database - DATASUS, by sorting the "deaths by preventable causes from 5 to 74 years old" subgroup and geographic coverage in Piauí. The items "row" and "content" were respectively set in "CID-10 category" and "occurrence deaths". The "column", on the other hand, alternated between the variable's "sex", "age range", "education" and "marital status"; and the "available time frames" varied from 1996 to 2019. The gathering was restricted to the E66 results. **RESULTS:** Between 1996 and 2019, there were 210 deaths by obesity in Piauí. It was noticed a growing rise over the 24 assessed years. Splitting into two-time frames of 12 years each, there were 53 obesity deaths in the first half (1996 to 2007), while in the second half (2007 to 2019) the total number more than tripled, reaching 162. With regard to sex, the mortality difference was insignificant: 47.1% on males and 52.85% on females. Regarding the age frame, the ones who died the most from obesity were between 40 and 69 years old (67.1%), while the age extremes had smaller participation. About education, the dominance was zero years of schooling (27.6%). In relation to marital status, a substantial portion (42.5%) was married, followed by bachelors (27.6%). **CONCLUSION:** There was an exponential growth in the number of deaths from obesity along the years on Piauí, reinforcing the modern lifestyle influence, tending to sedentarism and poor diet in this disease. The most frequent age frame and marital status reflect an economically active population, which reinforces the interference of a busy routine and weaker healthcare. The prevailing schooling was

of zero years, which speaks for how socioeconomic characteristics interfere with the access to appropriate health assistance.

18. SEX REASSIGNMENT SURGERY IN MALES: A COMPARATIVE STUDY OF THE TRANSEXUALIZING PROCESS BETWEEN BRAZILIAN STATES AND REGIONS

Igor dos Santos Cavalcante¹, Ana Vitória Meireles Veiga¹, Martha Laura Leão dos Santos Silva¹, Livia Rocha Santos¹, João Pedro Sousa Mendes¹ and Lúcia Maria de Sousa Aguiar dos Santos².

¹ Federal University of Delta do Parnaíba

² Facid

INTRODUCTION: Sex reassignment surgery (SRS) in males (M) is a highly complex procedure, in which bilateral orchiectomy is performed with amputation of the penis and neocolpoplasty. It is a transsexualizing process, which requires clinical monitoring, pre and postoperative, with hormone therapy. SRS is a surgical intervention in which an individual's birth sexual and genital characteristics are changed to those socially associated with the gender in which they recognize themselves. It is part, or not, of the physical transition of transsexuals and transgenders. **OBJECTIVES:** This work aims to comparatively analyze the procedures of SRS of M in Brazil. **METHODS:** It consists of an epidemiological study, whose data were obtained from the SUS Hospital Information System. The parameters used were Hospital Admission Authorizations by place of admission in the Brazilian states and regions and their year of occurrence, between 2015 and 2019. **RESULTS:** A total of 171 SRS were registered in the period. In 2015, there were 23 SRS: 4 in the Northeast region (NE), 12 in the Southeast (SE), 7 in the South (SU). In 2016, there were 38 SRS: 9 in the NE, 12 in the SE, 11 in the SU and 6 in the Midwest (MD). In 2017, there were 39 SRS: 9 in the NE, 12 in the SE, 11 in the SU and 7 in the MD. In 2018 there were 34 SRS: 11 in the NE, 8 in the SE, 7 in the SU and 8 in the MD. In 2019, there were 37 SRS: 10 in the NE, 10 in the SE, 13 in the SU and 4 MD. Rio Grande do Sul (RS) is the state with the most SRS with 49, followed by Pernambuco with 43, São Paulo with 28, Rio de Janeiro with 26 and Goiás with 25. From the data collected, it was possible to highlight the SE as the region of reference for performing SRS in the M. RS was the state that carried out the highest number of SRS among the others. A non-linear increase in the number of operations is evident, with a total percentage increase of 60.8% between 2015 and 2019. In addition, it is observed that only 5 states concentrate all these surgeries across the country, which indicates a certain unevenness of accessibility, showing the precariousness of public policies that effectively address the transsexual population. **CONCLUSION:** Thus, the need for reference services to perform SRS is perceived, as this represents a topic still seen under the pathological bias and surrounded by great prejudice in the medical field. The transsexual population is highly marginalized, which reveals the importance of analyzing their ways of accessing the SUS and whether their demands are being fully met.

19. AGENESIA OF RIBBONS AND CONGENITAL LEFT DIAPHRAMATIC HERNIA

Jemima Silva Kretli¹, Kalynne Rodrigues Marques¹, Raquel da Mota Portela e Silva¹, José Lucas Talles Ferreira Luz² and Bruno Pinheiro Falcão².

¹Uninovafapi University Center;

²Maternity Dona Evangelina Rosa

INTRODUCTION: Rib agenesis is a rare congenital malformation, often associated with vertebral defects such as spondylocostal dysostosis. It is a failure to update the embryonic cartilages of the axial skeleton. When associated with congenital diaphragmatic hernia (CHD), there is a protrusion of the viscera into the chest. **CASE REPORT:** Newborn, female, 1570 grams, 28 weeks gestational age, 2nd twin, cesarean delivery by fetal centralization. At birth, airway aspiration and two cycles of unresponsive positive pressure ventilation, followed by tracheal intubation and referral to the neonatal intensive care unit. Upon inspection, a cranio-body disproportion was identified with a defect in the left ear pinna and downward-sloping eyelid funds. Bulging observed in the lateral region of the left hemithorax during expiration. Whole body radiography showed left costal arch agenesis and vertebral malformations. Chest computed tomography confirmed the malformations of the left costal cage and vertebral bodies, with agenesis of the ribs, dysraphism of the posterior arches, hypoplasia of the left upper pulmonary lobe and left diaphragmatic discontinuity with eventration of abdominal structures. On echocardiogram, dextropex mesocardia, rastelli type A total atrioventricular septal defect, aortic thrust, infundibular pulmonary stenosis, hypoplastic pulmonary valve and pulmonary trunk, determining a tetralogy of Fallot. Total abdominal ultrasound showed herniation of abdominal structures (spleen and intestinal loops) into the left chest cavity. The patient remained under intensive care for 2 months, maintained on mechanical ventilation and using vasoactive drugs, with permanent hemodynamic instability and worsening with minimal manipulation, which made any attempt at surgical resolution impossible, resulting in death. **FINAL CONSIDERATIONS:** A thorough evaluation of the newborn is of paramount importance in diagnosing congenital malformations and in defining the therapeutic follow-up. Hemodynamic instability resulting from complex heart disease was a determining factor for the impossibility of surgical correction. Furthermore, the almost complete absence of ribs on the left makes an anchorage point for correcting the diaphragmatic defect inexistent.

20. HOSPITAL ADMISSIONS FOR THE TREATMENT OF ECLAMPSIA IN THE STATE OF PIAUÍ: AN EPIDEMIOLOGICAL ANALYSIS IN THE PUBLIC HEALTH SYSTEM

Igor dos Santos Cavalcante¹, Ana Vitória Meireles Veiga¹, Livia Rocha Santos¹, Martha Laura Leão dos Santos Silva¹, Lúcia Maria de Sousa Aguiar dos Santos² and José Arimatea dos Santos Júnior².

¹ Federal University of Delta do Parnaíba

² Facid

INTRODUCTION: Eclampsia (EC) is defined as a primary episode of seizure, during pregnancy or in the postpartum period, unrelated to other pathological conditions related to the central nervous system, present in pregnant women with pre-eclampsia. The definitive treatment is childbirth; however, the risk of prematurity is compared with gestational age, severity of pre-eclampsia and reaction to other treatments. Thus, as it represents a pathology that threatens the vitality of the mother-fetus binomial, it represents an important public health issue. **OBJECTIVES:** This study aims to analyze hospitalizations for treatment of EC in Piauí between 2014 and 2018. **METHODS:** This is an epidemiological, descriptive and quantitative study, whose data were extracted from the Hospital Information System (SIH/SUS). The cases of hospitalization for EC treatment in Piauí were addressed according to the Authorizations for Hospital Admissions (AHA) by

municipality in the years 2014 to 2018. **RESULTS:** During the entire period analyzed, a total of 127 admissions were obtained. In 2018, there were 21 admissions. In 2017, there were 15 admissions. In 2016, there were 22 admissions. In 2015, there were 36 admissions. In 2014, there were 33 admissions. As for the municipalities with the highest number of hospitalizations, the leadership was in the state capital, Teresina, with 41 (32.2% of cases), followed by Picos, with 24 (18.8%), Guadalupe with 10 (7.8. %), Parnaíba with 8 (6.2%) and Amarante with 7 (5.5%). The results obtained consolidated Teresina as a reference center for the treatment of EC, with almost a third of the total number of admissions. In addition, there was a trend towards a non-linear reduction for hospitalizations in the period, with a percentage difference between the first and last year of approximately 36% of cases. This reality can mean both a relative improvement in the management of pre-eclampsia cases, and a problem of underreporting for cases of EC, which represents a reality when studying maternal morbidity and mortality. **CONCLUSION:** The monitoring and evaluation of cases provide information that helps to strengthen public policies, resource management and the establishment of flows and references that correspond to the regional reality. Therefore, the analysis of notifications for hospitalization of EC is of paramount importance in hospital planning and in the qualification of teams based on scientific evidence and available protocols.

21. COMPARATIVE ANALYSIS BETWEEN THE PERIOD 2001 TO 2006 AND THE PERIOD 2010 TO 2015 ABOUT THE INCIDENCE OF CONGENITAL RUBELLA SYNDROME IN BRAZILIAN REGIONS

Ana Vitória Meireles Veiga¹, Igor dos Santos Cavalcante¹, Martha Laura Leão dos Santos Silva¹, Livia Rocha Santos¹, Lúcia Maria de Sousa Aguiar dos Santos².

¹ Federal University of Parnaíba Delta

² University center UniFacid

INTRODUCTION: Rubella is a viral disease that, when it occurs during pregnancy, is a concern due to the teratogenic action of the virus that can cause congenital rubella syndrome (CRS). Therefore, currently, in Brazil, the vaccine to prevent the disease is on the vaccine calendar and cases of CRS are mandatory notification. Since the data provided allows for control measures. **OBJECTIVES:** This work aims to comparatively analyze a time frame regarding the incidence of CRS cases. **METHODS:** This is an epidemiological, quantitative and retrospective study. Searches were performed on the DATASUS TABNET platform, in the Epidemiological and Morbidity section - Diseases and Diseases of Notifications. Collect data on CRS cases from the five Brazilian regions with a time frame from 2001 to 2006 and 2010 to 2015. As they are tertiary data, approval by the ethics committee was not required. **RESULTS:** In the northeast region, 51 cases were reported from 2001 to 2006 and 4 cases were reported from 2010 to 2015. In the northern region, 34 cases were reported from 2001 to 2006 and 4 cases were reported from 2010 to 2015. 14 cases were reported from 2001 to 2006 and 6 cases from 2010 to 2015. In the Southeast region 124 cases were reported from 2001 to 2006 and 18 cases from 2010 to 2015. In the South region, 6 cases were reported in the period from 2001 to 2006 and no cases were reported in the period from 2010 to 2015. Rubella has a benign evolution when it affects adults and children, but it is of great concern when it affects pregnant women. Therefore, in Brazil, from 1996 onwards, rubella is a compulsory notification disease. This was of paramount importance for the control of rubella in the country,

especially after the outbreak of infection in 2001. Therefore, it is possible to see that in the period that faced the outbreak, from 2001 to 2006, 229 cases of CRS were reported in the country, while in the period from 2010 to 2015, 32 cases were reported in Brazil. **CONCLUSION:** The importance of epidemiological surveillance in Brazil, as well as rubella vaccination, in the prevention of Congenital Rubella Syndrome is indisputable. There is a decrease in CRS cases, but efforts are still needed to maintain this scenario, with complete vaccination coverage and continued sensitivity to notifications of the infection.

22. COVID-19'S IMPACT ON IMMUNIZATION OF PREGNANT WOMEN BY THE DTPA VACCINE IN THE NORTHEAST REGION

Ana Vitória Meireles Veiga¹, Igor dos Santos Cavalcante¹, Martha Laura Leão dos Santos Silva¹, Lívia Rocha Santos¹, Lucia Maria de Sousa Aguiar dos Santos².

¹ Federal University of Parnaíba Delta

² University center UniFacid

INTRODUCTION: The adult-type acellular triple bacterial vaccine (dTpa) - which immunizes against tetanus, whooping cough and diphtheria - is of paramount importance for the prevention of neonatal tetanus and diphtheria in pregnant women. For this reason, it is on the vaccination calendar in Brazil and it is one of the immunization agents recommended for women during prenatal care. The coronavirus pandemic began in February 2020 with the first confirmed case in the country and may have impacted women's access to immunizations. **OBJECTIVES:** The aim of this work is to analyze the impact of the SARS - Cov -2 pandemic on the vaccination coverage of pregnant women in the Northeast region from 2016 to 2021. **METHODS:** This is an epidemiological, quantitative and retrospective study. Searches were performed on the DATASUS TABNET platform, in the Health Care section. Collect data on the vaccination coverage of pregnant women in 26 states and the federal district, with a time frame from 2016 to 2021. The generated spreadsheets were analyzed using Microsoft Excel software. As they are tertiary data, approval by the ethics committee was not required. **RESULTS:** After analyzing the data, it was possible to infer that there was a growing increase in vaccination coverage in all states in the period from 2016 to 2019. In Maranhão, there was an increase of 121%. In Piauí, there was an increase of 282%. In Ceará, the increase was 19%. In Rio Grande do Norte, there was an increase of 112%. In Paraíba, the increase was 145%. In Pernambuco there was an increase of 38%. In Alagoas, the increase was 66%. In Sergipe, it was 172%. In Bahia, there was an increase of 106%. However, there was a decrease in vaccination coverage in all states in 2020 compared to 2019. In Maranhão, there was a decrease of 41%. In Piauí, there was a decrease of 13%. In Ceará, there was a decrease of 24%. In Rio Grande do Norte, it decreased by 23%. In Paraíba, the rate was 31%. In Pernambuco there was a 26% decrease. In Alagoas, there was a 36% reduction in coverage. In Sergipe, it was also 36%. In Bahia, there was a 29% decrease. **CONCLUSION:** Therefore, it can be noted that the coronavirus pandemic had a negative impact on dTpa vaccination coverage in pregnant women in the Northeast region. This scenario may have occurred due to several factors triggered by the crisis, such as the reception of these women to seek health services and a decrease in care due to social isolation. Therefore, it is important a more in-depth research.

23. EPIDEMIOLOGICAL PROFILE OF PATIENTS WITH HIV-AIDS IN THE CITY OF PINHEIRO FROM 2015 TO 2020

Lorena Fontinele Godoi¹, Paulo Ricardo Pereira de Souza¹, Denise Nascimento Carvalho¹, Déborah Lima Lopes Araújo¹, Thiago Dutra Mendonça¹ and Almir José Guimarães Gouveia¹.

¹ Federal University of Maranhão

INTRODUCTION: Acquired Immunodeficiency Syndrome (AIDS) caused by the HIV retrovirus was discovered in 1984 among an epidemic in the United States (CDC, 2020). Since then, approximately 35 million deaths worldwide have been reported related to this pathology, representing almost 50% of mortality rate (WHO, 2018). As a result, early diagnosis is irreplaceable in combating the spread of this STD. However, due to the COVID-19 pandemic, there was a 22% drop in testing and 11% in prevention and treatment measures in 2020 worldwide, compared to 2019, according to the United Nations Joint Program on HIV-AIDS (UNAIDS), which comprises a risk to public health. **OBJECTIVES:** To analyze the epidemiological profile of patients affected by HIV-AIDS in the municipality of Pinheiro-MA from January 2015 to December 2020. **METHODS:** This is a time series study and its data were presented as absolute and relative frequency. The variables adopted were: gender, age group, race and region, and the data collected were from January 2015 to December 2020, from secondary data extracted from DATASUS. **RESULTS:** Within the period stipulated by the research, in the city of Pinheiro-MA, there were 109 cases of AIDS, which corresponds to 2.92% of the total cases reported in the state of Maranhão (3,721 cases). It was also verified in the data analysis there was a predominance in males (62 cases), in the age group between 40 and 49 years (24 cases), followed by age groups between 30 and 34 years (20 cases) and mainly in brown people (37 cases). **CONCLUSION:** Through the analysis of the epidemiological profile of HIV-AIDS notifications in the city of Pinheiro-MA, the predominance was found in males, in the age group from 40 to 49 years, besides that the brown race was predominant. However, the above-mentioned results do not coincide with the existing literature of world statistics, since the prevalence is in females, between 15 and 49 years of age (KFF, 2021). Furthermore, the conclusions reached will be more useful with progress preliminary data. Therefore, by delimiting more accurate epidemiological methodologies, more targeted prevention measures will be defined both for the city of Pinheiro-MA's scope and for the national's.

24. ROUTES OF DELIVERY: COMPARATIVE EPIDEMIOLOGICAL STUDY IN THE STATE OF PIAUÍ

Livia Rocha Santos¹, Martha Laura Leão dos Santos Silva¹, Igor dos Santos Cavalcante¹, Ana Vitória Meireles Veiga¹, Lúcia Maria de Sousa Aguiar dos Santos².

¹ Federal University of Delta do Parnaíba;

² Center University Unifacid.

INTRODUCTION: In recent decades, Brazil has had a caesarean section rate of around 40%, exceeding the values of 10-15% suggested by the World Health Organization (WHO). Given the increase and frequency of this type of delivery, the discussion about the decision on the mode of delivery has become important. This study allows a reading of the state scenario. **OBJECTIVES:** To draw an epidemiological profile of delivery routes between 2015 and 2019, in the state of Piauí. **METHODS:** This is a descriptive-quantitative epidemiological study. Data were collected from the Information Technology Department of the Unified Health System (DATASUS), using the Birth Information System (SINASC). The variables included

were the mother's education and age group, adequate follow-up, and the number of prenatal consultations. Data were tabulated on the Google Spreadsheets® website. **RESULTS:** During the study period, 242,213 deliveries were performed, of which 133,197 (54.99%) corresponded to cesarean deliveries, 108,942 (44.97%) to vaginal deliveries and 74 (0.04%) were ignored. As for the type of cesarean delivery, women aged between 25 and 29 years, with schooling between 8 and 11 years, with more than adequate follow-up and with seven or more visits during prenatal care predominated. As for vaginal delivery, a similar picture was observed, differing only in the age group, with women aged between 20 and 24 years. **CONCLUSION:** Therefore, there is a predominance of cesarean deliveries. The choice of this mode of delivery can be crossed for several reasons: Medical recommendations, to preserve maternal and child health; failures in prenatal care, regarding guidance on the disadvantages and advantages of each mode of delivery; choice of the woman, which can be taken due to misinformation and the feeling of fear and doubts related to vaginal birth; in addition to interventional medical interests and other sociocultural factors.

25. THE QUALITY OF OBSTETRIC FOLLOW-UP: ANALYSIS OF THE NUMBER OF PRENATAL CONSULTATIONS PERFORMED BY PREGNANT WOMEN IN THE CITY OF PARNAÍBA AND IN THE STATE OF PIAUÍ

Igor dos Santos Cavalcante¹, Livia Rocha Santos¹, Martha Laura Leão dos Santos Silva¹, Ana Vitória Meireles Veiga¹, Lúcia Maria de Sousa Aguiar dos Santos².

¹ Federal University of Delta do Parnaíba;

² Center University Unifacid.

INTRODUCTION: Prenatal consultation is the medical follow-up during pregnancy, which ensures a good referral to the time of delivery, with emphasis on the health of the mother-fetus binomial. Thus, it is extremely important to carry out a periodic inspection of the pregnancy, which, according to the Ministry of Health, must be at least 6 times per pregnant woman. Monitoring the number of prenatal consultations performed defines the quality of obstetric care and, therefore, represents a health issue. **OBJECTIVES:** To analyze the amount of prenatal care provided by pregnant women in the city of Parnaíba (PHB) and Piauí (PI). **METHODS:** This is a quantitative and epidemiological study. The information was obtained from the DATASUS TABNET platform, in the VITAL STATISTICS – BORN LIVES section. The data analyzed consist of the number of prenatal consultations registered in the city of PHB and in the state of PI, in the period from 2013 to 2017. **RESULTS:** In 2013, in PHB, 118 births occurred to mothers who did not attend any consultations, 754 of pregnancies with 1 to 3 consultations, 1,971 of pregnancies with 4 to 6 consultations and 1,813 with 7 or more; in PI, there were 1,782 without consultations (SC), 4,576 with 1 to 3 consultations, 17,667 with 4 to 6 and 24,488 with 7 or more. In 2014, PHB had 76 SC women, 623 with 1 to 3, 1,714 with 4 to 6 and 2,145 with 7 or more; the PI had 1,101 SC, 4,199 with 1 to 3 consultations, 16,869 with 4 to 6, 27,629 with 7 or more. In 2015, in PHB there were 74 pregnant women SC, 551 with 1 to 3, 1,787 with 4 to 6, 2,355 with 7 or more; in PI 943 SC, 3,624 with 1 to 3, 16,217 with 4 to 6 and 30,381 with 7 or more. In 2016, in PHB there were 78 SC, 567 with 1 to 3, 1,732 with 4 to 6, 2,519 with 7 or more; in PI 1,327 SC, 3,587 with 1 to 3, 14,875 with 4 to 6 and 29,783 with 7 or more. In 2017, in PHB 46 were SC, 616 with 1 to 3 appointments, 1,812 with 4 to 6 appointments and 2,697 with 7 or more appointments; in PI, 1365 SC, 3,617 with 1 to 3, 14,936 with 4 to 6 and 31,024 with 7 or more. **CONCLUSION:** Based on the study

described above, it is possible to see a progressive improvement in the quality of obstetric follow-up in the PI and in PHB, in which PHB was ahead of the state's percentage mean.

26. THE VERSICOLOR PITYRIASIS AS AN INSULIN PERIPHERAL RESISTANCE SIGNAL: CASE REPORT IN YOUNG PATIENT.

Matheus Castro Conrado¹; Ingridy Dourado Rêgo¹; Lara Monteiro Sérvio De Carvalho¹; Rayssa Dantas Nogueira Benvindo¹; Maria Eduarda Da Silva Oliveira Araújo¹; Evandra Marielly Leite Nogueira Freitas Galvão¹

¹ Centro Universitário Uninovafapi.

INTRODUCTION: Pityriasis Versicolor (PV) is a superficial fungal infection caused by *Malassezia Furfur*, lipophilic organism that in ideal conditions colonies in the corneum stratum of the skin, developing a pigmentation disorder with lesions that vary the coloring spectrum. The manifestation of PV occurs due to exogenous and endogenous stimuli. Among the exogenous factors mainly stands out the heat and moisture. Already among the endogenous factors stands out the positive family history for PV and the state of immunological deficiency caused by several other pathologies. The most diagnosis is clinical. **OBJECTIVES:** Reporting a case of recurrent versicolor pityriasis associated with peripheral resistance to insulin in a young patient. **CASE REPORT:** F.C.S.F, 15 years old, student, searched an outpatient clinic with multiple blemishes for three years three years ago. The dermatological examination evidenced multiple hypochromic spots all over the trunk, face and cervical region, Zireli signal was positive and Wood light with yellowish fluorescence at the lesions site. In complementing the patient history reported prior diagnosis of prédiabetes at age 11. He also reported that he has already had treatment for the stains and there was recurrence of the lesions. Patient was diagnosed with PV and pharmacological conduits in the first consultation were: itraconazole 100 mg orally and ketoconazole cream in the lesions site. Laboratory tests were requested to confirm insulin resistance. In return, patient brought the result of laboratory tests. The diagnosis of relevant versicolor Pityriasis + peripheral resistance to insulin was closed. As conduct the use of GliFage XR 500mg was instituted; Itraconazole 100mg (1x per month for 6 months) and Cetoconazole Shampoo (2x per week). **FINAL CONSIDERATIONS:** Patients with peripheral insulin resistance are more vulnerable to cutaneous infectious diseases. In these cases, the skin becomes an organ open to the most varied forms of commitment, facilitating complications or delaying healing. This is all due to leukocyte abnormalities that in these patients has their diffusion decreased. In these cases of relapsing PV the dermatologist should always investigate peripheral resistance to insulin, therefore, lesions are early signs of systemic disease. The most appropriate conduct is the use of systemic antifungal and the treatment of the base cause with oral antidiabetic. In view of the foregoing, it is important to highlight the importance of the dermatologist in the early diagnosis of systemic diseases as well as in the right driving of cases.

27. UTERINE MALFORMATION: DIDELPHUS UTERUS ASSOCIATED WITH UNILATERAL RENAL AND URETERAL AGENESIA IN PATIENT ATTENDED AT MATERNITY DONA EVANGELINA ROSA IN TERESINA-PIAUÍ. CASE REPORT

Marcos Castelo Branco de Deus¹, Lourdes Yumi Costa Kamada Melo¹, Ludmila Carvalho de Araújo¹, Luís Alberto de Sousa Rodrigues¹, Márcio Victor Cavalcante Borges Leal¹ and Maria Castelo Branco Rocha de Deus¹.

¹ University Center Faculty Integral Differential

INTRODUCTION: The didelphic uterus is a congenital uterine malformation related to alterations in embryogenesis up to the 12th week of fetal life due to defects in the fusion of Müller's canals or resorption of the inter-Müllerian septum. Its etiology is not well understood; its incidence and prevalence is complex. Clinical manifestations usually occur in puberty with menstrual alterations or in adulthood due to reproductive events such as: abortion, premature birth, high-risk pregnancy and/or sterility; can be associated with changes in the urinary tract. Transvaginal pelvic ultrasound (USTV), hysteroscopy, hysterosalpingography (HSG), laparoscopy and magnetic resonance imaging are complementary means of diagnosis. The diagnosis and its individualization will indicate the form of treatment for each type of anomaly. **CASE REPORT:** SAS, 19 years old, sought a gynecologist reporting purulent leukorrhea resistant to the treatments performed. Menarche at age 12, regular menses; gestates zero. Normal general physical examination. Gynecological exam: external genitalia without alterations; specular examination: trophic cervix with an external orifice 0.5 cm in diameter, located to the right of the vaginal cul-de-sac; on the left, there was another orifice or opening through which fetid purulent content continuously drained; the vaginal touch was inconclusive; TVUS showed double endometrial thickening in separate horns suggesting didelphic uterus; HSG showed only the right horn; it is not possible to visualize the left horn due to the impossibility of channeling the vaginal fistulous orifice; renal and left ureteral agenesis was seen by excretory urography. It was concluded that a didelphic uterus was diagnosed with absence of a typical cervix in the left horn that joined the vagina through a fistulous conduit. It was decided to surgically remove the left horn and part of the fistulous tract that ended in the vagina, as this could be the cause of continuous and recurrent vaginal infection. Surgery confirmed the findings; later, the patient returned reporting the disappearance of her complaint. **FINAL CONSIDERATIONS:** The present case is a rare uterine anomaly associated with renal and ureteral agenesis in a young patient with normal menstrual cycles and no defined reproductive future. The surgical option had a prophylactic/therapeutic indication due to the possibility of ascending pelvic infection through the already infected fistulous left uterine uterine vagina-horn canal.

28. STUDY ON ANTIMICROBIAL USE IN PATIENTS WITH SARS-Cov-2 IN AN INTENSIVE CARE UNIT IN TERESINA-PI

Mariana Oliveira Nascimento¹, Arielle Sampaio Carrias¹, Manuela Luiza de Souza Fernandes¹, Sara Cristina Saraiva Batista Diniz¹ and Mayara Ladeira Coêlho¹.

¹ University Center UniFacid.

INTRODUCTION: The pandemic outbreak and the acceleration in the number of Covid-19 cases become the use of antimicrobials widespread in the treatment of patients with SARS-Cov-2 in the intensive care unit (ICU). In these cases, the assessment of the defined daily dose (DDD) is widely used to measure the effectiveness of these drugs and to manage their rational use, preventing the selection and spread of resistant microorganisms. **OBJECTIVES:** The objective of this study was to analyze the defined daily dose of antimicrobials in a

Covid-19 ICU. **METHODS:** A quantitative-based analytical cross-sectional study was carried out with retrospective data collection. Data of the antimicrobial consumption in the Covid-19 ICU from January to June 2021 at the University Hospital of Piauí were imputed and analyzed in Excel. The work was submitted to the Research Ethics Committee (CEP) and approved under the position number 2.463.898.

RESULTS: Data analysis showed that intravenous (IV) Piperacillin + Tazobactam (A) represented 19% of the use of antimicrobials, Meropenem (IV) (B) 18.1%, Ceftriaxone (IV) (C) 17, 4%, oral azithromycin (VO) (D) 9.8%, Vancomycin (IV) 8.5% and Polymyxin B (IV) (F) 4.9%. In ICU, it is common a long term intravenous therapy, however the Covid-19 protocols included the oral route for Azithromycin, which justifies the emphasis on its use. In a study with non Covid-19 ICU, drug D represented 0.1% of medical prescription 14.4% of C. The data corroborate previous study carried out in the University Hospital from Largartos, in which 19.77% of the antimicrobial used was A. In another study, 19.8% of the relative consumption was antimicrobial B, 3.7% by C, 1.2% by E and 7.4% by F. DDD is important for comparison and assessments, but it is noteworthy that each hospital environment has its own characteristics and sensitivity profile of microorganisms. The use of antimicrobials is usually justified by nosocomial respiratory tract infection related to prolonged hospitalization or ICU stay. **CONCLUSION:** It is concluded that, based on what was analyzed, it is possible to generate data to plan clinical strategies in a health unit and, thus, to promote a conscious use of antimicrobials.

29. CASE REPORT: A RARE CASE OF PERFORATING FOLLICULITIS

Mariana Santiago Leão¹, Erlan Clayton Xavier Cavalcante², Ian Gabriel de Melo Batista², Paula Catarina Dalia Rego Medeiros², Beatrice Sousa Alencar² and Fernanda Ayres de Moraes e Silva Cardoso¹.

¹ University Center UniFacid

² State University of Piauí

INTRODUCTION: Perforating folliculitis is one of four forms of primary perforating dermatosis characterized by transepidermal elimination of follicle contents. The eruption generally manifests as papules with a keratotic plug, mainly on extremities and buttocks. Histopathologically, the follicular infundibulum is filled with necrotic material, keratinized substance, and inflammatory cells. The hair then perforates this structure and a transepidermal elimination picture is noted with invasion of collagen and elastic fibers. Any individual can develop perforating folliculitis, however, it is recommended to investigate diabetes and kidney disease, because these pathologies can be associated with the condition. The most common causes are: traumatic itchy scratches; friction caused by tight clothing or shaving; some conditions such as dermatitis and acne; lesions resulting from surgical wounds, and diabetic microangiopathy. Regarding treatment, it should be noted that no randomized clinical studies have been done for this dermatosis, but the management is based on symptomatic treatment. **CASE REPORT:** A female patient, 43 years old, white, housewife, living in Teresina/PI. Her main complaint was pruritic lesions that worsened at night, beginning one year ago. She reported previous treatment for scabies, with improvement during use of the antiallergic and relapse after discontinuing the medication. He denied comorbidities, smoking, and alcoholism. He reported allergy to soap and dipyrone. On physical examination, there were erythematous crusted papules in the abdominal and dorsal regions, as well as on the limbs and hands. A biopsy was requested, which

detected suppurative folliculitis with perforating features. The immunohistochemical study revealed hair follicles distorted by intense acute inflammatory infiltrate with permeating hair and epidermal transmigration of degenerated connective tissue. From these findings a diagnosis of perforating folliculitis was made. At the moment a laboratory investigation for secondary causes is being done, with evaluation of liver and kidney function. Treatment with antiallergic was maintained. **FINAL REMARKS:** Perforating folliculitis is a disease with non-specific lesions that has been little reported in the literature, which makes its diagnosis difficult. Its treatment is symptomatic, and topical corticosteroids and antihistamines are indicated, which may be associated with narrow-band ultraviolet ray phototherapy.

30. EPIDEMIOLOGICAL PROFILE OF DIRECT AND INDIRECT MATERNAL MORTALITY BY MACRO-REGION IN THE STATE OF PIAUÍ FROM THE YEAR 2009 TO 2019

Mariana Elvas Feitosa Holanda¹, Kamilla Garcez pinto Carvalho¹, Ana Maria Pearce Arêa Leão Pinheiro².

¹ Differential integral university center

² Federal University of Piauí

INTRODUCTION: A maternal death is the death of a woman during the gestational period or until 42 days after its ending, excluding those related to accidents. The causes of maternal death may be divided into direct obstetrics, which are related directly to pregnancy complications, childbirth or puerperal period and the indirect obstetrics, resulted from pre-existing illness in the gestation, or which developed during this period, not being provoked by direct obstetrics causes, but accentuated by the pregnancy physiological effects. **OBJECTIVES:** To analyze the epidemiological profile of the direct and indirect maternal mortality cases by macro-regions in the state of Piauí in the years of 2009-2019. **METHODS:** Descriptive, quantitative epidemiologic study and retrospective of Mortality Maternal cases based on the DATASUS platform data, during the period of January 2009 to December 2019. **RESULTS:** 446 maternal deaths were notified of specified cause in the State of Piauí between 2009-2019, being 316 (70,85%) of direct cause and 130 (29,15%), of indirect cause. According to the macro-region, it can be subdivided in Semi-arid with 92 (20,62%) deaths, being 67 (72,82%) deaths caused by direct and 25 (27,17%) indirect deaths; The macro-region Meionorte, with 155 (34,75%) deaths, being 98 (63,22%) deaths by direct causes and 57 (36,77%) by indirect deaths; in the Coastal area, there were 95 (21,3%) deaths, being 71 (74,73%) deaths caused by direct causes and 24 (25,26%) indirect causes in the Cerrado (The Brazilian savannah), 104 (23,31%) deaths, being 80 (76,92%) deaths by direct causes and 24 (23,07%) by indirect causes. The direct maternal mortality triad has been found in 48,71% of the cases of direct mortality, being 32,7% of the related cases to hypertensive syndromes, 9,17% to puerperal infections and 7,27% to postpartum bleeding. Among the 130 deaths by indirect causes, 103 (81,5%) were related to other mother's diseases classified in another part, but which cause complications to the pregnancy, the childbirth, and the puerperal period. **CONCLUSION:** The major frequency of direct causes found in our analyses indicate a larger need to establish preventive strategies and a better gestational assistance, together with appropriate quality, full-time and cross-disciplinary public policies during the entire antenatal, childbirth and puerperal period.

31. EPIDEMIOLOGICAL ANALYSIS OF ADMISSIONS FOR UROLITHIASIS IN BRAZIL BETWEEN 2016 AND 2020

Heyd Maria Marinho Silva¹, Marcelo Oliveira da Costa¹, Allessa Barros de Sousa Nascimento¹, Marcela Andrade Rodrigues da Costa¹, Letícia Lages Ribeiro Araújo Brito¹ and Isa Victoria Cavalcanti Coelho¹.

¹ Unifacid University Center

INTRODUCTION: Renal lithiasis (or urolithiasis), popularly known as "kidney stone", is a frequent condition in clinical practice with a high social impact and high cost. This happens because it affects 5 to 15% of people at some point in their lives, with high recurrence rates. This pathology results from solid formations constituted by concentrates of crystallized substances normally excreted in the urine. There are several types of stones, but the main ones include calcium oxalates, calcium phosphates, uric acid, struvite, and cystine. There are some factors that are considered risk factors, such as poor lifestyle habits, dehydration, use of medications, family history, and renals and metabolic disorders (diabetes, gout disease, hyperparathyroidism). Urolithiasis is the third most common reason of urinary tract disease, second only to infections and prostate pathologies and, among all urinary tract diseases, the stones are the biggest cause of morbidity. **OBJECTIVES:** This study aims to trace the epidemiological profile of hospitalizations for urolithiasis in Brazil between 2016 and 2020. **METHODS:** This is a descriptive epidemiological study, retrospective and quantitative performed based on secondary data collected from the Department of Informatics of the Unified Health System (DATASUS). There were collected data regarding the number of hospitalizations for urolithiasis between 2016 and 2020, age group, race and gender. **RESULTS:** Between 2016 and 2020 there were 406,355 hospitalizations for urolithiasis in Brazil. The highest incidence was in 2019, with about 22% of cases, and the lowest one was in 2020, with 18.07% of cases. Regarding gender, there was no significant difference in the total number of cases. The age group with the highest incidence on males was 40 to 49 years old, with 11.49%, and on females it was 30 to 39 years old, with 11.23%. The race group with more hospitalizations due to the disease, in both sexes, were the white ones, with 45.96% of cases, and brown ones, with 29.82%. **CONCLUSION:** The epidemiological analysis showed that the number of cases of urolithiasis in Brazil increased in 2019, with the highest percentage of incidence among men aged 40 to 49 years old and women aged 30 to 39 years old, with no significant differences related to sex. It is worth highlighting that carelessness with the prevention of this pathology may influence the increase in cases of the same.

32. EPIDEMIOLOGICAL ANALYSIS OF CONFIRMED UTERUS CANCER CASES IN NORTHEASTERN OF BRAZIL BETWEEN 2016 AND 2020

Marcela Andrade Rodrigues da Costa¹, Noélia Maria de Sousa Leal¹, Maria Clara Dantas Eulálio Cardoso¹ and Cindy Freire Alves¹.

¹ Unifacid University Center

INTRODUCTION: Cervical carcinoma, known as cervical cancer, results from persistent infection with the Human Papillomavirus (HPV). This virus infection is very frequent and does not progress to disease most of the time, but in some cases cellular changes occur that can progress to cancer. These changes are easily discovered in the preventive exam known as Pap smear, which is performed in

women aged 25 to 64 years old, who are already sexually active. When the tumor is early detected during the routine exams, there is a greatest chance of cure when it is treated, so it is important to carry out periodic exams, along with the use of condoms during sexual intercourse. The malignant neoplasm of the cervix is the third most frequent malignant tumor in women (after only breast and colorectal tumors), and the fourth cause of death from cancer among the female population in Brazil. **OBJECTIVES:** This study aims to trace the epidemiological profile of confirmed cases of cervical cancer in the Northeast between 2016 and 2020. **METHODS:** This is a descriptive, retrospective and quantitative epidemiological study based on secondary data collected in online platform of the Unified Health System (DATASUS). There were collected data regarding the number of confirmed cases of cervical cancer by state in the Northeast of Brazil and by age group. There were considered age groups over 19 years old. **RESULTS:** Between 2016 and 2020, there were 20552 cases of cervical cancer in the Northeast. By descending order in the number of cases, the order is: 2019, with 5127 cases (24.94%); 2020, with 4661 cases (22.67%); 2018, with 4197 cases (20.42%); 2017, with 3379 cases (16.44%); and 2016, with 3188 cases (15.51%). Among the states in the Northeast that had the highest number of cases in the last 5 years were: Bahia (4273); Pernambuco (3768); and Cear  (3286). The age group with the highest number of hospitalizations for confirmed cases by the pathology was the 40 to 44 years old one, with 2610 cases (12.69%), having the highest incidence in 2019, with 674 cases (3.28%), and the age group with the lowest number of cases was 25 to 29 years old one, with 744 cases (3.62%). **CONCLUSION:** The epidemiological analysis showed that the number of cases of cervical cancer in Northeast of Brazil increased in 2019, with a higher incidence in the state of Bahia and among women aged 40 to 44 years old.

33. EPIDEMIOLOGICAL ANALYSIS OF THE COVID-19 PANDEMIC IMPACT ON THE DIAGNOSIS OF LEPROSY IN BRAZIL

Guilherme Augusto Silva de Moraes¹, Andressa Carvalho Pereira¹, Ester Almeida de Sousa¹, T is Souza da Silva¹, Sarah Nilkece Mesquita Araujo Nogueira Bastos¹ and Karina Rodrigues dos Santos¹.

¹ Federal University of the Parna ba Delta (UFDPAr)

INTRODUCTION: Leprosy is an infectious, contagious and transmissible disease caused by *Mycobacterium leprae*. When left untreated, it causes dermatoneurological signs and symptoms which are often disabling. Early diagnosis and health surveillance have contributed for decreasing the number of cases of this illness in recent decades around the world. The delay in identifying new cases, due to the COVID-19 pandemic, impacts negatively the quality of life of the affected population and increases the chances of an unfavorable outcome of their cases. **OBJECTIVES:** To analyze quantitatively the impact of the COVID-19 pandemic on the diagnosis of leprosy in Brazil. **METHODS:** Quantitative, descriptive and cross-sectional epidemiological study based on data from the Notifiable Diseases Information System available on DATASUS, official online database of Brazil's public health system. In order to avoid statistical distortions, the average number of diagnoses of leprosy in Brazil, its regions and federative units in the five-year period from 2015 to 2019 was compared to the year 2020, the first of the COVID-19 pandemic. **RESULTS:** There was regularity in the annual number of diagnoses of leprosy in Brazil in the period before the COVID-19 pandemic, in contrast to 2020, when a strong reduction was registered. There was

a 44.6% decrease in this notification in 2020 compared to the average for the 2015-2019 period, from 35,190 to 19,478 diagnoses. All regions and federative units in the country registered decreases in this parameter. By region, the negative variation was more accentuated in the Southeast (50.4%), the most populous one, followed by the Northeast (45%), where leprosy is more prevalent in Brazil, South (44%), North (43.7%) and Midwest (41.2%). Considering the federative units, the biggest percentage decrease occurred in Esp rito Santo (84.7%), followed by Roraima (65.9%), Rio Grande do Sul (58.4%), Piau  (58.3%) and Bahia (54.3%). The smallest decreases were observed in the Federal District (10.7%), in Rio Grande do Norte (29.4%), in Sergipe (31.7%), in Santa Catarina (34.9%) and in Pernambuco (37.8%). **CONCLUSION:** The analyzed data showed regularity in the annual number of diagnoses of leprosy in Brazil in the period from 2015 to 2019, whose maximum variation did not exceed 5,000 cases, which makes significant the reduction of more than 19,000 cases in 2020 when compared to the average for this five-year period. The decrease in this notification, consistent in the analyzed variables, suggests a relevant impact of the COVID-19 pandemic in the identification of new cases of leprosy in the country, making relevant future analyzes on this topic.

34. PREVENTABLE DEATHS IN ADULTS IN THE STATE OF PIAU , BRAZIL: A DECADE-LONG EPIDEMIOLOGICAL PROFILE

Guilherme Augusto Silva de Moraes¹, Andressa Carvalho Pereira¹, Ester Almeida de Sousa¹, T is Souza da Silva¹ and Karina Rodrigues dos Santos¹.

¹ Federal University of the Parna ba Delta (UFDPAr)

INTRODUCTION: Preventable or reducible causes of death can be defined as those that could have been avoided, in part or totally, through fully efficient health services. The study of this type of death offers a parameter for evaluating the effectiveness of health care services. **OBJECTIVES:** To characterize the epidemiological profile of cases of death from preventable causes in adults in the state of Piau , Brazil, from 2010 to 2019. **METHODS:** Epidemiological and retrospective study, with a quantitative approach, based on data from the Mortality Information System, available on DATASUS, official online database of Brazil's public health system. All deaths from preventable causes registered in the state of Piau , by place of residence, between 2010 and 2019, of people aged between 20 and 59 years were included. Causes classified as unclear or not clearly preventable were excluded. **RESULTS:** Piau  state registered 40,925 deaths from preventable causes from 2010 to 2019. The annual occurrence of this type of death showed an increasing trend over this period, from 3,557 cases in 2010 to 4,195 in 2019. Considering the total number of cases in the decade under analysis, deaths were registered predominantly in men (70.8%), brown-skinned (71.1%), people with a maximum of 3 years of schooling (45.4%) and aged between 55 and 59 years (19%). The main causes were deaths reducible by actions of health promotion, prevention and care for non-transmissible diseases (49.6%) and deaths reducible by actions of health promotion, prevention and care for external causes, including accidents and violence (39.9%). Some causes were much more frequent in men, such as death from aggression (92%), alcoholic psychosis or other disorders related to alcohol consumption (91.8%) and traffic accidents (87.8%). **CONCLUSION:** The analyzed data showed an epidemiological profile mostly male, brown-skinned and advanced adult age. Even considering the male predominance in the total sum of cases, there were significant differences regarding

gender in some causes, especially those involving violence, alcoholism and traffic accidents. Finally, it is noteworthy the increase of deaths from preventable causes in adults in Piau  state over the analyzed period.

35. ANALYSIS OF THE TYPES AND CONSEQUENCES OF WORK ACCIDENTS IN THE PERIOD FROM 2015 TO 2019

Amanda Caroline Ribeiro Barros¹, Indira Luz da Silva¹, C ntia Maria de Melo Mendes².

¹ Medical Students at State University of Piau 

² Professor at the State University of Piau 

INTRODUCTION: According to article 19 of Law No. 8.213, of July 24, 1991, "Accident at work is what occurs when working for a company or a domestic employer or when insured persons are engaged in work, causing bodily harm or functional disturbance that causes death or loss or reduction, permanent or temporary". It can cause anything from a simple leave, loss or reduction in the ability to work and even the death of the insured. **OBJECTIVES:** To analyze the type, consequences and main clinical causes of disability recorded by the National Institute of Social Security (INSS) through the Occupational Accident Report (CAT) in the period from 2015 to 2019, due to lack of data standardization in the years previous. **METHODS:** Epidemiological, descriptive and quantitative study, containing occupational accidents registered with the INSS by the CAT and those that, even not registered, gave rise to a disability benefit of an accidental nature in Brazil between 2015-2019. Data were obtained from statistical yearbooks of occupational accidents on the Ministry of Labor and Welfare website, evaluating the type, consequences of the accident, as well as the main clinical causes of disability according to the International Classification of Diseases (ICD-10). The results, grouped in spreadsheets, graphs and tables by Microsoft Excel. **RESULTS:** During this period, 2,927,464 work accidents were registered. The year 2015 has the highest number of accidents with 507,753, however, the other years show a constancy in the notifications, with 1,819,289 resulting from a typical accident. Regarding the consequence, according to the National Classification of Economic Activities, 1,709,421 were away from work for less than 15 days due to temporary incapacity to work, it is also worth mentioning that 74,020 had permanent disability and 11,259 died. Regarding the number of work accidents due to the accident, according to ICD-10, wrist and hand injuries were the most common with 279,842. **CONCLUSION:** Through what has been exposed, it is possible to make a more accurate balance of these accidents and promote the formulation of more effective public policies for this problem. Since the frequent occurrence of these accidents, harms workers, employers, in addition to increasing the cost of medical, social security and social assistance, affecting the national economy (MUSSI, 2018).

36. LAPAROSCOPIC HEPATECTOMY WITH RADIOFREQUENCY USE: INITIAL EXPERIENCE IN THE STATE OF PIAU 

Nicolle Lima de Cerqueira¹, Marcela Coelho de S ¹, Lara V t ria de Araujo Costa Pereira¹, Sofia Rocha Santos¹, Maria Clara Brito Monteiro¹ and Wellington Ribeiro Figueiredo¹.

¹ Unifacid University Center

INTRODUCTION: The use of minimally invasive surgery has gained strength in all surgical modules due to the rapid recovery of the patient, early hospital discharge, in addition to lower hospital costs

and better aesthetics. In cirrhotic patients, the risk of fracture and intraoperative bleeding is high, requiring the use of more recent ablation techniques, such as Radiofrequency Ablation (RFA) to prevent conversion to open surgery or the use of blood products. It is noteworthy that most liver tumors when diagnosed no longer have the possibility of resection, and RFA in some cases is the only chance of cure or even palliation for both primary and secondary tumors. Despite being an initial experience, the surgical and post-surgical results proved to be satisfactory. **CASE REPORT:** Male, 72 years old, previously submitted to a laparotomic cholecystectomy due to urgent acute cholecystitis, where a cirrhotic aspect of the liver was identified. With follow-up, Hepatitis B and C was diagnosed, receiving treatment with a negative viral load after 12 months. A control MRI identified a 2.9x1.3cm nodule suggestive of Hepatocarcinoma. Laparoscopic Hepatectomy (LH) was performed where three 10mm and two 5mm portals were placed. After sectioning the hepatorenal ligament, a line on the upper and lower surface of the liver was demarcated with electrocautery, delimiting the area of segment VI to be resected. The RFA laparoscopic device was applied perpendicularly along this line to both marked surfaces. A second line of parenchymal ablation was performed, corresponding to the side of the lesion, which led to complete segment VI ischemia. Then, the device was successively applied parallel to the perpendicular ablation lines, as the ischemic parenchyma was sectioned with laparoscopic scissors. At the end of the procedure, the parenchyma section area was completely regular, with no extravasation of bile or blood. It was not necessary to use blood products. The patient was discharged on the 2nd postoperative day. **FINAL CONSIDERATIONS:** As this is an initial experience, the selection of candidates for LH should be judicious, being reserved for well-defined tumors located in the lateral or inferior segments of the liver. An advantage of LH using RFA is that it extends to the ablated resection surface, with a margin of up to 2cm.

37. RARE COMPLICATION OF HEPATIC HEMANGIOMA - KASABACH MERRITT SYNDROME: CASE REPORT

Nicolle Lima de Cerqueira¹, V t ria Freitas de Souza Moura¹, Bianca Maria Oliveira Lima de Castro¹, Ant nio Vitor da Rocha Neto¹, Paula Fernanda Bezerra Moura¹ and Wellington Ribeiro Figueiredo¹.

¹ Unifacid University Center

INTRODUCTION: Hepatic hemangioma is the most recurrent benign tumor of the liver, probably caused by congenital hamartomatous lesions in the liver. The etiology of the hemangioma is still a speculation. The diagnosis is, often, incidental, and the differentiation between benign and malignant tumors can usually be made only based on clinical data and imaging exams. Surgical treatment is considered based on size (> 4 cm), in the clinical symptoms, diagnostic uncertainty, nature and location of the lesions, in cases of patients refractory to clinical treatment, of lesion growth, of patients in activities with risks of abdominal trauma and involvement by Kasabach Syndrome – Merritt (KSM), an association of capillary hemangioma and thrombocytopenia. The aim of this study was to describe a case of surgical treatment for a symptomatic giant hemangioma submitted to right hepatectomy. **CASE REPORT:** C.R.A, female, 30 years old, with a report of petechiae, spontaneous bleeding from the oral mucosa after brushing teeth and abdominal pain in the right upper quadrant. Laboratory tests showed anemia and hypofibrinogenemia (177mg). Abdominal Magnetic Resonance Imaging and Tomography showed giant hemangioma 13.6 cm in the right hepatic lobe. We opted for lesion resection in two stages, with

previous embolization of the right hepatic artery and four days later, the definitive surgery, in which a right hepatectomy ruled with cholecystectomy was performed, lasting four hours, without the need for transfusion of blood products. The histopathological examination of the lesion confirmed hemangioma. **FINAL CONSIDERATIONS:** Most liver tumors are benign, and the expectant management is clinical observation. Indications for operative treatment are restricted to cases of complications directly related to the injury: abdominal pain, compressive symptoms, atypical growth, rupture, hemorrhage, KSM and diagnostic doubt regarding the malignancy. Indications for hepatectomy have increased due to the improvement of surgical and anesthetic techniques, and its results have been increasingly better.

38. THYROTOXIC HYPOKALEMIC PERIODIC PARALYSIS: CASE REPORT

Bianca Maria Oliveira Lima de Castro¹, Nicolle Lima de Cerqueira¹, Bruna Tavares Falcão¹, Luciane Costa Silva¹, Mariana de Carvalho Moreira¹ and Hésio José de Moura dos Anjos¹.

¹ Unifacid University Center

INTRODUCTION: Thyrotoxic hypokalemic periodic paralysis (PPHT) is a rare neuromuscular complication of hyperthyroidism, which mainly affects young men, characterized by the sudden appearance of severe muscle weakness, accompanied by hypokalemia and hyperthyroidism. The acute onset of paraparesis is due to the rapid influx of potassium into muscle fibers, secondary to excess Na/K/ATPase pump activity, causing cardiac arrhythmias. Cases of hereditary origin are due to mutation of the calcium or sodium ion channel gene, and in sporadic cases, the potassium channel seems to be more affected. This case report discusses the pathophysiology and treatment of PPHT and highlights the importance of early diagnosis.

CASE REPORT: M.L.S. 22 years old, male taxi driver, admitted to the emergency of a hospital in the city of Teresina-PI, on August 2017, complaining of muscle weakness in the lower limbs (LLLL) started 1 week ago, with progressive worsening in the last 24 hours. On admission, the patient reported that, upon waking up, he noticed an important deficit in strength in the lower limbs, making it impossible for him to walk, associated with dyspnea, chest pain and palpitations. He also mentioned a history of hyperthyroidism, with treatment abandonment about two weeks ago. In the emergency room, he developed syncope after venipuncture for exam collection, which was reversed after administration of atropine. An electrocardiogram examination revealed sinus rhythm with sinus arrhythmia, periods of 2nd degree sinoatrial block and prolonged QT interval (510ms) with right precordial ST elevation. In laboratory tests, it showed suppression of serum levels of thyrostimulating hormone (TSH <0.01U_m / L) and hypokalemia (K = 2.1mmol / L). Tapazol 30mg was started in a single dose in the morning and intravenous administration of K in central venous access. The patient evolved with improvement in muscle weakness and progressed without further episodes of arrhythmia, being discharged from the hospital after 3 days of hospitalization. He followed up on an outpatient basis, where he opted for the definitive resolution of hyperthyroidism with radioiodine therapy. **FINAL CONSIDERATIONS:** Care guidelines include control of plasma K with serial monitoring of its levels, prevention of large glucose and salt loads, and careful use of neuromuscular blocking agents, in addition to the importance of periodic neurological examination with attention to leg muscle strength for detect long-lasting weakness associated with myopathy.

39. IMPACT OF THE COVID-19 PANDEMIC ON BREAST CANCER SCREENING IN BRAZIL

Maria Theresa Leal Galvão¹, Maria Vitória de Deus Ramos¹, Francisco Gabriel Thomaz Bastos¹, Guilherme de Sousa Lima¹, Thalia Alves de Oliveira Evaristo¹ and Luciano da Silva Lopes¹.

¹ Federal University of Piauí

INTRODUCTION: Breast cancer is the most common type of cancer in women worldwide. In Brazil, this disease was responsible for 16.724 deaths in 2017. Considering its high incidence and mortality, the SARS-CoV-2 pandemic rearranged the Unified Health System (SUS), especially Primary Care, causing adverse effects that disrupted several health care practices. In the case of breast cancer, this mainly affects tracking and screening for the disease, which has a direct impact on reducing the mortality rate and costs for the health system.

OBJECTIVES: To analyze the impact of the COVID-19 pandemic on breast cancer screening in primary care in Brazil by state. **METHODS:** This is a descriptive study, carried out with data from the Health Information System for Primary Care (SISAB). Data were collected regarding breast cancer screening for each Brazilian state and certain age groups. Tables and graphs regarding the mentioned variables were then constructed in Microsoft Excel® software, comparing 2020 with the average of the years 2017 to 2019. **RESULTS:** In this study, it was noticed a significant decrease (44,01%) in the number of breast cancer screening in the year of pandemic, 2020 (1,052,494), when compared to the annual average of breast cancer screening that occurred between 2017 and 2019 (1,879,926.67). Analyzing individually each state, the three states that showed a greater decrease in breast cancer screening were Rondônia (86,80%), Sergipe (72,06%) and Rio de Janeiro (70,70%). Analyzing the number of screenings by month, the months that showed a greater decrease were april, May and June - 88,56%, 79,38% and 76,44% -, respectively. Besides, there was a sustained decrease over 50% between the months of april and august. When organized by age group, the data showed a decrease of breast cancer screening by 39,11% between 50 and 59 years old and by 39,66% between 60 and 69 years. **CONCLUSION:** Based on the collected data, it was found that the COVID-19 pandemic negatively impacted the breast cancer screening in Brazil, especially at Primary Care. This impact affects especially the decrease in feminine mortality and morbidity by breast cancer, mainly between 50 to 60 years old women, the age group most benefited by breast cancer screening strategies.

40. CASE REPORT OF A COINFECTION: PATIENT IN TREATMENT OF LEPROSY AND DIAGNOSED WITH SYPHILIS

Ian Gabriel de Melo Batista¹, Luciana Ximenes Cordeiro¹, Gabriela Freitas Nogueira Lima¹, Inês Portela Passos Galvão², Evandra Marielly Leite Nogueira Freitas Galvão²

¹ State University of Piauí

² UNINOVAFAPI University Center.

INTRODUCTION: Borderline Leprosy is a form of the chronic disease which the etiologic agent is *Mycobacterium leprae*, characterized by involving superficial nerves of the skin, peripheral nerve trunks and the presence of skin lesions. Secondary Syphilis is a mainly sexually transmitted disease caused by the spirochete *Treponema pallidum*. Leprosy and Syphilis are infectious-contagious diseases that present broad dermatological manifestations with lesional polymorphism and difficult differential diagnosis. Therefore, it is

important knowing how to differentiate them, due to the polymorphism, and considering that a co-infection may arise, although little reported. **THE CASE:** A 27-year-old man with the diagnosis of borderline leprosy, in treatment with multibacillary chemotherapy for four months, comes to a dermatological appointment with a sudden onset of lesions in the palmoplantar region for seven days. He also mentions fever and asthenia. The dermatological examination revealed multiple hyperchromic stains with desquamation on the palms of the hands and soles of the feet bilaterally and symmetrically. He also presented multiple erythematous plaques on the trunk and hyperchromic plaques with erythematous, edematous borders and atrophic center on the elbows, bilaterally and symmetrically, consistent with the previous diagnosis of Borderline Leprosy, as they had been present since the beginning of the disease. The diagnostic hypotheses of Secondary Syphilis or Erythema Multiforme were raised, possibly related to some drug in the treatment regimen. VDRL exam reactive, with a titer of 1/16, HIV non-reactive. Treated with Penicillin G Benzathine 2,400,000 IU in a single dose and treated the sexual partner. After antibiotic use, there was complete regression of palmoplantar lesions. **FINAL CONSIDERATIONS:** In the presence of polymorphic lesions, the etiology must be persistently investigated. We report a case of co-infection with strong indication of Secondary Syphilis: symmetric and bilateral squamous erythematous lesions in the palmoplantar region, a condition to be considered even in patients with a previous diagnosis of other pathologies.

41. ANALYSIS OF THE IMPACT OF THE PANDEMIC ON THE CONTINUOUS CARE INDICATORS OF ARTERIAL HYPERTENSION IN BRAZIL

João Gabriel Silva Portela¹, Gabriel Soares Bruno Santos¹, Camila Ramalho Teixeira Queiroz¹, Thalia Alves de Oliveira Evaristo¹, Felipe Augusto Oliveira Dantas¹ and Luciano da Silva Lopes¹.

¹Federal University of Piauí

INTRODUCTION: Systemic Arterial Hypertension (SAH) is the most frequent cardiovascular disease. In Brazil there are more than 30 million people with the disease, approximately 35% of the population aged 40 or over. SAH has a multiplicity of factors that place it at the origin of many chronic degenerative non-communicable diseases and, therefore, Primary Care has strategies that aim to improve this clinical condition. However, the situation of the pandemic caused by COVID-19 is a challenge to the continued treatment of hypertension, as it generates social impacts. **OBJECTIVES:** To analyze the impact of the pandemic on ongoing care for patients with hypertension. **METHODS:** This is a descriptive study, which uses data from the Health Information System for Primary Care (SISAB). Data about Systemic Arterial Hypertension continuing care was collected, in each Brazilian state, according to age groups (children/adolescents, adults and elderly). Then, tables and graphs were built on Microsoft Excel® software relating to the variables mentioned, comparing 2020 with the average of the years 2017 to 2019. **RESULTS:** In comparison with the average of the three previous years, it was possible to observe a reduction of 40.75% in the number of scheduled consultations for Hypertension in the year 2020. More specifically, Rondônia was the state with the greatest decrease (68.60%). Furthermore, the states of MS, RJ, RS, TO and the Federal District showed decreases higher than 60%. When analyzing the number of consultations per month, it was found that the months of April, May and June had the highest declines with, respectively, 60.70%, 65.16% and 52.51%. Moreover, it

was noted that the group with the greatest reduction was the children and adolescent one (54.30%). As for adults and seniors, the decreases were 41.34% and 40.10%, respectively. **CONCLUSION:** There was a decrease, in Brazil, in consultations focused on SAH in 2020, when compared to the three previous years. This situation reflects the impacts of the COVID-19 pandemic on the routine of patients in maintaining follow-up treatment, as the reduction in numbers does not correspond to a reduction in prevalence. The study also indicates the need to reinforce the importance of continuous treatment for children and adolescents, given that they were the group with the highest decrease. Greater impacts of the pandemic on the scheduled care of patients with SAH could be detected with further studies.

42. ANALYSIS OF CERVICAL CANCER SCREENING RATES IN BRAZIL DURING THE NEW CORONAVIRUS PANDEMIC

Felipe Augusto Oliveira Dantas¹, Yasmin Soares Vilarinho Félix², Luciana Mesquita Brito¹, João Gabriel Silva Portela¹, Gabriel Soares Bruno Santos¹ and Luciano da Silva Lopes¹.

¹Federal University of Piauí; ²UniFacid Wyden University Center

INTRODUCTION: Cervical cancer is the third most common cancer in the Brazilian female population, with an estimated incidence of 16,710 new cases in 2020. Its screening is a strategy capable of reducing its incidence by identifying early changes. However, the response capacity of the Brazilian Unified Health System (SUS) was notably modified with the rapid dissemination of COVID-19 worldwide, compromising screening strategies for this cancer. **OBJECTIVES:** To Analyze the impact of the pandemic on cervical cancer screening in Brazil, also considering how different age groups were affected. **METHODS:** This work is a descriptive study, carried out with data available in the Health Information System for Primary Care (SISAB). Data were collected regarding cervical cancer screening for each federative unit of Brazil and for certain age groups, from the year 2017 to 2020. Three groups of age groups were chosen, the first one from 0 to 24 years, the second one from 25 to 64 years, and the last formed by people aged 65 years or older. Tables and graphs were then constructed regarding the mentioned variable comparing the year 2020 with the average of the years 2017 to 2019. **RESULTS:** In 2020, there was a 40.47% decrease in cervical cancer screenings in Brazil compared to the average of the years 2017 to 2019, with the states of Rio de Janeiro (74.54%), Rondônia (71.59%), and Tocantins (71.25%) showing the largest decreases. The state of Rio Grande do Sul, meanwhile, stood out for having the smallest reduction in the number of screenings (8.86%). There was a sustained decrease of over 50% from April to August, reaching the 83.08% mark in April, when compared to the average for the same month in previous years. Analyzing by age group, a greater decrease in screenings was identified in the over-65 age group (44.57%), followed by the age group 0 to 24 years (40.87%) and, finally, by the age group 25 to 64 years (40.06%). **CONCLUSION:** There are great signs of negative impacts on cervical cancer screening, which may indicate a compromise of preventive actions. However, only with new epidemiological studies will it be able to know the true effect of the pandemic on this issue. It should also be noted that the absence of an audit of the data released in SISAB constitutes a limitation of this work.

43. EXOGENOUS INTOXICATION: EPIDEMIOLOGICAL PROFILE OF CASES REPORTED IN THE STATE OF PIAUÍ, BRAZIL, IN THE LAST DECADE

Andressa Carvalho Pereira¹, Guilherme Augusto Silva de Moraes¹, Taís Souza da Silva¹, Ester Almeida de Sousa¹ and Karina Rodrigues dos Santos¹.

¹ Federal University of the Parnaíba Delta (UFDPa)

INTRODUCTION: Exogenous intoxication can be defined as an organic imbalance caused by the interaction with one or more toxic agents, manifested by clinical or laboratory alterations. According to the World Health Organization (WHO), annually between 1.5% and 3.0% of the world population is affected by this type of intoxication. They can be intentional or not and represent an important cause of harm to health. **OBJECTIVES:** To describe the epidemiological profile of exogenous intoxication cases reported in the state of Piauí, Brazil, between 2011 and 2020. **METHODS:** Retrospective, cross-sectional and quantitative epidemiological study, based on secondary data from the Notifiable Diseases Information System, available on DATASUS, official online database of Brazil's public health system. All exogenous intoxication cases reported in the state of Piauí between the years 2011 and 2020 were included. The variables analyzed were: city of residence, gender, race, age group, education, area of residence, toxic agent, circumstance, type of exposure and evolution. **RESULTS:** In the period analyzed, 11,532 cases of exogenous intoxication were reported in the state of Piauí. The municipalities of Teresina and Floriano were responsible for 33.4% and 14.5% of the total notifications, respectively. There was a predominance of females (60.8%), mixed race (62.7%), aged between 20 and 39 years (39.4%), people with incomplete primary education (14%) and urban area residents (80.4%). The most frequent toxic agents were medications (52.3%), followed by food/drinks (7.5%) and household products (6.6%). The main circumstance involved was suicide attempt (39%), more frequent in adults, followed by accidental causes (18.2%), more common in children. Most exposures were of the acute/single type (53.1%) and evolved to cure without sequelae (70.8%). **CONCLUSION:** The analyzed data showed an epidemiological profile predominantly female, of mixed race and adult age regarding cases of exogenous intoxication in the state of Piauí from 2011 to 2020. The main circumstances involved were suicide attempts, among adults, and accidents, among children. More studies are needed to monitor the evolution of this profile over the years. Health promotion strategies that address the prevention of suicide and accidents, as well as the rational use of medications, must be implemented to reduce the incidence of this problem.

44. EPIDEMIOLOGICAL PROFILE OF COINFECTION CASES WITH TUBERCULOSIS AND HIV IN THE STATE OF PIAUÍ, BRAZIL, FROM 2015 TO 2020

Andressa Carvalho Pereira¹, Guilherme Augusto Silva de Moraes¹, Ester Almeida de Sousa¹, Sarah Nilkece Mesquita Araujo Nogueira Bastos¹, Taís Souza da Silva¹ and Karina Rodrigues dos Santos¹.

¹ Federal University of the Parnaíba Delta (UFDPa)

INTRODUCTION: Tuberculosis (TB) is the most frequent coinfection in people living with the human immunodeficiency virus (HIV), with a significant impact on the quality of life and mortality of this population. In order to guarantee comprehensive care for these patients, some of the recommended interventions are testing TB patients for HIV and organizing properly the health care network. **OBJECTIVES:** To describe the epidemiological profile of TB and HIV coinfection cases reported in the state of Piauí, Brazil, between 2015 and 2020. **METHODS:** Epidemiological and retrospective study,

based on secondary data from the Notifiable Diseases Information System, available on DATASUS, official online database of Brazil's public health system. All TB and HIV coinfection cases reported in the state of Piauí between 2015 and 2020 were included. The variables used were: sex, race, age, education, area of residence, clinical form of TB, use of antiretroviral therapy, comorbidities, special populations and outcome. **RESULTS:** In the analyzed period, 359 cases of coinfection with TB and HIV were reported in Piauí. Those patients were predominantly men (78.2%), mixed race (73.5%), aged 40 to 59 years (37.3%), with incomplete primary education (37.3%) and urban area residents (86.1%). The predominant clinical form of TB was pulmonary (69.1%). 54.6% of the coinfectees were using antiretroviral therapy (ART). As for comorbidities, smoking (20.1%), alcoholism (19.2%) and diabetes (3.1%) stood out. Regarding situations of vulnerability, 5.6% of the patients were homeless, 2.2% were deprived of liberty, 1.4% were health professionals and 9.7% were beneficiaries of social programs by the government. Patients using ART had higher cure rates (42.3%) when compared to patients without ART (20%). **CONCLUSION:** The analyzed data showed a profile of TB and HIV coinfectees in the state of Piauí, from 2015 to 2020, mostly male, of mixed race and adult age. Higher rates of cases were observed in people with low education, socially vulnerable or chemically dependent. Lastly, the importance of antiretroviral therapy for better outcomes in terms of TB was verified.

45. CRITICAL ANALYSIS OF THE RESULTS OF 61 LIVER RESECTIONS IN THE STATE OF PIAUÍ

Ana Clara da Silva Amorim¹, Gabriela Maria Rebouças Andrade¹, Isadora Maria Policarpo Lacerda¹, Kalyne Rodrigues Marques¹ and Wellington Ribeiro Figueiredo¹.

¹ UninovaFapi University Center

INTRODUCTION: Studies on the liver allowed a significant development of liver surgery, including hepatectomy, surgery of extreme importance for the treatment of various diseases. **OBJECTIVE:** To retrospectively evaluate complications and indications of liver resections performed by a single group of hepatopancreatobiliary surgery in several hospitals in Teresina-PI. **METHODS:** We analyzed the 61 cases of patients who underwent liver resections in several hospitals over a period of six years, according to a standardized spreadsheet. **RESULTS:** According to the technique, 54 procedures performed laparotomically, compared to 7 laparoscopically. The indications were 21 for metastases, 19 of them colorectal and 2 renal, 13 for hepatocarcinomas, 8 for vesicle adenocarcinoma, 4 for hemangiomas, 3 for liver cysts, 3 for cholangiocarcinomas, 2 for adenomas, 2 for Caroli diseases, 2 for focal nodular hyperplasia, 1 for inflammatory pseudotumor, 1 for tuberculosis, 1 for carcinoid tumor. In number of surgical procedures, 29 segmentectomies, 15 left hepatectomies, 12 right hepatectomies, 3 right trisegmentectomies, 1 metastasectomy and 1 segment VII radioablation were performed. The period in days in the ICU ranged from 0 to 32 days, with an average of 1.74 days being considered low, according to the literature showing an average of 12.5 days and 10.9 days. Of the 61 patients, only 11 required blood transfusion, 6.71% of patients, revealing a considerably lower result compared to 30.7% in the literature. Of the procedures performed 5 had complications (3.05%), results considered satisfactory in relation to studies with a rate of 17.64% of patients with complications on the same procedure. In the present study, an operative mortality rate of 2.44% was observed in 4 cases of deaths. **CONCLUSION:** Only in recent years have liver resections become routine in surgical practice. This was allowed due to several advances in medical knowledge that enabled hepatectomies to be performed with low rates of morbidity and

minimal mortality, which was crucial for the expansion of indications especially in the area of oncology and liver transplants.

46. NEWBORN PAROTIDAL HEMANGIOMA

Anna Letícia de Sousa Marinho¹, Myrna Beatriz de Melo Oliveira¹, José Lucas Talles Ferreira Luz², Jemima Silva Kretli and Bruno Pinheiro Falcão².

¹UninovaFapi University Center;

²Maternity Dona Evangelina Rosa

INTRODUCTION: Hemangioma is the most common benign vascular tumor in children, with a predisposition for females. The intraparotid location, although rare, can be found in the pediatric population. Parotid hemangioma represents an important and difficult differential diagnosis of salivary gland lesions in the neonatal period. Ultrasound and magnetic resonance imaging help in this diagnosis, providing information about the blood flow and morphological characteristics of the lesion. **CASE REPORT:** Female NB, 31 weeks, small for gestational age, born by cesarean delivery. It required neonatal resuscitation maneuvers and early continuous positive airway pressure (CPAP) to improve respiratory distress. On physical examination, still in the delivery room, a nodule was identified in the right cervical region, with a soft characteristic and painless on palpation, without inflammatory signs and without other associated symptoms. Ultrasound of the cervical region, in the first week of life, showed signs of mumps on the right and absence of collections. A control echography, in the following week, identified an increase in the right parotid, measuring 3.3 x 2.8 cm, with increased flow on Doppler. Cervical computed tomography confirmed the echographic findings, highlighting only an increase in the right parotid (3.3 x 2.8 x 2.8 cm). Laboratory tests ruled out an infectious origin and, given the diagnostic doubt, an incisional biopsy of the lesion was chosen. The intraoperative period suggested benign characteristics and the anatomopathological exam concluded the diagnosis of parotid hemangioma. The NB evolved without complications and was referred for outpatient follow-up. **FINAL CONSIDERATIONS:** Based on the above, parotid hemangiomas are rare and benign tumors, which, due to their fast and expansive growth, may require surgical management, given their proximity to the facial nerve. Although the diagnosis is clinical, ultrasound and magnetic resonance can help in the differential diagnosis, assess extension, adjacent structures, and risk of complications. Currently, the treatment of choice is with propranolol, which works by decreasing the proliferative phase and accelerating the involution phase. Subsequently, if necessary, surgical intervention is performed.

47. ANALYSIS OF THE CLINICAL-EPIDEMIOLOGICAL PROFILE OF NEONATES WHO UNDERWENT TREATMENT FOR ACUTE OBSTRUCTIVE ABDOMEN AND ITS CORRELATION WITH CONGENITAL MEGACOLON

Elayne Ester Nogueira Policarpo¹, Kalyne Rodrigues Marques¹, Lucas Palha Dias Parente¹, Adrienne Conceição Cardoso Medeiros¹, Rogério de Araújo Medeiros² and Bruno Pinheiro Falcão².

¹UninovaFapi University Center;

²Maternity Dona Evangelina Rosa

INTRODUCTION: Congenital Megacolon (CM), also known as Hirschsprung's disease, is a congenital anomaly whose intrinsic characteristic is the absence of intramural neurons from the Meissner

and Auerbach myenteric plexuses, affecting the rectum and sigmoid colon. Thus, it causes abdominal distension, occurring soon after birth, with the presence of vomiting and delay in the elimination of meconium, without an immediately recognized mechanical obstructive factor. Diagnosis is made with barium enema and/or rectal suction biopsy. Treatment consists of reconstructing the intestinal transit, using the Duhamel, Soave or Swenson techniques.

OBJECTIVES: To analyze the clinical and epidemiological profile of neonates who underwent exploratory laparotomy (LE) for the treatment of acute obstructive abdomen and its correlation with CM.

METHODS: From January 2019 to August 2020, 56 patients diagnosed with acute abdomen who underwent LE in a reference maternity hospital in the state of Piauí were analyzed retrospectively. The study was previously approved by the ethics committee of UninovaFapi, opinion n. 4,244,574. **RESULTS:** Among 56 patients, 10 were diagnosed with MC. The average age of the pregnant women was 30 years, among which 40% had no prenatal care, the others had 5 or more consultations. In the delivery route, 90% progressed to cesarean, with an average of 34 weeks and 2 days of gestational age. The mean apgar was 6 on the 1' and 9 on the 5. Most evolved with abdominal distension, vomiting and absence of bowel movements. A colostomy with colonic biopsy was performed in multiple regions, showing the absence of myenteric plexuses. 60% of patients died, sepsis being the main cause (66%), followed by pulmonary hemorrhage (34%). 40% of patients were discharged with an average of 1.5 months of hospitalization, in an outpatient follow-up.

CONCLUSION: The anatomopathological evaluation is essential for the diagnosis of CM, through the identification of aganglionosis. The objective colostomy, in addition to diagnosis, is to maintain the patient's clinical stability for future definitive surgical treatment. However, the results of biopsies obtained late, associated with the low prevalence of this atypical clinical condition, contribute to the great difficulty in making a diagnosis, despite the availability of specialized care and complementary laboratory and radiological tests.

48. EPIDEMIOLOGICAL PROFILE OF TUBERCULOSIS IN SMOKERS – PIAUÍ, 2014-2020

Ian da Costa Araújo Barros¹, Antonio Evangelista Apolônio Neto¹ and Márcio Dênis Medeiros Mascarenhas¹.

¹ Federal University of Piauí

INTRODUCTION: Tuberculosis (TB) is a disease transmitted mainly by the airways and is characterized by granulomatous necrotizing pulmonary inflammation, although extrapulmonary sites may be involved. Among the risk factors for infection and development of the active form of the disease are smoking and passive exposure to smoke, which contribute to a worse prognosis and worse response to treatment, besides being associated with a higher risk of death from TB. **OBJECTIVE:** To describe the epidemiological profile of TB cases in smokers in Piauí State from 2014 to 2020. **METHODS:** Epidemiological, descriptive and retrospective study, with data about new TB cases in smokers obtained from the Notifiable Diseases Information System (SINAN), from 2014 to 2020. The variables sex, age, notification city, education level, alcoholism, form of the disease and treatment were used. Frequency and linear trend analyze were performed using TabWin and EpiInfo 7, respectively. **RESULTS:** There were 594 new TB cases reported in smokers residing in Piauí. Most cases occurred in residents of Teresina (n=240; 40.4%); in the male population (n=468; 78.8%); in the age group from 40 to 59 years (n=242; 40.7%); in the illiterate population with incomplete primary education (n=348; 58.6%) and in the pulmonary form of the disease

(n=531, 89.4%). Regarding alcoholism, 43.8% of the cases were alcoholics (n=260). Directly observed treatment (DOT) for TB was recorded in 44.9% of cases. There was an increasing trend in the proportion of TB cases in smokers in relation to the total number of TB cases: the overall proportion was 13.3%, ranging from 2.2% in 2014 to 18.6% in 2020 (beta =2.076; r2=0.71; p-value=0.018). **CONCLUSION:** TB in smokers was more frequent in the pulmonary form, in males, middle-aged and among those with low education, with cases reported mainly in the state capital and with an important association with alcoholism, another risk factor for the disease. Standard DOT treatment was performed in most cases. There was a significant increase in TB infection in smokers, which requires improvement in the planning of prevention and control actions at all levels of care, including prevention, early diagnosis, and treatment.

49. CLINICAL-EPIDEMIOLOGICAL ANALYSIS OF NEWBORNS WITH GASTROSCHISIS IN REFERENCE MATERNITY IN PIAUÍ

Elayne Ester Nogueira Policarpo¹, Kalyne Rodrigues Marques¹, Lucas Palha Dias Parente¹, Thiago Rodrigues Marques¹, Rogério de Araújo Medeiros² and Bruno Pinheiro Falcão².

¹ Uninovafapi University Center;

² Maternity Dona Evangelina Rosa

INTRODUCTION: Gastroschisis (GTQ) is characterized by a defect in the formation of the anterior abdominal wall, associated with the extrusion of abdominal organs. Its prevalence is 0.5-7 per 10,000 live births. Due to great advances, the diagnosis still occurs in the prenatal period, from the 16th week by gestational USG. Do death rates range from 3 to 10? high morbidity in the neonatal period is associated with factors related to slow post-surgical intestinal adaptation, such as the use of prolonged parenteral nutrition and long-term central venous catheters, infections and renal aggression. The complexity of this malformation and its association with other complications that require surgical management make short bowel syndrome challenging, prolonging the length of hospital stay and promoting a sum of comorbidities. **OBJECTIVES:** To evaluate the clinical-epidemiological profile of newborns diagnosed with gastroschisis in a reference maternity hospital in Piauí, in order to describe the morbidities related to postnatal clinical management. **METHODS:** Newborns diagnosed with GTQ between the years 2019 and 2020 were retrospectively evaluated. The study was previously approved by the ethics committee of Uninovafapi, opinion n. 4,244,574. **RESULTS:** 9 cases of GTQ were analyzed, with a mean maternal age of 21.7 years, of which 3 did not attend prenatal consultations, 2 attended less than 5 consultations and 4 attended more than 5 consultations. Among them, 22.2% used alcohol and/or drugs during pregnancy. Mean gestational age was 35 weeks and 6 days, and weight 2302.7g. The evolution of the newborns had an average time of 52 days, with high mortality rates (66.6%), much higher than in the literature, due to the high complexity of the cases, associated with complications that worsened the patients' prognosis (sepsis 88, 8%), in addition to multiple surgical re-approaches (88.9% with 2 or more approaches). In cases of isolated GTQ, the prognosis was better when compared to cases associated with other comorbidities (meconium ileus 22.2%, intestinal malrotation 33.3%). **CONCLUSION:** GTQ is an early detection disease, enabling the programming of ideal care in tertiary centers, favoring the reduction of neonatal mortality and the improvement of results in the medium and long term. Mortality rates are high, due to the complexity of the cases addressed in the

reference maternity hospital, in addition to the low adherence to prenatal care.

50. CAUSE-SPECIFIC MORTALITY INDICATORS IN THE STATE OF PIAUÍ FROM 2014 TO 2018: AN EPIDEMIOLOGICAL STUDY

Sâmia Moura Araújo¹, Felipe Martins de Carvalho¹, Guilherme Rodrigues Mascarenha², Flávio Henrique Rocha de Aguiar Filho¹, Yasmin Batista Coelho¹, Maylla Moura Araújo³.

¹Uninovafapi University Center

²Federal University of Piauí

³Pediatrician at the Federal University of Piauí

INTRODUCTION: The epidemiological profile of populations has been changing and mortality data is used to demonstrate the health situation in different spaces. One of the variables used in this type of analysis is the specific cause of death. Diseases of the circulatory system, respiratory system, and neoplasms (tumors) are the most representative in numerical terms. **OBJECTIVE:** To perform an analysis of data on cause-specific mortality indicators between the years 2014 to 2018 in Piauí. **METHODS:** This is an observational, cross-sectional, and retrospective study, with a quantitative approach, using data from the Notifiable Diseases Information System (SINAN) and the SUS IT Department (DATASUS). Indicators of mortality due to diseases of the circulatory, respiratory and neoplasms were analyzed in relation to gender, race and age group. **RESULTS:** There were a total of 96,951 deaths, 32.54% corresponding to circulatory diseases, 9.94% respiratory diseases and 13.94% to neoplasms. The number of deaths from diseases of the circulatory system was 31,551, being prevalent in males (53.4%). 9,361 deaths represented diseases of the respiratory system, with 50.27% in men. 13,517 deaths were related to deaths from cancer, 51.46% corresponding to males. 66.53% of deaths from circulatory system disease occurred in the brown race. Regarding deaths from respiratory diseases, 18.82% occurred in the brown race and 2% in the black. On the other hand, neoplasms were responsible for 9.54% of deaths for white individuals, 26.37% brown and 3.73% black. In the group of individuals over 80 years of age, deaths from diseases of the circulatory system corresponded to 42.15%, while 50.35% were related to deaths from respiratory diseases and 19.91% to deaths from cancer. **CONCLUSION:** Diseases of the circulatory system are the most prevalent cause of death in Piauí, with a predominance of mortality in males. As they are mostly chronic diseases, there is an increase in prevalence in the age group over 80 years. Thus, there is a need to implement changes in the lifestyle of the still young population, in order to reduce these numbers.

51. EPIDEMIOLOGICAL PROFILE OF CONGENITAL SYPHILIS IN THE STATE OF PIAUÍ IN 2018

Sâmia Moura Araújo¹, Felipe Martins de Carvalho¹, Guilherme Rodrigues Mascarenha², Yasmin Batista Coelho¹, Maylla Moura Araújo³, Larissa Eva Macêdo Nunes⁴.

¹Uninovafapi University Center

²Federal University of Piauí

³Pediatrician at the Federal University of Piauí

⁴University Center UniFacid

INTRODUCTION: Congenital syphilis is an infectious disease caused by *Treponema pallidum* through vertical transmission to the fetus of a pregnant woman with previously untreated syphilis. The increase in

the number of cases may reflect failures in prenatal care, hence the importance of gathering data on the occurrence of this disease. **OBJECTIVES:** to conduct an epidemiological survey about congenital syphilis in the state of Piauí during the year 2018. **METHODS:** This is a retrospective, cross-sectional, descriptive, and quantitative study, which analyzed data on congenital syphilis in the year 2018 in Piauí, collected from the Information System for Notifiable Diseases (SINAN) and the Information System on Live Births (SINASC), through DATASUS. The results were grouped in Microsoft Excel® spreadsheets and displayed in graphs and tables. **RESULTS:** There were a total of 26,307 diagnosed cases of congenital syphilis. The incidence of the disease was 9 cases per 1,000 live births. 96.8% were diagnosed in children less than 7 days old. 93.6% of the cases were recent congenital syphilis, 0.2% late congenital syphilis and 6.2% stillborn/dead. In the maternal history, most were mixed race (58.4%), with a predominance of cases in the maternal age group of 20-29 years (53.6%). Regarding prenatal care, 81.8% of women performed it properly. As for the diagnosis of syphilis in pregnant women, 57.6% occurred during prenatal care and 31.8% during delivery or curettage. Treatment for syphilis during pregnancy was adequately performed in only 5.6% of cases, while 54.6% performed it inadequately and 26.4% did not perform any treatment regimen. Partner treatment was performed in 22.2%, while 53.2% of partners did not receive therapy. **CONCLUSION:** The increased incidence of congenital syphilis indicates failures in prenatal care. Among them, a low adherence of pregnant women to treatment after diagnosis and treatment of sexual partners can be suggested. When the appropriate therapy is not applied, the transmission chain and the increase in the numbers of congenital syphilis are maintained. Changing this scenario will only be possible when strategies aimed at prevention and control are systematically applied.

52. SEVERE RESISTANT PEMPHIGUS VULGARIS IN TREATMENT WITH RITUXIMAB

Joana Clara Oliveira Macedo Lima¹, Ana Carla Souza Menezes¹, Isabel Maria Oliveira Macedo Lima², Erlan Clayton Xavier Cavalcante¹, Gabriel Arrais Chaves Nascimento¹ and Jesuito Montoril Soares Dantas¹

¹ State University of Piauí,

² Federal University of Piauí

INTRODUCTION: Pemphigus is an autoimmune disease, caused by autoantibodies against antigens on the skin and mucosa of the body, causing acantholysis. Pemphigus vulgaris is one of the classical presentations. It involves the formation of blisters of various sizes on the skin and lining of the mouth and on other mucous membranes. The development can occur at any age, however it is more prevalent from the fourth to the sixth decade, without differentiation between sexes. **CASE REPORT:** Female, 62 years old, controlled hypertension using losartan 50mg. She presented with extensive crusted and exudative infected skin lesions on the left shoulder and chest, multiple blisters that evolved after a few days into erythematous and urticarial crusts on the arms and forearms. The diagnosis of pemphigus vulgaris was established based on the clinical picture and skin biopsy. During the first hospitalization, treatment with methylprednisolone, azathioprine, ceftriaxone and vancomycin was initiated. She presented mycosis on her breasts, treated with fluconazole, possibly caused by immunosuppression from the overuse of corticoids. She was discharged after 9 days with improvement, but returned to the outpatient clinic after 2 weeks, in poor general condition, with worsening skin lesions and presenting

Cushing's syndrome due to high doses of corticosteroids. On the same day she was hospitalized and treated with two doses of rituximab 500mg by slow intravenous application, each dose one week apart. At the same time, the patient was weaned from corticosteroids, maintaining 60mg of prednisone a day. The patient evolved after 10 days of hospitalization with a good response to the medication infusion, without side effects. After the third hospitalization for the dose of rituximab, the lesions regressed and only residual hyperchromic spots remained. She is currently seeing a dermatologist or endocrinologist for follow-up and orientations. **FINAL CONSIDERATIONS:** The case described points out the benefit of using rituximab in a severe resistant case of pemphigus vulgaris. Through this report and other few cases described in the literature, we can conclude that the use of rituximab is a good choice in relation to the usual immunosuppressive treatment in cases resistant to treatment. It is worth noting that this treatment should be used in patients presenting with moderate to severe pemphigus vulgaris and may be an opportunity to reduce the corticosteroid damage associated with standard treatment regimens, in addition to demonstrating significant improvement in skin lesions.

53. TRAQUEAL ATRESIA WITH BRONCHESOPHAGEAL FISTULA

Leonardo Nunes Bezerra Souza¹, Raquel da Mota Portela e Silva¹, Isadora Alves de Carvalho¹, José Lucas Talles Ferreira Luz², Rogério de Araújo Medeiros² and Bruno Pinheiro Falcão².

¹Uninovafapi University Center;

²Maternity Dona Evangelina Rosa

INTRODUCTION: Tracheal atresia is a rare disease of unknown origin and usually lethal. It consists of the partial or total absence of the trachea, below the larynx, as a consequence of the abnormal development of the laryngotracheal sulcus in early pregnancy. The lower respiratory tract is usually connected to the gastrointestinal tract (GIT) through three presentations of fistulas, including the bronchoesophageal fistula. The absence of any fistula between the airways and the TGI is incompatible with life. **CASE REPORT:** Male, 36 gestational weeks, born by cesarean section with prenatal diagnostic suspicion of duodenal atresia (DA). At birth, APGAR 2 and 1 at 1 and 5' respectively, requiring cardiopulmonary resuscitation and airway management. Due to the impossibility of orotracheal intubation due to tracheal atresia, verified by direct visualization at laryngoscopy and emergency cervical surgical exploration, esophageal intubation was performed, evolving with good pulmonary expansion, consequent to the presence of a bronchoesophageal fistula. On clinical examination, identified anorectal anomaly, without evidence of fistula. Post-intubation chest/abdominal radiography showed expanded lungs and the "double-bubble sign", corroborating the prenatal diagnostic hypothesis of AD. After minimal clinical stabilization, at surgery, the presence of complete persistence of the omphalomesenteric duct was also observed. Duodenoduodenostomy and distal loop ileostomy were performed, considering the associated GIT malformations. AD made it possible to maintain ventilatory pressure. After surgical correction, the patient evolved with progressive respiratory failure and died in less than 12 hours. It was not possible to assess the presence of cardiac or genitourinary malformations. **FINAL CONSIDERATIONS:** Tracheal atresia is usually accompanied by other malformations, characterized as part of a syndrome or sequences. Despite being considered lethal, when there is a fistula the reconstruction of the respiratory system can be performed.

Performing procedures such as EXIT (ex utero intrapartum treatment) could improve the management of patients with respiratory tract obstruction.

54. VIRAL ARBOVIRUS ENCEPHALITIS: SEVERE INVOLVEMENT WITH SYSTEMIC REPERCUSSIONS

Kassio Costa Moreira¹, Simone Soares Lima¹, Ana Karoline Batista Burlamaqui Melo¹, Ana Teresa Spíndola Madeira Campos¹, Alzira Almeida de Sousa Castro² and Tatiane Nayane Pedrosa da Silva¹.

¹ Federal University of Piauí

² Lucidio Portella Children's Hospital

INTRODUCTION: Encephalitis is an inflammation of the brain parenchyma associated with neurological dysfunction, which can occur alone or in association with meningitis, myelitis, radiculitis, or neuritis. Its main causes are infectious, autoimmune, and post-infectious. Arbovirus encephalitis occurs in the acute phase of the disease. This event is rare, but with an increased incidence after the Zika Virus epidemic. **CASE STUDY REPORT:** Male, 13 years old, began the case with hyporexia and unmeasured fever. On the third day, the patient started to present vomiting and diarrhea, treated with symptomatics. On the fourth day, the patient presented retrograde amnesia, motor imbalance, ataxic gait, and bradycardia with a heart rate (HR) of 49 beats per minute (bpm), needed to be transferred to the Intensive Care Unit. There is no report of exogenous intoxication. On admission: Regular state, eupneic in natural air, hydrated, pale, and acyanotic. Regular heart rate, in two beats, normal heart sounds, HR 49 bpm, and 128/69 mmHg blood pressure. Central and peripheral pulses were normal with capillary refill time under 2 seconds. Glasgow Coma Scale of 14 points, losing one point in some disoriented verbal responses. Pupils were isochoric, medium-sized, reacting slowly to light input. Liquor 5 cells; protein 57 mg/dL; anti-myelin oligodendrocyte glycoprotein, anti-thyroid peroxidase, and negative oligoclonal bands. Serum serology: negative serology, except for Zika and Chikungunya, whose immunoglobulin M was reactive. Magnetic Resonance of the head: areas of signal alteration spread out along the cortical region of the cerebral hemispheres, as well as in the basal ganglia, thalamus, left hippocampus, and brainstem. Normal electrocardiogram and echocardiogram. Normal myoglobin, troponin, creatine kinase, and creatine phosphokinase levels. 24-hour Holter: no change in rhythm and frequency. He was empirically treated with ceftriaxone, acyclovir, and dexamethasone, with significant clinical improvement on the third day of treatment. **FINAL CONSIDERATIONS:** Infectious encephalitis can manifest in altered mental status, confusion, behavior change, agitation or interruption of the sleep-wake cycle. Although arboviruses are a rare cause of encephalitis, the current growing number of arbovirus infections justify the inclusion of viruses in the etiological investigation of encephalitis.

55. EPIDEMIOLOGICAL PROFILE OF PATIENTS WITH TUBERCULOSIS IN THE CITY OF SÃO LUÍS FROM 2015 TO 2020

Déborah Lima Lopes Araújo¹, Thiago Dutra Mendonça¹, Denise Nascimento Carvalho¹, Iasmim Bianca Melo Passos de Oliveira¹, Paulo Ricardo Pereira de Souza¹ and Almir José Guimarães¹.

¹ Federal University of Maranhão

INTRODUCTION: Tuberculosis is a bacterial infection transmitted by the airways that is caused by *Mycobacterium tuberculosis*. Due to the fact that it's the respiratory infection with the highest mortality in the world, there is a need for an active search and early treatment to prevent it to spread (WHO, 2021). However, due to the COVID-19 pandemic in 2020, the diagnosis of this disease dropped 15% in the American continent compared to 2019 (PAHO, 2021). Specifically in Brazil, there was a decrease in the incidence rate of 5.8/100 thousand inhabitants for the same reason, according to the 2021 Epidemiological Bulletin of Tuberculosis of the Health Surveillance Secretariat (SVS). In Maranhão, also occurred a decrease in the notifications, representing a drop of approximately 6% when comparing the two years, according to data from DATASUS. **OBJECTIVES:** To analyze the epidemiological profile of patients affected by tuberculosis in the city of São Luís (MA), from January 2015 to December 2020. **METHODS:** This is a time series study, with data presented in the form of absolute and relative frequency. The adopted variables were: sex, age group, race and region, and the data collected were from January 2015 to December 2020, based on secondary data extracted from DATASUS. **RESULTS:** During the period stipulated by the research, there were, in total, 14,957 cases registered in Maranhão, of which 6,928, were located in the city of São Luís. The profile analyzed in the city of São Luís presents a prevalence in males (4,704 cases/total), with the corresponding age group between 20- 39 years (3,352 cases/total), with the predominant race being brown (5,426 cases/total). **CONCLUSION:** The profile resulting from the epidemiological analysis carried out verified a predominance of the male population and aged between 20-39 years, with the brown race being the most prevalent, corroborating the existing literature (BRASIL, 2021). In this way, the outline of the conclusions obtained, through the results presented, will be more enlightening with the advancement of knowledge and the confirmation of preliminary data that, by creating a mechanism to aid in early diagnosis, will avoid underreporting, thus delimiting a more precise epidemiological picture within the city of São Luís, as well as extending to the national context.

56. ANALYSIS OF OUTCOME OF LEPROSY CASES IN THE NORTHEAST REGION OF BRAZIL BETWEEN THE YEARS 2015 AND 2020

Gabriela Freitas Nogueira Lima¹, Suayne Regina Reitz¹, Amanda Caroline Ribeiro Barros¹, Victor Correa Frota¹ and Evandra Marielly Leite Nogueira Freitas Galvão².

¹ State University of Piauí

² University Center UniNovafapi

INTRODUCTION: Leprosy is a chronic, granulomatous disease, characterized by loss or decrease in thermal, tactile and pain sensitivity, explained by the tropism of the *Mycobacterium Leprae* bacteria for skin and peripheral nerves. In Brazil, this disease still has a high prevalence rate, being endemic. Thus, it is important to observe the results of the treatment of patients with this disease. **OBJECTIVES:** To analyze the outcomes of leprosy care in the Northeast Region of Brazil, between 2015 and 2020. **METHODS:** Cross-sectional, retrospective and descriptive study using secondary data made available in the Sistema de Informação de Agravos de Notificação - SINAN (Information System for Notifiable Diseases) referring to leprosy cases from 2015-2020. Variables were used such as: sex, age, type of exit and disability assessment at the time of healing. The data were tabulated in EXCEL spreadsheets for study.

RESULTS: In the five-year period analyzed, 84,126 cases of Leprosy were registered in the Northeast region. The most affected age group was that between 40 and 49 years (f=18.2%, n=15323) and cases were more prevalent in males (f=56.10%, n=47202). The most frequent clinical form was the dimorphic form (f=42.3%, n=35,628), followed by the virchowian form (f=16.8%, n=14,172). As for the outcome of the disease, 24.31% of patients (n=9213) had some degree of disability at the time of cure and there was an overall average for the Northeast region of 5.57% treatment abandonment rate, more pronounced in the state of Pernambuco, where this rate reached 7.02%. Regarding the number of doses, 6 doses were more frequently recorded in the paucibacillary form (f=32.7%), and less than 12 months in the multibacillary form (f=45.5%). **CONCLUSION:** Throughout the Northeast region, there was a high rate of patients with sequelae of the disease and of treatment abandonment. This fact ratifies the finding of predominant clinical forms, the dimorphic and virchowian being responsible for the potential transmission and perpetuation of the disease. The outcomes of the care given to leprosy patients are of utmost importance, since they show which types of patients should receive more attention, both in terms of diagnosis and continuity of treatment. In addition, it provides information about how the treatment of the disease has been applied in recent years and can also bring changes in the approach to the patient and there is greater promotion of health education on leprosy for the population.

57. CLINICAL-EPIDEMIOLOGICAL PROFILE OF NEWBORN CHILDREN DIAGNOSED WITH GASTRIC PERFORATION IN REFERENCE MATERNITY

Soraya Macêdo Uchôa¹, Paula Shelda Fonseca Fernandes¹, Evanayza Vieira de Sousa¹, Bruna Porteiro Oliveira Sales Ramos¹, Tiago Duarte Barroso Moura¹ and Bruno Pinheiro Falcão².

¹ Uninovafapi University Center

² Maternity Dona Evangelina Rosa

INTRODUCTION: Gastric perforation is characterized by perforation of some portion of the stomach, releasing gastric contents into the peritoneal cavity. In newborns, they are mostly idiopathic, occur more in the first week of life and tend to affect preterm infants more often. The clinic presents with sudden abdominal distension, dyspnea, vomiting, lethargy, and severe pneumoperitoneum. Some of the risk factors described are perinatal stress, prematurity, use of corticosteroids, the need for positive pressure ventilation and the use of an orogastric tube. Traditional surgical and laparoscopic approaches have been used for treatment. **OBJECTIVE:** Define the incidence, profile and prognosis of patients diagnosed with gastric perforation in a reference maternity hospital in Teresina-PI, from March 2019 to March 2020. **METHODS:** This is an observational, cross-sectional, quantitative study, descriptive and retrospective, through the review of medical records of patients admitted to a reference maternity hospital with a diagnosis of gastric perforation, during the study period. **RESULTS:** The incidence of gastric perforation in the analyzed period was 1 case for every 1,311 live births (0.076%). There were 7,867 live births, 68 underwent laparotomy and 6 were diagnosed with gastric perforation. All patients in the sample were premature (gestational age between 31 and 36 weeks) and abdominal distension was the main clinical manifestation (50%). Gastrorrhaphy was performed in all cases. Two patients needed treatment for intestinal malrotation, one for annular pancreas and two cases required surgical re-approach. The maximum

hospital stay was 2 months. Two deaths were reported and 4 patients were discharged from the maternity hospital. **CONCLUSION:** There was an incidence of 0.076% of gastric perforations. Gastrorrhaphy accounted for 8.82% of the service's laparotomies. It was possible to observe prematurity as the main risk factor and abdominal distension as the main clinical manifestation. Gastrorrhaphy was necessary in all cases, with the need for re-approach in 2 cases. The mortality rate was high (33.3%), with a worse prognosis when associated with premature amniorrhexis, gestational age less than 32 weeks and reoperation.

58. THE ROLE OF PEDICLE SUBTRACTION OSTEOTOMIES IN CORRECTING SAGITTAL BALANCE IN AN ANKYLOSING SPONDYLITIS PATIENT: A CASE REPORT

Indira Luz da Silva¹, Amanda Caroline Ribeiro Barros¹, Lucas Silva Reis de Sousa¹, Paulo Rodrigues Da Cruz Neto¹, Ayrana Soares Aires².

¹ Medical Students at State University of Piauí

² Spine surgeon at Getulio Vargas Hospital

INTRODUCTION: Ankylosing spondylitis (AS) is a chronic inflammatory disease characterized by inflammation in the axial skeleton and sacroiliac joints, with pain, stiffness and progressive joint ankylosis. Studies have shown that one of the main postural changes is the accentuation of thoracic kyphosis with anteriorization and lowering of the center of gravity associated with hip flexion, which causes compensation in the knee and ankle. These changes lead to imbalance in the sagittal axis and impair the patient's horizontal gaze, walking, as well as compromising daily activities, quality of life and the functioning of the viscera due to compression. **CASE REPORT:** Male, 54 years old, Catholic, born and raised in Urucui-PI. He complains of fixed spinal deformity for 19 years without previous diagnosis, smoker, with no other associated complaints. History of current disease: patient with ankylosing spondylitis, with a history of progressive spinal deformity in kyphosis and inability to look to the horizon. In imaging exams, Pelvic Incidence (PI): 76°, Lumbar Lordosis (LL): 6°, PI-LL Mismatch: 70°, Pelvic Tilt (PT): 56°, Sacral Slope (SS): 20°, Sagittal Vertical Axis (SVA): 20cm, Chin-Brow Vertical Angle (CBVA): 31°. Given the clinical picture of extensive involvement of the spine and spinopelvic imbalance with pelvic retroversion and knee flexion, we opted for pedicular subtraction osteotomies (PSO) at two levels (T12 and L3). The procedure was performed in two stages with an interval of 1 week, due to the large blood loss that occurs in the PSO (about 1800 mL of blood). There was a significant reduction in the parameters of sagittal balance. **FINAL CONSIDERATIONS:** PSO is one of the main techniques for correction of fixed sagittal deformities, consisting of a 3-column osteotomy, with gain of up to 30° of lordosis. This technique consists of closing the wedge resulting from pedicular subtraction, which avoids rupture of the adhered large vessels or with calcifications, common in patients with chronic and inflammatory diseases. There was an improvement in all sagittal balance parameters, with improvement in health-related quality of life scores not related to low back and cervical pain. Pre and postoperative data were obtained through the NDI (Neck Disability Index) and Oswestry Disability Index questionnaires.

59. PARADOXAL ADIPOSE HYPERPLASIA POST CRYOLIPOLYSIS: A CASE REPORT

Sarah Maria Monteiro Soares Costa de Holanda¹, Maria Clara Mousinho Silva Rodrigues¹, Nathalia Câmara Fontes

Fernandes Torres¹, J ssica Ferreira de Moraes Brand o¹, and Thiago Ayres Holanda¹.

¹ University Center Uninovafapi

INTRODUCTION: Cryolipolysis is an aesthetic procedure characterized by adipocyte death by apoptosis, which is based on the concept that fat cells are more susceptible to cold than skin, nerve or muscle cells, resulting from a localized cold panniculitis. The procedure is performed using a specific device that features a concave applicator with two cooling plates, responsible for sucking the adipose tissue from the area to be treated into the cavity using a moderate vacuum. Although, when performed with the proper technique and respecting the contraindications, it is considered a relatively simple procedure, it can present adverse effects, including edema, sensory alterations, burns and paradoxical adipose hyperplasia. The latter boils down to an initial reduction in the volume of the treated area, followed by an increase in volume, leading to a bulge in the area with the shape of the applicator. Such an effect is quite rare, and the focus of this study. **CASE REPORT:** A 32-year-old female patient, nulliparous, using OAC and without other comorbidities, seeks care for presenting bulging in the epigastric region, starting in the first month after undergoing a procedure in an aesthetic clinic to eliminate fat located. On physical examination, there was a mass with a soft consistency, not adhered to deep planes, painless to touch and deep palpation, suggestive of lipodystrophy. The abdominal wall ultrasound corroborated the diagnostic hypothesis. We suggest that this change was due to the cryolipolysis procedure performed. The liposuction procedure was suggested. **FINAL CONSIDERATIONS:** Cryolipolysis has been shown to be the non-invasive mechanism with the best performance in the treatment of localized fat so far, with the highest satisfaction rate when compared to similar technologies. This procedure is considered safe, however, the technique must be strictly followed, both in its indication and in its execution. In addition, the presence of a physician is necessary in the indication and execution of this procedure, as well as in the follow-up of the treatment, as cryolipolysis is susceptible to adverse effects, such as the one that occurred in the aforementioned case, which must be explained to the patients beforehand.

60. PNEUMOCYSTOSIS AS A DIFFERENTIAL DIAGNOSIS OF COVID-19

Isabel Maria Oliveira Mac do Lima¹; Christian Nunes Carvalho Silva¹; Joana Clara Oliveira Mac do Lima²; Hitalo Roberto de Ara jo Co lho²; Suyene Maria Lima de Sousa²; Walfrido Salmito de Almeida Neto¹.

¹ Federal University of Piau 

² State University of Piau 

INTRODUCTION: Pneumocystosis is an opportunistic disease caused by the fungus *P. jirovecii*, which is responsible for febrile and potentially fatal pneumonia in immunodeficient patients, especially those infected with HIV. Pneumonia caused by this fungus has decreased in recent decades after the introduction of antiretroviral therapy. Computed tomography is one of the tests performed in patients with respiratory symptoms, and in patients with pneumocystosis as well as in patients with COVID-19 diffuse or regional and often bilateral ground-glass infiltrates can be found. **CASE REPORT:** Male patient, 57 years old, from Esperantina-PI, presenting asthenia, lethargy and frank dyspnea, intercostal retraction, and use of supplemental oxygen therapy. A chest CT was performed, demonstrating "Multiple opacities with sparse ground-glass attenuation in both lungs, affecting 75% of the parenchyma".

COVID-19 RT-PCR was not reagent. He underwent rapid tests for detection of antibodies to Syphilis and HIV, both reagent (previously unknown), as well as sputum analysis, is without the presence of BAAR, but showing Yeasts in budding, suggesting Pneumocystosis by serological history. He presented whitish and painful plaques on the jugal mucosa and ventrolateral region of the tongue, removable, in addition to odynophagia, dysphagia, and anorexia suggestive of oral and esophageal candidiasis, a defining disease of AIDS, therefore, he used a nasoenteral tube. On auscultation, he presented diffuse and bilateral fine holoinspiratory rales. A new chest CT was performed, and the initial alterations remained. After 3 days, he was referred to the ICU, intubated, and under use of vasoactive drugs and analgesia. **FINAL CONSIDERATIONS:** According to the current epidemiological context, the presence of ground-glass opacifications on CT scan indicates a viral infectious process caused by COVID-19. However, when after performing other tests that reveal the non-infection by coronavirus, one should immediately think of other etiologies such as pneumocystosis. Because it is still one of the most important causes of mortality among AIDS patients. Therefore, patients with suspected pneumocystosis should be immediately submitted to anti-HIV serologic tests. Patients who present viral infection by HIV, after a long asymptomatic period of about 8 years and without ART develop immunodeficiency syndrome that leads to opportunistic infections, such as pneumocystosis.

61. ATYPICAL CHRONIC INFLAMMATORY DEMYELINATING POLYNEUROPATHY IN A GLOVE BOOT PATTERN

Isabel Maria Oliveira Mac do Lima¹; Joana Clara Oliveira Mac do Lima²; Hitalo Roberto de Ara jo Co lho²; Carlos Eduardo Rodrigues Dourado¹; Walfrido Salmito de Almeida Neto¹; Kelson James da Silva Almeida¹

¹ Federal University of Piau 

² State University of Piau 

INTRODUCTION: Chronic Inflammatory Demyelinating Polyneuropathy is part of the spectrum of immune-mediated inflammatory polyneuropathies, with prevalence ranging from 0.8 to 8.9/100,000 inhabitants. It manifests by means of immunomediated affection to peripheral nervous structures, resulting in progressive reduction of muscle strength, especially proximal groups and absence/reduction of neuromuscular reflexes. The presentations are classified into typical and atypical groups, based on the symmetry of involvement and presence of extra-neuromuscular signs/symptoms, requiring electroneuromyographic evaluation. It is usually associated with immunological stress reactive to pathologies/immunotherapies. **CASE REPORT:** Male patient, 40 years old, reports onset in 2019 of bilateral paresthesia in the toes, with succession of 3-4 crisis episodes, with bilateral, symmetrical and distal-proximal progression of symptoms in the 4 limbs. In the year 2021, in the upper limbs, he presents hyporeflexia, paresthesia, and paresis of fingers, with predominance in the ulnar region, with preservation of tactile sensitivity. In the lower limbs, he has hyporeflexia, paresthesia, and paresis below the knee and generalized loss of tactile sensitivity in both feet, defining an atypical demyelinating neuropathy symmetric distal to proximal, with talon gait, suggestive of sensory ataxia, that is, atypical presentation of motor and sensory PDIC. Electroneuromyography of the upper and lower limbs showed alterations compatible with chronic peripheral sensory-motor polyradiculoneuropathy, with signs of disease in activity, of accentuated degree and mixed pattern with a primarily demyelinating

pattern in the boot-glove, associated with albumin-citological dissociation in the cerebrospinal fluid, confirming the diagnosis of PDIC. He is under treatment with endovenous immunoglobulin and corticoids. He reports previous treatment and negative bacilloscopy for leprosy. **FINAL CONSIDERATIONS:** The electroneuromyography is a good diagnostic criterion evidencing demyelinating alteration in fibers in its majority, related to little motor impairment. It is very important to monitor and disclose the clinical forms, helping to plan the therapeutic protocols of immunosuppressants according to the patient's demand, because the worsening of the clinical form of PDIC is associated with progressive increase in the scale of functional impairment.

62. CONFLUENT AND RETICULATED PAPILLOMATOSIS OF GOUGEROT-CARTHEAUD: DIAGNOSTIC CHALLENGE AND THERAPEUTIC SUCCESS WITH AZITHROMYCIN

Sarah Maria Soares Da Costa Holanda¹; Bárbara Cândida Nogueira Piauilino¹; Carlos Daniel De Sousa Lima¹; Letícia Pereira Portela¹; Myrna Beatriz De Melo Oliveira¹; Lana Andrade Napoleão Lima²

¹ UninovaFapi University Center,

² Lineu Araújo Integrated Health Center

INTRODUCTION: Confluent and Reticulated papillomatosis of Gougerot-Cartheaud (PCR) is a genodermatosis of ceratinization, still unknown etiology. As major theories include bacterial trigger by dietzia papillomatosis, cutaneous response exacerbated to P. orbicular, endocrine disorders related to insulin resistance, ultraviolet light-induced epidermal change, amyloid deposition and mutation in keratin 16. It is characterized by papules and hyperpigmented hyperactive plates, with peripheral cross-linking in the trunk (thorax, abdomen and back) which, occasion, extend one of them of them regions. Histopathological findings are nonspecific and include hyperkeratosis, acanto, papillomatosis and surface perivascular lymphocyte infiltrate. The inferential digestic diagnoses income nigricans, pityriasis versicolor, congenital disceratosi, amyloidosis macular, land firm-shape, derier diseases, Dewling-Deggos and Galli-Galli. It ivora the use of topical keratolitics, retinides or antifungal and isotretinoin, acitretin and oral antifunctional is to be relatiuos, minocycline and azithromycin therapy - with anti-inflammatory, antibacterial and immunomodulating action is being preferred. **CASE REPORT:** male patient, 19 years, student, semorbidities, from Timon-Ma, with complaint of "chest spots", 3 years ago. It reported that in 4 previous consultations received diagnosis of pityriasis versicolor and used imidazolic (itraconazole, terbinafine and ketoconazole oral associations to cetoconazole and miconazole topics), without improvement. At the examination he presented hypercromic, keratotic micropines, confluing on chest plates in the thorax, upper abdomen and cervical region. The histopathological evidenced epidermis papillomatosis, acanto, hyperkeratosis and discreet infiltrate infiltrate mononuclear perivascular mononuclear NAFERME, corroborating with a clinical Hypothe of PCR. It was prescribed azithromycin (500mg once a day for 3 consecutive days in the week, for 6 weeks) and 10% urea formula + 12% ammonium lactate. After 8 weeks, he returned with complete remission. **CONCLUSION:** Despite being rare and beniger dermatosis, knowing how to recognize a PCR is fundamental to avoid misleading diagnoses and treatments and disposed, which generate a certain anxiety to patients. In this case, as clinical characteristics and histopathological findings were typical and there was a favorable

response to the administration of azithromycin, safe and low-cost therapy.

63. EPIDEMIOLOGICAL PROFILE OF HOSPITAL ADMISSIONS OF RESIDENTS OF PINHEIRO (MA) FOR TREATMENT OF INGUINAL HERNIA BETWEEN 2015 AND 2021.

Denise Nascimento Carvalho¹, Iasmim Bianca Melo Passos de Oliveira¹, Déborah Lima Lopes Araújo¹, Thiago Dutra Mendonça¹, Lorena Fontinele Godoi¹ and Almir José Guimarães¹.

¹ Federal University of Maranhão

INTRODUCTION: Hernia is defined as a protrusion or projection of an organ or part of an organ through the body wall that normally contains it. (BROOKS and HAWN, 2021). The indicated treatment is surgical correction, and, in inguinal hernia, it is carried out urgently in patients with complications such as strangulation. (BROOKS and HAWN, 2021; BROOKS, 2021). According to the Brazilian Society of Hernia and Abdominal Wall (SBH, 2021), in 2020, 139,400 hospitalizations/surgeries were performed for abdominal wall hernia repairs, via the Unified Health System (SUS), and in Maranhão, there were more than 34 thousand cases (DATASUS). **OBJECTIVE:** To analyze the epidemiological profile of patients hospitalized for treatment of inguinal hernia in Pinheiro (MA) between January 2015 and July 2021. **METHODS:** This is a time series study with data presented as absolute and frequency relative, adopting as variables: sex, age group, race and nature of the service, during the period from January 2015 to July 2021, based on secondary data extracted from DATASUS. **RESULTS:** The research had a total of 797 cases of inguinal hernia hospitalizations, peaking in 2017 (142) and falling 47.5% in 2020 (74), corroborating the SBH bulletin (2021) that, due to COVID-19, there was a reduction of 47.8%. The profile resulting from the analysis is mostly male (661), aged between 50-59 years old and with prevalence pf emergency care (468), which confirms the results of Brooks & Hawn (2021), males being eight times more likely to develop a hernia in this age group. As limitations, the study had data referring to race/color and treatment regimen for the most part filled in as "ignored", represented, respectively, by 572 and 699 cases. **CONCLUSION:** The profile resulting from the epidemiological analysis of patients hospitalized for inguinal hernia in the city of Pinheiro (MA) found a predominance of men, aged 50-59 years, who were taken to medical care due to the clinical urgency of possible complications. Thus, as it is a follow-up study, the outlining of the conclusions obtained through the results presented will be more informative with the advancement of data and, with these, to create mechanisms to aid in the early diagnosis of patients in the city of Pinheiro (MA), as well how to extend to the national level.

64. REINFUSION OF CHYME IN A PATIENT WITH SHORT BOWEL SYNDROME

Carlos Eduardo Cordeiro Cavalcante¹; Arthur Caminha de Araujo Costa¹; Matheus Oliveira de Brito¹; Matheus Vilarinho Serra²; Elcias Baldoino Vilarinho²

¹ Federal University of Piauí

² Santa Maria Hospital

INTRODUCTION: The surgical approach to intestinal pathologies often requires the use of temporary treatment, such as enterostomies (PICOT et al., 2016). A therapeutic solution that has been particularly studied in recent years is the reinfusion of chyme into a double

enterostomy, a technique that reduces parenteral nutrition time, allows for an effective restoration of intestinal absorption, and reduces hospital stay (KITTSCHA, 2016; PFLUG et al., 2013). The case below narrates the application of the technique addressed in an oncology patient, treated at the Hospital Santa Maria in Teresina - PI, where colectomy and reinfusion of the chyme were performed. **CASE PRESENTATION:** A 61-year-old male patient with a history of smoking, peripheral arterial disease and atherosclerosis underwent colectomy at the splenic angle topography followed by primary anastomosis. After successive hospitalizations, the patient returned to the hospital in July 2020, presenting vomiting and exteriorization of the loop of the small intestine in colostomy, with obstruction to the passage of fecal material. Abdominal CT showed a voluminous collection of fluid and gas that filled the regions corresponding to the mesogastrium, epigastrium, flanks, and left hypochondrium. He was admitted to the operating room for exploratory laparotomy, jejunostomy, enterectomy and left terminal ileostomy. On the third postoperative day, re-infusion of chyme with a volume corresponding to 40 mL was initiated. An improvement in the patient's general condition was observed in the following days, with introduction of total liquid diet on the third postoperative day and oral diet on the sixth postoperative day, in association with the reinfusion of the chyme. After a favorable evolution, the patient was followed up and the following month underwent elective surgery for intestinal transit reconstruction, which was successfully performed. **CONCLUSION:** The case presented illustrates the benefits related to the reinfusion of chyme in patients with intestinal failure secondary to short bowel syndrome, being considered a safe and effective enteral nutrition technique. In this sense, it should be more recognized in the surgical setting. However, the widespread use of this technique in these indications requires the production and distribution of automated devices that allow its reproduction with minimal discomfort.

65. INSULINOMA IN A YOUNG PATIENT - A SYNDROMIC PICTURE?

Carlos Eduardo Cordeiro Cavalcante¹; Arthur Caminha De Araujo Costa¹; Isadora R nia Lucena Oliveira²; Matheus Vilarinho Serra³; Anderson Martins Dantas⁴

¹ Federal University of Piau 

² Uninova pi University Center

³ Santa Maria Hospital

⁴ Prontomed Hospital.

INTRODUCTION: Insulinomas are the most common functional neuroendocrine neoplasms, with an incidence of 4 cases per million per year. Most present sporadic occurrence, with peak incidence in the fifth decade of life. Additionally, up to 10% of cases occur in association with a hereditary syndrome named multiple endocrine neoplasia type 1. Clinically, symptoms are heterogeneous, nonspecific and differ among patients. As for treatment, surgery remains the only curative option. **CASE REPORT:** Female patient, 27 years old, admitted to the hospital with report of repeated seizures. Previous history of macroprolactinoma without scheduled neurosurgical reoperation and use of cabergoline (discontinued on her own 6 months earlier) and prednisone, with previous diagnosis of multiple endocrine neoplasia type 01. Paternal family history of multiple endocrine neoplasia type 1, in addition to mother and brother with multiple neurofibromas. On physical examination, the patient was in a good general state, oriented, hydrated, afebrile, acyanotic, anicteric and capillary glycemia of 37 mg/dL. During hospitalization, she presented new episodes of hypoglycemia. The patient underwent magnetic resonance imaging (MRI) of the abdomen, with detection of a 3 cm nodular lesion located in the caudal region of the pancreas

and was referred for surgical evaluation. Intraoperative evaluation demonstrated two pancreatic nodules not identified by MRI, and proceeded with distal pancreatectomy with associated splenectomy. Postoperatively, the patient presented infection of the surgical wound and small output pancreatic fistula through the abdominal drain. **CONCLUSION:** Although insulinoma has a sporadic occurrence, a relevant portion of patients manifest it as a reflection of other syndromes. The early diagnosis of these pathologies allows for adequate follow-up, considering possible implications in the clinical presentation and outcome of the cases. In this context, multiple endocrine neoplasia type 01 draws particular attention. Warning signs include family history, early age, and atypical characteristics of the tumors, larger or multiple in size. Finally, further studies are needed to verify the possible participation of other pathologies potentially related to the manifestation of insulinoma, especially neurofibromatosis type 1.

66. EPIDEMIOLOGICAL ANALYSIS OF HOSPITAL ADMISSIONS FOR CROHN'S DISEASE AND ULCERATIVE COLITIS IN PIAU  BETWEEN 2015 AND 2020

B rbara Fernandes de Meneses Brito¹, Naira Lorena Monte Paes Landim¹, Anne Barbosa Gonalves Mesquita¹, Rafaela Miranda Pereira de Queiroz¹, Lucas Rodrigues Melo¹ and Euripedes Ferreira Ara jo Mendes¹.

¹ Uninova pi University Center

INTRODUCTION: Inflammatory bowel diseases (IBD) are chronic diseases that significantly affect the quality and life expectancy of patients. Crohn's disease (CD) emerges as a disorder of such class, of unknown etiology and multifactorial nature, and it can also be characterized by transmural inflammation of the gastrointestinal tract and marked by periods of remission and relapse. **OBJECTIVES:** To describe the epidemiological profile of hospital admissions for Crohn's disease and ulcerative colitis in the State of Piau  from 2015 to 2020. **METHODS:** This is a retrospective, descriptive, quantitative approach study, conducted from data collected in the SUS Hospital Information System (SIH/SUS) of the Department of Informatics of the Unified Health System (DATASUS). These records were analyzed in a simple statistical way. The variables considered were: number of hospitalizations, gender, age group, race/race and deaths. **RESULTS:** 693 cases of hospital admissions (HA) for Crohn's disease and ulcerative colitis were notified in Piau  during the analyzed period. Most of HA cases were evidenced in 2019, with 138 (19.91%) ones, and the year of 2015 presented the lowest period, with 87 (12.55%). Men were the most affected group, representing 53.82% of HI. Regarding the age range, there was prevalence between 40 to 49 years (21.35%), followed by 30 to 39 years (20.20%), and the age group with the lowest number of cases was the one between 5 to 9 years (2.02%). Moreover, there was predominance of mixed race (62.62%), while the black color/race had less involvement (1.44%). Regarding the final outcome, 23 patients died (3.31%). **CONCLUSION:** From this study, a gradual increase could be observed in the number of hospitalizations for IBD. There is a slight predominance in males, with higher incidence between 40 and 49 years, followed by a second peak, from 30 to 39 years. Regarding color/race, there was a predominance of the mixed one. Therefore, the importance of the analyzed data stands out, given the growth in the number of cases and its consequences, both for the individual, causing impact on quality of life, and for society, due to the high costs with health services.

67. DECALVANT FOLLICULITIS: RARE PRIMARY CICATRICAL ALOPECIA AND CHALLENGING THERAPEUTIC

Carlos Daniel De Sousa Lima¹; B rbara C ndida Nogueira Piauilino¹; L cicia Pereira Portela¹; Myrna Beatriz De Melo Oliveira¹; Sarah Maria Soares Da Costa Holanda¹; Lana Andrade Napole o Lima²

¹ Uninovafapi University Center

² Lineu Ara jo Integrated Health Center

INTRODUCTION: Folliculitis decalvans (FD) is a scalp disease that often results in cicatricial alopecia (represents about 11% of cicatricial alopecia cases). Its etiology is unclear, but immune mechanisms, genetic predisposition and *Staphylococcus aureus* infection seem to be involved in its pathogenesis. It predominantly occurs in young adults, of African-American descent, males. It is characterized by inflammation, erythema and desquamation, especially in the apex and occipital region of the scalp. Trichoscopy typically shows the presence of multiple strands emerging from a single follicle – polytrichia or “hair in tufts” or “strands in doll’s hair”, in addition to erythema, desquamation, crusts and perifollicular inflammatory pustules. **CASE REPORT:** Male patient, 42 years old, brown, construction worker, from Teresina-PI, with progressive “irritation” on the scalp for 9 years. No previous treatments. On examination, the patient shows erythematous-desquamative alopecic plaque, with some pustules, located in the vertex; to trichoscopy, multiple “tufted hairs”. Histopathological examination showed a shortage of appendages and the presence of dense perifollicular mononuclear inflammatory infiltrate, with aggression and destruction of hair and proliferation of perifollicular fibrous connective tissue with total replacement by fibrosis, thus characterizing cicatricial alopecia compatible with FD. Systemic antibiotic therapy with Doxycycline 200 mg/day and topical corticosteroid (Clobetasol) was instituted. The patient will maintain follow-up. **FINAL CONSIDERATIONS:** Folliculitis decalvans is a rare and chronic type of alopecia. The exact etiology still not well known, which make the treatment a challenge, with many episodes of recurrence. Systemic and topical antibiotics, also, topical, systemic and intralesional corticosteroids, isotretinoin and dapsone are the most used therapies. Other medications such as topical calcineurin inhibitors and immunobiologicals, as well as, laser epilation, appear as recent therapeutic options. However, there is no established guideline or consensus for the treatment of this dermatosis and the persistence of disease activity is common even after several therapeutic attempts.

68. PERIORBITAL ANGIOEDEMA FOLLOWING HYALURONIC ACID INJECTION: A RARE CASE REPORT

Fernanda Ayres De Morais E Silva Cardoso¹; Yllana Ferreira Alves da Silva²; Ana Luiza Ribeiro Barroso Maia¹; Gabriella Machado Moror o Carvalho²; Lisia Raquel Fernandes Paz²; Leticia De Melo Lustosa³.

¹University Center Unifacid

²University Center Uninovafapi

³General Physician.

BACKGROUND: Non-surgical dermal fillers with injectable hyaluronic acid (HA) are widely used in aesthetic dermatology, most frequently administered in the periocular region. HA is well tolerated, predictable, and has a low incidence of adverse effects despite its wide use. In the periorbital region, complications reported are malar edema, bluish-gray discromia, contour irregularities and, rarely,

angioedema. In view of this, we aim to report an unusual case of immediate periocular angioedema after HA application. **CASE REPORT:** A 31-year-old female patient came to the dermatology clinic complaining of dark circles under the eyes. During dermatological examination, a slight loss of elasticity and fine wrinkles in the palpebral region were also observed. In view of this, she underwent intradermal filling with hyaluronic acid 5 mg/ml (Filorga NCTF 135HA) through a 25g cannula, aiming at hydration in the periocular region. Hours later, an evolution with erythema and significant edema restricted to the region of application was observed, suggestive of angioedema. The patient denied any difficulty breathing. On the following day, the condition worsened, but remained localized. The patient returned and was treated with intralesional infiltration of hyaluronidase 2000 UTR, diluted in 3 ml of distilled water and 3 ml of lidocaine without vasoconstrictor. Multiple applications of 0.01 ml per 1 mm of lesion were performed, and then systemic corticotherapy was prescribed. On a re-evaluation after three days, a good evolution and complete resolution of the clinical picture were observed. **CONCLUSION:** Few reports in the literature portray angioedema as an adverse event to periocular filling with hyaluronic acid. It is believed that this would be a consequence of an allergic reaction prevalent in 0.1% of cases. This complication usually occurs late, and being an early course as described in this case report is even more uncommon. The main mechanism suggested would be a mast cell-mediated hypersensitivity to product proteins. In addition, anatomical variations of the patient and the injection technique are also possible causes. In this case, there was a good response to treatment with application of hyaluronidase in the region to dissolve the HA, allowing the action of the systemic corticoid. The discussion of potentially serious complications such as angioedema is valid, as it allows for greater safety in the proper use of hyaluronidase to dissolve the product, followed by appropriate treatment.

69. EPIDEMIOLOGICAL PROFILE OF PREGNANT WOMEN DIAGNOSED WITH SYPHILIS IN THE CITY OF TERESINA BETWEEN 2016 AND 2020: A RETROSPECTIVE CROSS-SECTIONAL STUDY

Mar lia M ximo de Ara jo¹, Lucas Santos de Sousa¹, Irene Sousa da Silva¹

¹ State University of Maranh o.

INTRODUCTION: Syphilis is a systemic disease with chronic evolution, caused by the spirochete *Treponema pallidum*, with sexual and vertical transmission. In Brazil, there was an increase in the number of cases of syphilis in pregnant women, a worrying factor due to complications to pregnancy and the child’s health. In 2019, in Teresina, the average syphilis rates in pregnant women were on 28%, higher than the national average. Also, there is a lack of studies on this worrying public health data. **OBJECTIVES:** The purpose of the following study is to describe the epidemiological profile of syphilis in pregnant women from 2016 to 2020 in the city of Teresina. **METHODS:** Cross-sectional study. Data were collected from the DATASUS platform between 2016 and 2020, the epidemiological profile was recorded through the Sistema de Informa o de Agravos de Notifica o (SINAN) and stratified by gestational age, education level, color or race and clinical classification. A descriptive analysis was executed, in which the variables were described by absolute frequency and percentage. **RESULTS:** Teresina was among the capitals with the highest detection rates in 2019. Between 2016 and 2020, 1164 syphilis cases were detected in pregnant women, accounting for 32,81% of all cases in 2019. As for gestational age, the third quarter stood out, with

a total of 571 cases. The age group from 20 to 29 years was the most prevalent, with 623 cases (53,22% of total) in 2019, similar to the national data. As for education level, 277 (23,70%) cases were women in high school, with 95 cases in 2018. As for color or race, the brown color stood out, with 812 cases (69,75%). In 2019, 32,51% of cases were that color or race. This data was similar to the national figure, in which the race or brown color also stood out, equal to 51,2% of pregnant women with syphilis in 2019. **CONCLUSION:** A high number of syphilis cases in pregnant women was observed in Teresina, in which the years of 2018 and 2019 were the most prominent, a factor that possibility reflects an improvement in the notification system in pregnant women. However, in 2020 the rates dropped considerably, possibly due to the decrease in notifications and the mobilization of the country's health services to fight the pandemic in Brazil. Nevertheless, it was observed that the scenario in Teresina is worrying, highlighting the need for greater focus on educational measures and notification.

70. CHILDREN'S POTT TUMOR AS A RARE FRONTAL SINUSITIS COMPLICATION: A CASE REPORT

Marianna Mendes De Barros¹; Sarah Maria Soares Da Costa Holanda¹; Larissa Alves Dos Santos²; Ana Paula Rodrigues Melo³

¹Uninovafapi University Center

²Federal University of Piauí,

³Teresina Urgency Hospital

INTRODUCTION: Pott's edematous tumor (PPT) is a subperiosteal abscess with extradural empyema resulting from a complication of rhinosinusitis or trauma that clinically manifests as a well-delimited frontal edema. It is rare since the advent of modern antibiotic therapy, but with risks of intracranial sequelae if underdiagnosed. **CASE REPORT:** Female, 6 years old, started with fever, headache and facial edema. Ten days later, he was admitted to the local hospital due to trauma impacting the occipital region. Skull Computed Tomography showed sinusitis, starting treatment with Amoxicillin and Clavulanate for 10 days, with improvement of the condition. She returned to the service 16 days later, with fever, headache and swelling of the forehead, was hospitalized and started treatment with Ceftriaxone, Oxaciline and Metronidazole. On physical examination, a softened tumor in the frontal region of the face was highlighted. Skull and face CT showed bilateral maxillary ethmoidal sinusopathy, bilateral frontal sinusopathy, erosion of the anterior and posterior bone parts, with formation of an anterior subcutaneous collection and frontal epidural collections on the right and left. It was referenced. The pediatric neurosurgery opinion reported the need for prolonged antibiotic therapy, Clindamycin and Ceftriaxone, with no indication for surgical intervention. Magnetic resonance imaging showed filling of the frontal sinuses and signs of erosion of the bone plates, evidencing collection in extracranial soft tissues in the median region, which determines the bulging of the local skin surface, measuring about 3.2x1.9x 2.5 cm, with restriction to the diffusion sequence, which suggests an infectious component in association with bone inflammatory involvement and possible osteomyelitis. Evolved with regression of the swelling in the forehead and without symptoms. She remained hospitalized for administration of intravenous antibiotics, with expectant management being performed with monthly follow-up of pediatric neurosurgery. **FINAL CONSIDERATIONS:** As in the aforementioned case, the literature shows that early antibiotic therapy for acute rhinosinusitis may not prevent complications. However, management with a high degree of suspicion and early

diagnosis, with appropriate referrals, treatment of PPT with hospital admission, intravenous use of broad-spectrum antibiotics or surgical approach, are imperative to reduce morbidity and mortality.

71. EPIDEMIOLOGICAL PROFILE OF PATIENTS ADMITTED FOR SEPSIS IN MARANHÃO BETWEEN 2016 AND 2020

Lucas Santos de Sousa¹, Marília Máximo de Araújo¹ and Irene Sousa da Silva¹.

¹ State University of Maranhão.

INTRODUCTION: Sepsis is defined as a medical emergency characterized by an organic dysfunction due to an unregulated and intense immune and inflammatory response, triggered by an infectious process caused by viruses, bacteria, fungi or protozoans. It is a disease that has a fast evolution and high mortality rate, mainly because of the delay in diagnosis. **OBJECTIVES:** The purpose of the following study is to describe, epidemiologically, the profile of patients hospitalized for sepsis in the State of Maranhão, between 2016 and 2020. **METHODS:** The study is a cross-sectional, quantitative and retrospective epidemiological analysis of hospitalizations by sepsis reported in Maranhão, in the period from 2016 to 2020, using data from the Sistema de Informações Hospitalares – SIH-SUS. For the elaboration of the research, the following variables were used: place of residence, assistance type, age group, gender, days of hospitalization and number of deaths. From a descriptive analysis, the variables were described according to their absolute and relative frequencies. **RESULTS:** In the period studied, 7909 hospitalizations for sepsis were registered in the State, with the highest prevalence in the city of São Luís, with 1582 registered cases (20% of State admissions). The most prevalent age group were people over 60 years, with 3789 cases (47.9%). As for the sex of hospitalized patients, 4154 (52,25%) were men. Also, most cases were emergency assistance, equivalent to 6901 cases (87.25%). Regarding the cases evolution, 3354 deaths were registered (mortality rate equal to 42.41%), with an average hospital staying equal to 11.5 days. In addition, 9 countryside cities reached a mortality rate equal to 100%, while the capital São Luís reached a rate of 46.52%. **CONCLUSION:** Thus, the research shows a higher prevalence of hospitalizations for sepsis in patients aged over 60 years, in the urgent assistance, without significant distinction between the genres. In addition, the discrepancy in the assistance between the capital and the smaller cities is evident, since 9 countryside cities had mortality rates equal to 100%, a reflection of a smaller health structure and a lower quality assistance.

72. HYPERSENSITIVITY PNEUMONITIS: DIFFERENTIAL DIAGNOSIS TO COVID-19

Anna Paulla Da Silva Barbosa¹, Abel De Barros Araújo Filho², Cristiane Vieira Amaral³, Luana De Sousa Araújo Cardoso Martins², Maria Eduarda Lopes De Castro¹.

¹Medical Student at The State University Of Piauí – Teresina, Piauí;

²Pneumologist And Thisiologist Doctor at The Getúlio Vargas Hospital – Teresina, Piauí;

³Resident Of Medical Clinic at The Getúlio Vargas Hospital – Teresina, Piauí.

INTRODUCTION: Hypersensitivity pneumonitis (HP) is an interstitial lung disease that occurs in individuals previously sensitized to respiratory allergens. Its pathophysiology has not been completely elucidated, but it is known that exposure to specific antigens in susceptible individuals is the determining factor. The objective of this

paper is to present a case of hypersensitivity pneumonitis. **CASE REPORT:** Female patient, 67 years old, teacher, with dyspnea on great exertion and dry cough that had started 6 months ago, evolving to dyspnea on minimal exertion in the last few weeks. She reports asymptomatic Sars-cov-2 infection two months ago. She denies chest pain, but reported sporadic wheezing, with no noticeable triggering factor. No history of previous respiratory illness. She has arterial hypertension and fibromyalgia, in continuous use of enalapril, duloxetine, mirtazapine and periciazine. She denied environmental exposures or smoking. On physical examination, she was eupneic, normal colored, saturating 98% with room air. Pulmonary auscultation with croaking and Velcro rales. Chest tomography performed two months after Sars-cov-2 infection showed ground-glass opacities affecting 50% of the parenchyma. She had negative ANA and rheumatoid factor, in addition to normal thyroid function. Echocardiogram without changes. Spirometry described severe restrictive ventilatory disorder unresponsive to bronchodilators. Despite the absence of an epidemiological context compatible with hypersensitivity pneumonitis, prednisone 1mg/kg/day was started for two weeks with subsequent weaning. The patient returned with significant improvement, without coughing, and dyspnea only on great exertion. At the time, she revealed that she had been taming birds for a year. We then opted for lung biopsy, which showed cellular and fibrosing interstitial pneumonitis, with areas of bronchiocentric accentuation, in which chronic hypersensitivity pneumonitis is the main diagnosis. Guided then the cessation of contact to the allergen. **FINAL CONSIDERATIONS:** Hypersensitivity pneumonitis is a chronic condition and requires immediate withdrawal from exposure to the antigen as a first therapeutic measure. This is a case of relevant interest, especially in the pandemic context, due to its description in the differential diagnosis with infection by the new coronavirus. The patient is undergoing therapy adjustment and is currently using prednisone and azathioprine, with good symptom control.

73. EPIDEMIOLOGICAL ANALYSIS OF THE REPORTED CASES OF VISCERAL LEISHMANIASIS IN THE STATE OF PIAUÍ BETWEEN THE YEARS 2015 AND 2019

Isabelle Lima Barradas¹, Débora Maria Oliveira Cardoso¹ and Raimundo Ribeiro Barradas¹.

¹ State University of Piauí

INTRODUCTION: Visceral Leishmaniasis (VL) is a zoonosis, caused by the protozoan of the gender *Leishmania*, transmitted by the mosquito of the gender *Lutzomyia*. It is a disease with chronic evolution and high lethality. The clinical manifestation, when it exists, is exuberant and can evolve to more severe conditions. The prevalence of this disease is related to socioeconomic and environmental factors. Therefore, VL is a public health problem, and studies are needed about its occurrence and epidemiological characteristics. **OBJECTIVES:** To analyze the epidemiological profile of reported cases of Visceral Leishmaniasis in the state of Piauí between 2015 and 2019. **METHODS:** This is a cross-sectional epidemiological study with a quantitative approach to reported cases of VL in the period from 2015 to 2019 in Piauí. The database chosen for the analysis was the Notifiable Diseases Notification System, made available by the Department of Informatics of the Unified Health System. The variables studied were: year of notification, age group, gender, confirmatory criterion and evolution. The results were organized in Microsoft Excel software spreadsheets and exposed in charts and tables. **RESULTS:** A total of 1020 cases have been reported in the state during these 5 years. The year 2017 had the highest number of cases with 245 (24%), followed by 2015 with 239 (23%). However, 2019 had 158 (15%),

being the year with the least records. Regarding gender, there was a predominance of males (716 cases, which represented approximately 70% people affected with the pathology). Regarding age group, the data show prevalence between 20 and 39 years (26.3%), followed by 1 to 4 years (21.2%) and 40 to 59 years (20.9%). Of all reported cases, 910 (89.2%) presented laboratory testing as a confirmatory criterion of the disease, while the other 110 (10.8%) were applied only to clinical and epidemiological evaluation. In addition, the records showed that the number of deaths caused by visceral leishmaniasis was 60 cases (5.08%). **CONCLUSION:** VL still persists in Piauí, especially in men and at the age of 20 to 39 years, with laboratory testing being the main diagnostic tool and mortality of 5.08%. Despite the decrease in cases in 2019, one should be aware of the notification of the disease in the state, to avoid underreporting of cases. Thus, the need for actions for surveillance and control of this disease in the state is evidenced.

74. CONSEQUENCES OF TREATMENT AND LATE DIAGNOSIS OF ELBOW FRACTURE AND EVOLUTION TO TOTAL ARTHRODESIS SURGERY: A CASE REPORT

Lucas Silva Reis de Sousa¹, Indira Luz da Silva¹, Mauro Fernando Ramos de Moraes Filho¹, João Pedro Libório Neiva Eulálio¹, Justijânio Cácio Leal Teixeira², Janelson dos Reis Pires³

¹ Medical students at the Faculty of Medical Sciences - FACIME/UESPI, Teresina, PI.

² Orthopedic surgeon doctor. Getúlio Vargas Hospital. Teresina - PI.

³ Resident in Orthopedics and Traumatology at the State University of Piauí. Teresina - PI.

INTRODUCTION: Elbow joint fractures are serious injuries that may affect several anatomic structures from this joint. Radio head fractures are the most common elbow fractures, accounting for a third of these injuries and 3% of all fractures. Normally, this structure fractures when it collides against the humerus capitulum, it may happen due to a pure axial load such as the Essex-Lopresti fracture. Olecranon fractures account for 10 to 20% of all elbow fractures. Distal humerus fractures, on the other hand, have an incidence of 5,7 cases per 100.000 persons per year. **CASE REPORT:** Male, 53 years old, rural worker, born and raised in Hugo Napoleão-PI. The patient reports a fall from own height one month ago. He sought medical attention immediately, but the correct diagnosis was not made in the initial care, he returned to his home. After 3 weeks, with persistence of symptoms, he sought medical attention again, and the fracture was diagnosed. The results of the initial physical examination were limited, with signs of pain intensified on mobilization and palpation, in addition to loss of function in the affected humerus-ulnar joint. An X-ray of the lesion was requested, which showed a comminuted radius fracture with signs of intense bone resorption, thus indicating the need for an emergency surgical procedure. The surgery chosen was the arthrodesis type with plates and pins, due to the high loss of bone tissue at the site and an extended posterior approach. After the end of the operation, 3 bone fragments, the largest with dimensions 4.5 x 3.5 x 1.5 cm, were referred for an anatomopathological examination of the paraffin freezing type, the result of which showed areas of fibrosis and remodeling trabecular, without any presence of malignancy. The patient's elbow was kept flexed at 90° to provide greater comfort in performing daily tasks and to facilitate cleaning of the area. The patient returned after 45 days, with no pain, no signs of inflammation or infections and no neurological deficits. **FINAL CONSIDERATIONS:** Although this lesion is common, its treatment is

complex and it should preferably be surgical to prevent restrictions on motility. In this case, the delay in performing a surgical treatment, associated with the patient's high age and the type of injury, led to the need to perform total elbow arthrodesis surgery, a rare outcome, but necessary in this case.

75. IDIOPATHIC ERYTHEMA GYRATUM REPENS: CASE REPORT

Fernanda Ayres de Morais e Silva Cardoso¹, Ana Luiza Ribeiro Barroso Maia¹, Yllana Ferreira Alves da Silva², Anna Joyce Tajra Assun o¹ and Pedro Henrique Freitas Silva¹.

¹ University Center UniFacid;

² University Center Uninovafapi.

BACKGROUND: Erythema Gyratum Repens (EGR) usually occurs as a paraneoplastic syndrome. The diagnosis of this condition may precede the onset of neoplasms by months, which is most commonly associated with bronchial, gastric, esophageal, and breast carcinomas. We report here a rare idiopathic case in which screening for malignancy remained negative for 3 years. **CASE REPORT:** A 39-year-old female patient sought dermatologic care 3 years ago with a history of erythematous macules and plaques, some annular in shape, with thin scaling edges, located on the buttocks and lower limbs. Hypothesis of Tinea corporis and psoriasis were raised. The use of antifungals and topical corticoids did not lead to remission of the symptoms. A biopsy of the lesion ruled out psoriasis and EGR was diagnosed. Thus, neoplasms were investigated through imaging exams (chest X-ray, mammography and total abdomen ultrasound). The results of imaging exams showed no alterations, concluding that it was idiopathic EGR. The use of prednisone led to significant improvement of the condition. However, currently the pathology has recurred. **CONCLUSION:** The idiopathic form is a rather uncommon presentation of EGR. Concentric erythematous, desquamative rings of rapid progression were reported in this case, corresponding to the classic pattern of this pathology. Differential diagnoses were performed regarding this condition; Fungal erythematous lesions, such as tinea corporis, and psoriasis (erythema gyratum-like psoriasis or EGR-associated psoriasis). Thus, exclusion of these hypotheses was performed by histopathological and empirical treatment of the lesions. The search for malignancy is imperative, as EGR may precede neoplasms by months. However, the patient in this case study showed negative for screening tests for 3 years. As a result, the hypothesis of idiopathic EGR was confirmed. In such cases, treatment consists of alternative corticosteroid therapies, although they do not present a satisfactory long-term response, as observed in the reported case.

76. ERUPTIVE XANTHOMAS: CUTANEOUS MANIFESTATION OF SYSTEMIC DISEASE. CASE REPORT

Fernanda Ayres de Morais e Silva Cardoso¹, Ana Luiza Ribeiro Barroso Maia¹, Yllana Ferreira Alves da Silva², Isabela Ceccato Barili² and Barbara C ndida Nogueira Piauilino².

¹ University Center UniFacid;

² University Center Uninovafapi.

BACKGROUND: Eruptive Xanthomas (EX) occur due to elevated triglyceride levels, usually >3,000 mg/dl. This condition is exacerbated when associated with Type 2 Diabetes Mellitus (Type 2 DM), obesity, and retinoic acid therapy. Clinically, it is seen as erythematous papules/nodules, about 1-4 mm in size, yellow-orange in color,

localized on extensor surfaces of the limbs and trunk and gluteal region. They generally disappear in 6-8 weeks upon treating the underlying disease. **CASE REPORT:** A 35-year-old male patient sought dermatologic care reporting asymptomatic skin lesions that appeared three months ago. Physical examination revealed yellow-orange, popular/nodular lesions (about 1-4 mm in diameter) with an erythematous base on the trunk and upper limbs. The anatomopathological study of the lesion confirmed the diagnosis of EX by revealing lymphocytic infiltrate, macrophages with a xanthomized aspect, and accumulation of lipids in the dermis. Laboratory tests showed elevated triglycerides (3119 mg/dl) and hyperglycemia (240 mg/dl). Referred to the endocrinology clinic, the patient was diagnosed with type 2 DM, hypertriglyceridemia, and obesity. Pharmacotherapy was instituted to control hyperglycemia and dyslipidemia, which led to remission of the eruptive lesions.

CONCLUSION: EX, as a dermatosis characterized by accumulation of lipids in the skin, has its formation mechanism associated with dyslipidemia, which leads to extravasation of circulating lipoproteins into the tissue, through the dermal capillaries. Subsequently, phagocytosis of lipids by macrophages occurs, leading to the formation of xanthoma cells (foam cells) - which contain abundant lipid droplets in their cytoplasm. Skin disorders can be warning signs of systemic diseases, and eruptive xanthomas are one of such examples. In this clinical case, the patient had type 2 DM, which causes insulin resistance and interferes with glucose and lipoprotein metabolism, precipitating the formation of EXs. After establishing the diagnosis and the study of dyslipidemia by a specialist, it was possible to start treatment, thus preventing complications of hypertriglyceridemia, such as cardiovascular disease and acute pancreatitis. Thus, EX are benign dermatological manifestations. However, they are often associated with metabolic alterations, which may lead to serious cardiovascular and gastrointestinal complications.

77. ESOPHAGEAL AND ANTRAL STENOSIS DUE TO MURIATIC ACID INGESTION ASSOCIATED WITH A SUICIDE ATTEMPT: A CASE REPORT

Ian da Costa Ara jo Barros¹, Lucas Gon alves da Rocha Lima¹, Antonio Evangelista Apol nio Neto¹, Jo o Paulo Alves de Oliveira¹.

¹ Federal University of Piau 

INTRODUCTION: The ingestion of corrosive substances is alarming in the medical field, as it generates highly serious cases, in addition to being associated with self-extermination attempts. In the digestive tract, acids promote coagulation necrosis, which causes damage greater in extent than in depth. In the long term, esophageal and antral stenosis and development of carcinomas can occur. Treatments for injuries caused by acids are still the subject of disagreement among researchers and are considered unsatisfactory, requiring further research to develop a consensual technique. **CASE REPORT:** J.J.R.N, male, 48 years old, born in Coelho Neto - MA, went to the University Hospital complaining of odynophagia and recurrent vomiting, in addition to burning retrosternal pain and hyporexia. He reports the onset and progression of the condition after a suicide attempt with muriatic acid intake 7 months ago. He was in regular general condition, conscious, afebrile, emaciated with a hollow abdomen, depressive and with hydro-aerial noises, in addition to normal cardiac and respiratory auscultation. He denied smoking and drinking. The blood count showed a significant leukocyte reaction and the chest x-ray showed no changes. Esophagoduodenoscopy

showed burns Zargar's grade 3a in esophagus and stomach, with the presence of fibrotic scars and necrotic and fibrinoid material in the stenosed esophagus and antrum. After caustic stenosis of the esophagus and antrum was confirmed, balloon dilatation attempts were made, which did not yield satisfactory results, and then elective gastroenteroanastomosis (GEA) surgery was scheduled by videolaparoscopy. After the procedure was uneventful, the patient on the 4th POD was stable in the infirmary bed, already walking, on a well-accepted liquid diet and without changes in diuresis and evacuation. Normal vital signs and physical examination showed a flat, depressive abdomen without visceromegaly, in addition to an unaltered blood count. Diet progression, clinical support, and post-operative care were given. **FINAL CONSIDERATIONS:** GEA was required due to injuries and esophageal and gastric stenosis after failed balloon dilatation attempts. These injuries are frequent in patients who ingest caustic substances in the context of self-extermination attempts. Due to its impact on the patient, its potential complications must be promptly treated.

78. EPIDEMIOLOGICAL ANALYSIS OF EXOGENOUS INTOXICATION IN CHILDREN AND ADOLESCENTS IN PIAUÍ FROM 2015 TO 2020

Rafaela Miranda Pereira de Queiroz¹, Naira Lorena Monte Paes Landim¹, Lucas Rodrigues Melo¹, Bárbara Fernandes de Meneses Brito¹, Anne Barbosa Gonçalves Mesquita¹ and Eurípedes Ferreira Araújo Mendes¹

¹Uninovafapi

INTRODUCTION: Exogenous intoxication is described as any clinical or laboratory alteration related to an organic disorder caused by the interaction of the organism with a certain toxic agent. Regarding that, exogenous intoxication in children and adolescents constitute an important public health problem. **OBJECTIVES:** To describe the profile of exogenous poisoning in the pediatric age group of zero to 19, in the state of Piauí in the period from 2015 to 2020. **METHODS:** This is a retrospective, descriptive study with a quantitative approach, conducted from data collected in the Notifiable Diseases Information System (SINAN - BRAZIL) by the Department of Informatics of the Unified Health System (DATASUS). These records were analyzed in a simple statistical form. The variables considered were: gender, age range, circumstance of the event, toxic agent and evolution of the condition. **RESULTS:** Based on the analyzed data, there were 3,370 exogenous intoxication cases in children and adolescents in the period studied. Among those, females were the most common ones (60%/N: 2,023). Regarding the age bracket, 15-19 years was prevalent (36.3%/N:1,223), the main circumstance being suicide attempt (81.4%/N:996), followed by the 1-4 years bracket (32.5%/N:1,096) caused mainly by accidental conditions. Regarding toxic agents, drugs are the main cause in all ages (54.9%/N:1,853). Regarding the evolution, most of them progressed with healing without leaving side-effects (69%/N:2,325), while only 0.38% (N:13) evolved to death. **CONCLUSION:** Based on the references above, it was observed that the female gender is the most affected and the main agent used is medication. Moreover, the ingestion of medicines, both accidentally by children aged 1 to 4 years and by attempted suicide by adolescents aged 15 to 19 years, deserves to be highlighted as an important public health problem. However, the results should be analyzed with caution due to under-reporting and incorrect filling out of notification forms. Finally, health surveillance actions are necessary for the prevention of new cases.

79. EPIDEMIOLOGICAL DELINEATION OF HOSPITALIZATIONS FOR CARDIAC ARRHYTHMIAS IN PIAUÍ FROM 2016 TO 2020

Naira Lorena Monte Paes Landim¹, Lucas Rodrigues Melo¹, Anne Barbosa Gonçalves Mesquita¹, Bárbara Fernandes de Meneses Brito¹, Rafaela Miranda Pereira de Queiroz¹ and Eurípedes Ferreira Araújo Mendes¹

¹Uninovafapi

INTRODUCTION: The Conduction Disorders and Cardiac Arrhythmias (TCCA) are electrical alterations of the heart that cause changes in the normal rhythm of this organ, producing tachycardia, bradycardia, and irregular heart rates in the propagation of impulses, known as dysrhythmia or irregular heart rhythm, thus causing electrical instability. These conditions may occur in people with normal heart condition or secondary to other diseases, presenting them asymptotically or not. **OBJECTIVES:** To demonstrate the epidemiological survey regarding cardiac conduction disorders and cardiac arrhythmias in the State of Piauí in the period from 2016 to 2020. **METHODS:** This is an epidemiological, quantitative, retrospective study, conducted from data collected in the SUS Hospital Information System (SIH/SUS), made available by the Department of Informatics of the Unified Health System (DATASUS). These records were analyzed in a simple statistical form. The variables analyzed were number of hospitalizations, gender, age group, color/race and deaths. **RESULTS:** During the analyzed period, 2,228 hospitalizations for cardiac conduction disorders and cardiac arrhythmias were reported. The male gender presented a slight majority with 52.74% of hospitalizations, while 47.26% were females. Regarding the age range, there is a higher prevalence of the pathology among the elderly, corresponding to 74.42% of the total. Of these elderly individuals, 467 were between 60-69 years old, 616 between 70-79 years old and 575 were 80 years old or older. The age interval less affected was that of children between 5 and 9 years old, displaying 8 cases. Regarding to color/race, 1,384 were specified. Of these, 1,121 referred to mixed ones, 136 yellow ones, 79 white ones, 48 black ones. 844 of the totals were not informed. As for the variable deaths/year, it totaled 363 notifications and the highest number of these in 2017, with 106 records. **CONCLUSION:** In the view of results obtained, it can be inferred that men represent the majority in the number of hospitalizations for cardiac conduction disorders and cardiac arrhythmias, as well as the population aged between 60 and 80 years. Regarding color/race, of those that were specified, the most affected were the mixed-race individuals. Moreover, the highest number of deaths was recorded in 2017. Therefore, the analysis of these data becomes important to trace the epidemiological profile of the population studied, and thus allow reflection in an attempt to improve the performance of health services.

80. OOPHORECTOMY DUE TO OVARIAN CYST TORSION IN A NEWBORN: A CASE REPORT

Celli Veloso Cavalcanti¹, Denise Coelho de Almeida², Laís Fernanda Vasconcelos Cândia², Jemima Silva Kretli², Kalyne Rodrigues Marques², Ivo Lima Viana³

¹Federal University of Piauí;

²Centro Universitário Uninovafapi;

³Maternity Dona Evangelina Rosa.

INTRODUCTION: Ovarian masses with cystic content can occur at different ages in females and usually occur due to an enlargement of a cystic follicle, also called a physiological cyst, or as a consequence

of a benign or malignant ovarian tumor. The clinical presentation progresses suggestively with abdominal distension, a palpable mass on physical examination and confirmation via imaging. In children, most cysts are physiological or at the expense of a benign tumor. Despite this, it is important to carry out an early diagnosis both to guide the treatment and to guarantee a better prognosis and avoid possible complications, such as cystic hemorrhage, cyst rupture and, especially, ovarian torsion. **CASE REPORT:** Female newborn, full term, 3640 grams, born by vaginal delivery uneventful, APGAR 9/10 with gestational ultrasound with a 4 cm abdominal cystic mass. The patient evolved well in rooming-in, and an abdominal ultrasound was performed suggesting a teratoma with intrauterine ovarian torsion. On the 5th day of life, he underwent surgical laparotomy, in which a torsion of the left ovary was found with necrosis, a left oophorectomy was performed and the histopathological confirmation of a benign ovarian cyst was confirmed. The patient evolved uneventfully and was discharged from the Intensive Care Unit 7 days after surgery. **FINAL CONSIDERATIONS:** The most common ovarian cysts in the fetal and neonatal period are follicular, which occur physiologically due to the growth of a cystic follicle by ovarian stimulation via maternal and fetal gonadotropins. Although the factors that increase its incidence are unknown, there is evidence of a direct relationship with advanced gestational age and maternal complications such as diabetes mellitus and pre-eclampsia. In neonates, physiological cysts present as asymptomatic pelvic or abdominal cystic masses, which can be displaced into the abdomen due to the mobility of the cystic ovary. To confirm the diagnosis and guide the approach, ultrasonography is of great value to demonstrate the pattern of the cystic material. Simple pattern cysts are generally physiological cysts, whereas complex pattern cysts may indicate ovarian torsion or hemorrhage. Therefore, early diagnosis helps in the patient's treatment and prognosis, in order to avoid complications such as ovarian torsion, rupture, intracystic hemorrhage and intestinal obstruction, which require effective and immediate management, usually with surgical correction after birth.

81. THORACOSCOPIC DIAPHRAGMATIC PPLICATION DUE TO TOCOTRAUMA

Celli Veloso Cavalcanti¹, Lucas Palha Dias Parente², Evanayza Vieira de Sousa², Lucas Guilherme Mota de Sousa², Ivo Lima Viana³, Bruno Pinheiro Falc o³.

¹Federal University of Piau ;

²Centro Universit rio Uninovafapi;

³Maternity Dona Evangelina Rosa

INTRODUCTION: Diaphragm paralysis can occur due to trauma during childbirth, cardiothoracic surgery, or neuromuscular disorders. It predominates in newborns born vaginally, weighing more than 4500 grams and cephalic or pelvic presentation, caused by injury to the phrenic nerve or brachial plexus, which may be unilateral or bilateral. Unilateral paralysis is usually asymptomatic and may require, in the presence of symptoms, plication of the affected hemidiaphragm. Bilateral paralysis, on the other hand, requires treatment with ventilatory support, diaphragmatic stimulation and/or surgical nerve reconstruction. **CASE REPORT:** Female newborn, full term, large for gestational age, 4560 grams, born vaginally, cephalic presentation, with difficulty in extraction, associated with the presence of cephalohematoma and brachial plexus injury. In the delivery room, the patient was hypotonic, APGAR 3/8, weak crying, evolving with apnea and bradycardia. Two cycles of positive pressure conditioning were performed, followed by orotracheal intubation. Maintained in mechanical ventilation (MV) and referred to the neonatal intensive care unit. A chest X-ray showed elevation of the

right hemidiaphragm. After two months of unsuccessful ablation from ventilatory support, surgical treatment through diaphragmatic plication by thoracoscopy was indicated. The patient evolved well, being discharged after the thirtieth day after surgery, without oxygen support and with good bilateral pulmonary expansion. **FINAL CONSIDERATIONS:** The history of traumatic injury to the brachial plexus and radiological findings guide the diagnosis of diaphragmatic eventration secondary to nervous palsy. As differential diagnoses we can also consider congenital diaphragmatic hernia, congenital diaphragm muscle deficiency and right phrenic nerve injury. Diaphragmatic plication is characterized by the creation of tortuosity in the diaphragm, through suture lines, reducing the mobility of the paralyzed hemidiaphragm. The plication facilitates weaning from MV and oxygen therapy, improves pulmonary vascular resistance and improves exercise resistance and dyspnea.

82. ISCHIO OMPHALOPAGUS TWINS: A REPORT OF A RARE ANOMALY

Myrna Beatriz de Melo Oliveira¹, Kalyne Rodrigues Marques¹, Elayne Ester Nogueira Santos Policarpo¹, Rog rio de Ara jo Medeiros², and Bruno Pinheiro Falc o².

¹Uninovafapi University Center;

²Dona Evangelina Rosa Maternity

INTRODUCTION: Xyphopagus twins are a rare type of monochorionic and monoamniotic twins, joined by body segments. Birth defects are common in these cases, and there is a high prevalence of stillbirths. These cases have a poor prognosis even with the surgical separation. **CASE REPORT:** Preterm newborns (NBs), 33 weeks, undefined sex, 3,118 grams, 40 cm, born by caesarean section due to prenatal diagnosis of ischio/omphalopagus siamese twins. APGAR on the 1' and 5', 9 and 9; Rh incompatibility, single umbilical cord, 4 upper limbs, 3 lower limbs, and anorectal anomaly (AAR). The diagnosis of the connection of the twins through the abdomen and pelvis was performed using morphological ultrasound in the 2nd trimester (17 weeks 03 days), without complications during pregnancy. Twenty-five hours after birth, due to the RAA without identifying a fistula to the perineal or genitourinary region, we opted for abdominal surgical exploration, and the presence of a separate gastrointestinal tract to the distal ileum, 15 cm from the ileocecal valve, was confirmed. merged. The single colon was hypoplastic and malfixed, ending in a blind end. Partial colectomy was performed, with ileostomy and mucous fistula, fixed in the topography of the umbilical scar. Cardiovascular and abdominal investigation was performed, with identification of a single liver mass in the midline, drainage of independent hepatic veins, 2 kidneys, 1 spleen, 1 bladder, in addition to atrioventricular septal defects in both, wide interatrial communication and transposition of large vessels in one of the RNs. They managed to remain stable in the first postoperative days (POD), on room air, with parenteral nutrition and slow progression of the enteral diet. Due to the progressive hemodynamic worsening of the twin with complex heart disease, both evolved to mechanical ventilation on the 7th POD and died on the 17th POD. **FINAL CONSIDERATIONS:** The presentation of the case becomes relevant due to the rarity of occurrence and association with AAR. It is worth emphasizing the importance of prenatal diagnosis for obstetric/surgical planning and referral to a specialized service. Mortality is high because of the complexity of the fused structures and the incidence of associated malformations.

83. NON-SURGICAL NEWBORN MANAGEMENT WITH BILE-PLUG SYNDROME

Evanayza Vieira de Sousa¹, Elayne Ester Nogueira Polcarpo¹, Kalyne Rodrigues Marques¹, Rog rio de Ara jo Medeiros² and Bruno Pinheiro Falc o².

¹ Uninovafapi University Center;

² Maternity Dona Evangelina Rosa

INTRODUCTION: Obstruction of extrahepatic bile ducts is the most common cause of neonatal cholestasis. Although related to many infectious or mechanical disorders, biliary atresia and neonatal hepatitis are responsible for most cases. Thick Bile Syndrome, a rare etiology of direct hyperbilirubinemia, refers to obstruction of the extrahepatic bile ducts by the biliary slurry in patients with anatomically normal bile duct. In general, it is a cause of obstructive jaundice in newborns (NB), surgically correctable or not. **CASE REPORT:** Male, 40 weeks, APGAR 9 and 10. He presented jaundice on the 3rd day of life (ddv) and was readmitted on the 5th ddv with suspicion of kernicterus and sepsis. Laboratory tests showed indirect hyperbilirubinemia and leukocytosis. Physical examination showed mild hepatomegaly and normal physiological clearances. He was treated with phototherapy until the 9th ddv, remaining jaundiced. During this period, blood cultures were positive for *S. haemolyticus*, treated with oxacillin and amikacin for 7 days, with resolution of the infectious condition. On the 10th ddv, ultrasound (US) of the biliary tract showed the presence of biliary sludge, starting the investigation of the underlying cause. On the 15th ddv, he evolved with cholestasis, fecal acolia and US presenting a swollen vesicle. MRI identified the presence of thick bile in the common, cystic and common bile ducts, causing a slight dilatation of the upstream bile ducts. Discussed with a gastropediatrician and opted for conservative treatment, with the use of ursodeoxycholic acid, since it is clinically stable and without signs of cholangitis. After 7 days of medication use, bilirubin levels reduced, stools were colored and the control US showed a patent biliary tract and a small amount of biliary mud in the gallbladder. Thus, we opted for outpatient follow-up. **FINAL CONSIDERATIONS:** The diagnosis of Bile-Plug Syndrome is suggested through US of the biliary tract or cholangiopancreatography by magnetic nuclear resonance and confirmed by endoscopic retrograde cholangiopancreatography. Therapeutic surgical procedures have been described in the literature, such as retraction of the biliary plug via duodenostomy/papilotomy and intraoperative irrigation of the biliary system with saline or mucolytics. However, despite being rare, this syndrome can resolve spontaneously. Conservative treatment proved to be effective and opens the door to a less invasive approach in cases without cholangitis.

84. BENIGN CYSTIC TERATOMA - A CASE REPORT

Lais Fernanda Vasconcelos C ncio¹, Kalyne Rodrigues Marques¹, Larissa Mota Oliveira¹, Adrienne Concei o Cardoso Medeiros¹ and Bruno Pinheiro Falc o².

¹ Uninovafapi University Center;

² Maternity Dona Evangelina Rosa

INTRODUCTION: Germ cell tumors originate from the primordial germ cell and present a benign or malignant evolution, which may occur in a gonadal or extragonadal location. Teratoma is characterized as a germ cell tumor, with the sacrococcygeal region being the most common extragonadal location, and the lesion may be solid, multicystic or formed by a large single cyst. This neoplasm is more frequent in the neonatal period. Most of these tumors are

benign, however, there is a risk of malignancy with age. Its diagnosis and treatment must be early for a good prognosis. **CASE REPORT:** Newborn, male, gestational age 36 weeks and 4 days, birth weight 5240g, 24 days old, presenting a tumor in the sacral region at birth, conducted in the intrauterine period as myelomeningolecs visualized on obstetrical ultrasound. On the second day of life, a computed tomography scan of the lumbar-sacral region showed extensive expansive formation, measuring up to 15.9x10.1cm, with homogeneous cystic attenuation incited by fine internal septations in the sacral region, with a nonspecific aspect, without well-defined communication with the canal spinal cord. On the same day, the patient underwent excision of a sacrococcygeal tumor with an inverted V incision in the buttock, dissection of the lesion in a single piece, preserving the rectum and adjacent musculature. The patient evolved with a dry surgical wound, without signs of dehiscence and with good clinical evolution, evacuating normally and accepting an adequate diet, being discharged from hospital on the twenty-second postoperative day and referred for outpatient follow-up. During hospitalization, newborns evaluated by a geneticist for the presence of dysmorphia on physical examination. He also presented changes in the echocardiogram, with the presence of FOP + VSD, but with little repercussion. Awaiting the result of G-band karyotype. Histopathological results showed cystic material measuring 15x14x10cm, weighing 1,126g, consisting of hemorrhagic fluid, suggesting benign cystic teratoma. **FINAL CONSIDERATIONS:** Teratoma is the main form of neoplasm in the newborn, being often diagnosed in the uterus. This report demonstrates the importance of early diagnosis and treatment, being of fundamental importance to prevent its malignancy.

85. EPIDEMIOLOGICAL CHARACTERISTICS OF HOSPITAL ADMISSIONS FOR ANTEPARTUM HEMORRHAGE IN PIAU  FROM 2016 TO 2020

Anne Barbosa Gon alves Mesquita¹, Lucas Rodrigues Melo¹, Guilherme Henrique Ferreira de Ara jo¹, Andrea Carla Soares Vieira Souza¹, J ssica Maria Ribeiro Chaves¹ and Vanessa Inglid Ara jo Campelo¹.

¹ Uninovafapi

INTRODUCTION: Antepartum hemorrhage is one of the most important causes of maternal-fetal mortality. By definition, this condition corresponds to vaginal bleeding occurring from the 20th week of gestation until delivery. The main causes of this bleeding are premature Placental Abruption (PA) and Placenta Previa (PP). While PA is the separation of the placenta implanted in the body of the uterus, PP is defined as the implantation of the placenta in the lower segment of the uterus (totally or partially). **OBJECTIVES:** To characterize the epidemiological profile of antepartum hemorrhage cases associated with Placental Abruption and placenta previa in the state of Piau  in the period from 2016 to 2020. **METHODS:** This is a retrospective, descriptive, quantitative approach study, conducted from data collected in the SUS Hospital Information System (SIH/SUS) of the Department of Informatics of the Unified Health System (DATASUS). The records were analyzed in simple statistical form. The variables were evaluated by annual distribution of hospitalizations, age range, color/race and deaths. **RESULTS:** 1,423 cases were recorded in the analyzed period, and the year 2020 displayed the highest incidence with 312 cases (21.92%). Women aged between 25 and 29 years were the most affected, representing 336 cases (23.71%). Regarding color/race, only 461 cases were specified, and the majority being the mixed ones (74.40%). As for the deaths, only 2 cases were

notified in the analyzed period. **CONCLUSION:** Based on what was exposed, most cases happened to women between 25 and 29 years of age, in the state of Piauí. Regarding color/race, the cases were predominant in the mixed one. Therefore, the importance of knowing the epidemiological profile of this pathology is also highlighted to improve the network of care for these women and ensure the promotion of health, and to reduce maternal and fetal morbidity and mortality as well.

86. SPONTANEOUS INTESTINAL DRILLING IN AN ATYPICAL LOCATION IN THE NEWBORN – CASE REPORT.

Evanayza Vieira de Sousa¹, Elayne Ester Nogueira Santos Policarpo¹, Kalyne Rodrigues Marques¹, Eduardo Gomes Meneses de Santana II², Bruno Pinheiro Falcão²

¹ Uninovafapi UNiversity Center;

² Maternity Dona Evangelina Rosa.

INTRODUCTION: Spontaneous intestinal perforation (SIP) is a condition of unknown etiology that presents with focal perforation of an intestinal segment of the newborn (NB), particularly in the distal ileum. The main risk factor is prematurity associated with low birth weight, with an estimated incidence of 5-6%. Despite having been interpreted as a variant of necrotizing enterocolitis (NEC), today it is accepted as a distinct clinical entity, differing in clinical, radiological and surgical aspects. **CASE REPORT:** NB born at 32 weeks, male, 1700 grams, cesarean for severe preeclampsia, fetal centralization and anhydramnios, APGAR 6 and 8. At birth, referred to the neonatal intensive care unit (NICU) due to respiratory distress. Treatment for late-onset sepsis started despite normal laboratory investigations. After four days of hospitalization, without clinical or radiological worsening, pneumoperitoneum was identified on an abdominal X-ray. Submitted to exploratory laparotomy: identified perforation located in the proximal jejunum, about 15 cm from the angle of Treitz, affecting less than 50% intestinal light. Absence of signs of ischemia, necrosis or obstruction throughout the rest of the assessed gastrointestinal tract. Opted for lesion biopsy and enterorrhaphy due to location. The histopathological report suggests a localized acute inflammatory process of unknown etiology. After surgery, the patient evolved to radiological normalization, abdomen without distension, without vomiting or fever. Extubated on the 7th postoperative day, with good diet acceptance, with gradual progression of volume. Hospital discharge after 34 days of hospitalization, 13 days of hospitalization in the NICU, on full diet and weighing 1920 grams. **FINAL CONSIDERATIONS:** The differential diagnosis of EIP can be made by the presence of clinical, radiological, surgical and anatomopathological findings typical of NEC, characterizing a progressive and severe condition. Treatment is directly related to the perforation site and the degree of peritonitis. Signs of gross cavity contamination and low perforations are best conducted through an ostomy. In patients without signs of peritonitis or in lesions closer to the angle of Treitz, complications related to the high ostomy justify enterorrhaphy. Faced with a rapidly progressive abdominal distension in a premature and low birth weight NB, we should always think about EIP and promptly seek the best possible treatment.

87. IMPACTS OF THE COVID-19 PANDEMIC ON DIABETES COMPREHENSIVE CARE INDICATORS IN PRIMARY HEALTH CARE

Guilherme de Sousa Lima¹, Francisco Gabriel Thomaz Bastos¹, Maria Theresa Leal Galvão¹, Maria Vitória de Deus

Ramos Santos¹, Camila Ramalho Teixeira Queiroz¹ and Luciano da Silva Lopes¹.

¹ Federal University of Piauí

INTRODUCTION: The SARS-CoV-2 pandemic forced a reorganization of the Unified Health System (SUS) from Primary Health Care (APS) to the entire Hospital System. This action, which was so necessary to fight the pandemic, has an impact of an uncertain dimension, notably in chronic non-degenerative diseases (NCDs) and the lines of continued care established within the PHC. In the case of Diabetes, this reorganization has the potential to affect, mainly, screening and screening strategies for the disease to prevent cardiovascular events, and the continued care established for this disease. Therefore, there is a need to analyze this impact to propose adequate health policies, especially for the post-pandemic period. **OBJECTIVES:** This study seeks to analyze the impact of the pandemic on diabetic care in primary care in the state of Piauí. **METHODS:** This is a descriptive study, using data available in the Health Information System for Primary Care (SISAB). Data related to scheduled or scheduled appointments/continuing care were collected from each health region of the state, with diabetes as an assessed condition. This data refers to individual programmatic actions, aimed at priority diseases and conditions, notably diabetes and hypertension, where the patient is monitored, and the patient's condition is assessed. Tables and graphs were built for the variable, which compared the year 2020 and the first 8 months of 2021 with the average of the years 2017 to 2019. **RESULTS:** There was a decrease of 34.87% in consultations in the state, with the regions Entre Rios and Vale do Sambito showing the biggest drops (53.07% and 9.85%). It was possible to notice a sustained fall between March 2020 and August 2021, greater than 50% between April and August 2020. In addition, there was a differential impact in each sex, with a reduction in attendance of 31.89% in men and 36.12% in women in 2020. **CONCLUSION:** We have signs of impairment in the attributes of primary care, such as comprehensive care, longitudinality and coordination of care, in addition to losses in prevention strategies for cardiovascular events and adherence to treatment. The main limitation is that the SISAB data lacks auditing and data control, as the data is only informed by the municipalities and published in the system. In this way, the real impact will be known from further epidemiological studies.

88. SERIOUS ASSOCIATION BETWEEN ONPHALOCELE ROUTE AND CONGENITAL DIAPHRAGMÁTICA HERNIA.

Marcelly Juliana Silva de Meneses¹, José Lucas Talles Ferreira Luz¹, Elayne Ester Nogueira Santos Policarpo¹, Lucas Palha Dias Parente¹, Bruno Pinheiro Falcão²

¹ Uninovafapi University Center;

² Maternity Dona Evangelina Rosa

INTRODUCTION: Omphalocele is an abdominal wall defect with evisceration of the abdominal contents covered by a translucent membrane that, when not intact, is called a ruptured omphalocele. Diagnosed by ultrasound after 12 weeks.¹ Of unknown etiology, it may be linked to genetic predisposition, nutritional deficit and exposure to teratogens.² With an incidence of 1-3 per 1000 live births, it prevails in men in a 3:1 ratio. The association with other abnormalities, which lead to a poor prognosis, exists in 50 to 70% of cases, with cardiac, genitourinary, gastrointestinal, etc., being more frequent.³ Thus, the fetal karyotype must be investigated.⁴ With the advancement With the surgical technique, the prognosis of these newborns evolves significantly, but they are still a surgical challenge. **CASE REPORT:** On 03/22/2021, a 17-year-old patient,

G1P1A0, was admitted to the reference maternity hospital in Piauí with a cesarean delivery, at 39 weeks and 6 days. Prenatal said uneventful. Female newborn with ruptured bag, clear amniotic fluid, cephalic presentation. It weighed 2800g and appar 3/8, 33 cm in head circumference. Resuscitation was performed with positive pressure ventilation (PPV) and orotracheal intubation with 100% FIO₂. Omphalocele ruptured in childbirth with placement of a silo. Patient evolved with progressive reduction of the silo. During this period the suspicion arose, and was confirmed, of the presence of diaphragmatic hernia. Taken on the 7th day of life to close the silo and correct the diaphragmatic hernia. Readmitted to the ICU under mechanical ventilation, she evolved without signs of abdominal hypertension and hemodynamic instability, using vasoactive amines and antibiotic therapy. It evolved with acidosis, hypernatremia, hyperkalemia, hypermagnesemia and malperfused in a comatose state. On 04/01/2021, he had no pulse. Resuscitation, VPP and adrenaline started. No return of the beat and in asystole, declared death. **FINAL CONSIDERATIONS:** Ultrasound advancement allows the previous diagnosis of omphalocele. Treatment is guided by the size of the defect and the age of the patient. Due to the size, the closure can be spontaneous. In this case, the condition required surgical intervention. Thus, it is worth analyzing the complications present, bearing in mind the association between omphalocele and other malformations. Adequate reception in the delivery room with protection of the defect and stabilization of the airways is important. Live births have a survival rate of 90%, which emphasizes prenatal diagnosis.

89. THERAPEUTIC ITINERARIES OF PEOPLE EXPERIENCING LEPROSY

Guilherme de Sousa Lima¹, Eduardo Roesener Vieira¹, Camila Maria Coelho de Moura¹, Fábio Solon Tajra¹.

¹ Federal University of Piauí

INTRODUCTION: Leprosy, characterized as a neglected condition in Brazil, has been a public health problem. Even with the World Health Organization establishing a global goal to interrupt the transmission of this disease in 2020, this did not materialize in the country. From this, there is a tension for the elaboration of intervention proposals to prevent, control and minimize the effects caused. The therapeutic itineraries built by people who experience this condition contribute to the identification of good practices, as well as points to be improved and improved. **OBJECTIVES:** To understand the therapeutic itineraries of the population who experience leprosy in the state of Piauí, in view of the need to realize the potential and weaknesses of the network. **METHODS:** This is a study of qualitative design guided by the interpretive paradigm. We conducted individual interviews from a semi-structured script with thirteen people who experienced leprosy in the state of Piauí, following the proposal of the Standards for Reporting Qualitative Research (SRQR) to ensure the transparency and completeness of this production. The project was approved by the Research Ethics Committee of the Universidade Federal do Piauí, with its opinion approved under number 3,429,590. From the transcription and full analysis of the interviews, the units of analysis (units of meaning) were identified, which were discussed with professionals with expertise in the subject. **RESULTS:** The users' experiences allowed identifying gaps in the attributes of Primary Health Care, such as longitudinality, comprehensiveness and coordination of care, as well as in health education and active search strategies. On the other hand, there were weaknesses related to

scheduling appointments, the pilgrimage of users and the diagnosis and preparation of professionals in the face of appropriate conduct for the diagnosis and treatment of leprosy. **CONCLUSION:** It is important to consider the highlights mentioned in this study, as it proposes the health care of people who experience leprosy. Therefore, it includes reflection on the organization and functioning of network services, definition of support and logistics systems, adoption of protocols and flows, as well as an emphasis on training and professional development. This must be based on important principles such as, for example, empathy, respect and humanization.

90. POSSIBLE HISTOPATHOLOGICAL ALTERATIONS IN RATTUS NORVEGICUS AFTER TREATMENT WITH ETHANOLIC EXTRACT OF DYSPHANIA AMBROSIOIDES L. (MASTRICH) AND NASTURTIIUM OFFICINALE R. BR (CRESS) ON BONE REPAIR

Dianna Joaquina Pereira da Paz Mendes¹, Luana Santos de Oliveira¹, Matheus Soares Carvalho¹, Flávio Henrique de Oliveira Garcia¹, Ian da Costa Araújo Barros¹ and Maurício Aguiar Reis¹.

¹ Federal University of Piauí

INTRODUCTION: Megaesophagus (ME) is a disease characterized by progressive dysphagia and esophageal dilatation, resulting from the destruction of Meissner and Auerbach's autonomic nervous plexuses, which results in achalasia and peristalsis alterations. The main cause is Chagas disease (CD), the idiopathic form being rare - annual incidence of 1/100,000 and prevalence of 1/10,000. The ME has a progressive character and determines relevant repercussions on the nutritional and psychological status. **REPORT:** M.S.S, female, 63 years old, hypertensive, born in the rural area of União - PI, went to the UPA complaining of recurrent vomiting and hyporexia for 40 days. She reported "snap" and progressive dysphagia for solids for years, in addition to unmeasured weight loss. Denied smoking and drinking. no visceromegaly. Serology for non-reactive CD and upper digestive endoscopy ruled out neoplasia and evidenced dolichomegaesophagus and associated moniliasis. Tomography and esophagogram (EG) confirmed important esophageal caliber dilation with many food debris and distal cardia thinning, typical sign of "beak. Confirmed delay in esophageal emptying and diagnosis of grade IV idiopathic BD and achalasia. The patient underwent surgical treatment, esophagectomy in two fields by videolaparoscopy, reconstruction with gastric tube and intrathoracic anastomosis with the Ivor-Lewis technique with linear stapler endoscopic surgery, and chest drainage in water seal. He was discharged from the ICU in the 2nd day. On the 5th day, he developed a gastroesophageal anastomotic fistula, and the chest tube was repositioned for better lung expansion and fistula drainage. Today, on the 25th day, he remains in good general condition, without infections, on a zero oral diet, enteral nutrition with post-pyloric NS, weaning from parenteral nutrition, with a fistulous treatment schedule with vacuum tube and esophageal prosthesis. **CONCLUSION:** Advanced ME is considered a serious pathology, although rare, and its definitive treatment is exclusively surgical. As it is a debilitating disease that affects nutritional status, surgery carries a high risk of complications. Thus, the patient needs to be closely monitored and well prepared before the procedure. Likewise, your complications must be promptly resolved.

91. CLINICAL AND EPIDEMIOLOGICAL PROFILE OF LEPROSY IN PIAUÍ FROM 2016 TO 2020

Maria Clara Amorim Silva¹, Caroline de Carvalho Soares¹, Larissa Oliveira Batista¹, Luiz Matheus Silva e Pereira Lima¹, Ana Carla Souza Menezes¹ and Vanessa Rocha de Moura Moreira².

¹ State University of Piauí

² Brazilian Society of Dermatology

INTRODUCTION: Leprosy is a chronic infectious disease caused by *Mycobacterium leprae*. In Piauí, it is endemic and constitutes a public health problem, since besides causing skin lesions, this disease can course with limiting chronic neurological lesions, such as loss of sensibility, peripheral neuritis and motor sequelae. The course of the disease depends on the individual's cellular immunity and may evolve to cure or to paucibacillary, borderline or multibacillary forms. Reactive states also leave sequelae and can occur during or after treatment. Thus, diagnosis, early treatment and recognition of reaction states are essential to interrupt the chain of transmission and to prevent neurological sequelae of the disease. **OBJECTIVES:** To study the clinical and epidemiological profile of leprosy patients in the state of Piauí, between 2016 and 2020, comparing with the national reality. **METHODS:** Quantitative descriptive epidemiological study, prepared from data obtained from the Notification System of Notifiable Diseases (SINAN), in the period from 2016 to 2020. The following data were analyzed: sex, race, age group, macroregion of origin, clinical form, skin lesions, performance of skin smears and occurrence of leprosy reactions. **RESULTS:** In the period from 2016 to 2020, 5545 patients diagnosed with leprosy in Piauí were registered, with 1124 cases notified in 2016 (20.3%), 1343 cases in 2017 (24.2%), 1318 cases in 2018 (23.8%), 1176 cases in 2019 (21.2%) and 584 cases in 2020 (10.5%). The male population showed higher prevalence, with 56.7% of cases during the 5 years, while the female population reached 43.3%. As for the race of patients, browns showed higher prevalence in all years, being 69.6% overall. Moreover, the population of adults between 40-69 years of age (52.5%) and the Mid-North macro-region (51.3%) were the most affected over the years. Regarding the clinical form, the dimorphic form was the most prevalent, with 46.8% of cases. Regarding skin lesions, most patients presented more than 5 lesions (multibacillary) (38%). In addition, 47.4% of patients did not undergo sputum smear microscopy and 66.4% had no reaction. **CONCLUSION:** The profile of the cases analyzed points to the prevalence of involvement of men, browns, between 40-69 years, indicating the need for public policies aimed at this population in order to reduce the number of cases and their complications.

92. PITIRIASIS VERSICOLOR ASSOCIATED WITH INSULIN RESISTANCE: A CASE REPORT

Lucas Rodrigues Melo¹, Naira Lorena Monte Paes Landim¹, Rafaela Miranda Pereira de Queiroz¹, Bárbara Fernandes de Menese Brito¹, Guilherme Henrique Ferreira de Araújo¹ and Evandra Marielly Leite Nogueira Pinheiro¹.

¹ State University of Piauí

INTRODUCTION: *Pityriasis versicolor* (PV) is a superficial fungal disease caused by *Malassezia furfur*, a lipophilic fungus found in the horny layer of the skin. The most frequent location of PV is in areas of higher sebaceous gland concentration, such as the upper half of the trunk and arms, but it can also affect the face, abdomen and even the lower limbs. Insulin resistance (IR) is responsible for several alterations in the immune system. Therefore, the action of IR

promotes a significant deficiency of the immune response on the vasculature system, which favors infections and delays their resolution. **CASE REPORT:** F.A.S.M., 31 years old, male, from Teresina-PI, street vendor, sought Dermatology outpatient clinic complaining about some pruritic lesions all over the body. He reported that the condition started about 5 years ago, getting worse with some exposure to the sun. In addition, he said he had already taken medication, but he did not know much about it, and that there was an improvement about such condition for about 8 months. After this period, the lesions and symptoms returned, causing such damage that he decided to change careers. He denied having comorbidities and allergies. The physical examination displayed *Acanthosis nigricans* in the cervical region and hypochromic, pruritic, scaling spots on the malar region, neck, back, upper and lower limbs. The Wood's light examination evidenced golden-yellow fluorescence in the lesions. The diagnostic hypothesis was *Pityriasis versicolor* associated to insulin resistance. A treatment for PV with local spray isoconazole and oral ketoconazole for 20 days was chosen for such condition. In addition, fasting glycemia and fasting insulin were requested for diagnostic confirmation. Upon return, the patient presented recovery from the lesions and brought tests that confirmed the association of PV with insulin resistance. Finally, the treatment for PV with ketoconazole cream for 20 days along with the continuous use of metformin was prescribed for the patient. **FINAL CONSIDERATIONS:** It was observed that the insulin resistance is a precipitating factor in the appearance of infection by recurrent PV. Thus, the importance of dermatological examination in general medical practice is highlighted, since cutaneous manifestations may reflect in the early diagnosis of systemic diseases.

93. EVALUATION OF PROGNOSTIC FACTORS OF PATIENTS WITH DIAGNOSIS OF GIANT CELLS BONE TUMOR

Larissa Eva Macedo Nunes¹, Luciane Costa Silva¹, Thaís Café de Andrade, Sâmia Moura Araújo², Leonardo Telles Alves de Aguiar³ and Marcelo Barbosa Ribeiro⁴.

¹ Unifacid University Center

² Uninovafapi University Center

³ Physician, resident in orthopedics and traumatology at the federal university of piauí ⁴ Professor at Unifacid University Center

INTRODUCTION: The giant cell tumor (GCT) of bone is a benign-looking mesenchymal neoplasm with aggressive characteristics, affecting mainly individuals in the third and fourth decades of life, with a slight predominance in females, and they are located preferentially in the epiphyseal region of the long bones. The most used classification is that of Campanacci. **OBJECTIVES:** Evaluate the prognostic factors of patients diagnosed with bone GCT treated between 2009 and 2019 in a philanthropic hospital in Teresina-PI, as well as determine the regional clinical and epidemiological profile. **METHODS:** Analytical, observational and cross-sectional with retrospective collection and quantitative approach, with analysis of medical records of patients diagnosed with GCT treated at a philanthropic hospital in Teresina-PI from 2009 to 2019. **RESULTS:** Forty-nine medical records were evaluated, with 55.1% women; with 53.1% of cases in the age group 20-40 years; 69.4% of Campanacci grade III cases; 30.6% affecting the proximal end of the tibia. There was a low rate of pathological fracture along with the tumor and pulmonary metastasis. Intralesional surgery was performed in 69.5% of patients. Recurrence occurred in 16.3% of cases. **CONCLUSION:** The criteria used for diagnosis, classification and treatment used in our service followed the standards established in the literature. Being

able to guide further research and improve the local prognosis in the future.

94. RECURRENT PAPILLARY CARCINOMA: A CASE REPORT

Sabas Carlos Vieira¹, Isadora Alves de Carvalho², Letícia Nunes Costa² and Luana Santos de Resende².

¹ Oncocenter, Piauí, Brazil

² Uninovafapi University Center, Piauí, Brazil

INTRODUCTION: Papillary carcinoma is the most common malignant neoplasm of the thyroid, accounting for about 80% of cases. The prevalence of this type of pathology is higher in children, adults under 30 years of age, patients with a history of head and neck irradiation, and patients with a family history of thyroid cancer. It usually manifests as a nodule of firm consistency, detectable on physical examination or ultrasound. Management is based on the ultrasound pattern and on the interpretation of fine needle aspiration puncture. Definitive diagnosis is confirmed by histopathological examination. **CASE REPORT:** Patient, female, 62 years old, complaining of a painless nodule in the neck in April 2015. After ultrasonography, which showed a lesion with irregular contours in the right thyroid lobe, she underwent partial thyroidectomy: 2.1 cm papillary carcinoma of the classic non-encapsulated variant. Compromised surgical margin due to extrathyroid tumor extension and present angiolymphatic invasion. The resection was completed after one month, the patient started iodine therapy and remained in follow-up with thyroglobulin dosage and thyroid hormone replacement. In 2020, thyroglobulin 12.2 with the possibility of relapse. Magnetic resonance imaging showed nodular lesion in L3 vertebra and computed tomography (CT) with bilateral pulmonary nodules. Cervical CT with lesion invading cricoid cartilage, subglottic larynx and trachea. The patient underwent radiotherapy and palliative chemotherapy. Currently, 8 months after the diagnosis of recurrence, she is in good general condition, with a reduction in the lesion with an expanding effect on the right visceral space and a slight increase in nodulation in the tracheoesophageal sulcus. **FINAL CONSIDERATIONS:** The case reported brings to light the discussion about the treatment of papillary thyroid carcinoma, as the monitoring of patients through periodic evaluations is essential to avoid late diagnosis of disease recurrence. Thyroglobulin dosage, when altered after thyroidectomy, may indicate tumor recurrence, in this report, irregular thyroglobulin dosage may have contributed to the patient's prognosis.

95. EPIDEMIOLOGICAL ANALYSIS OF CASES OF AMERICAN TEGUMENTARY LEISHMANIASIS IN THE NORTHEASTERN REGION FROM 2016 TO 2019

Rodrigo de Oliveira Castelo Branco¹, Sâmia Moura Araújo², Luciana Ximenes Cordeiro¹, Marina Meneses de Carvalho Coelho³, Joana Clara Oliveira Macedo Lima¹ and Amanda Tauana Oliveira e Silva³

¹ State University of Piauí;

² University Center Uninovafapi;

³ University Center Unifacil Wyden.

INTRODUCTION: American Tegumentary Leishmaniasis (ATL) is an infectious disease, with low mortality, non-contagious, caused by a protozoan of the genus *Leishmania*. Transmission is by the bite of insects called sand flies - belonging to the genus *Lutzomyia*. ATL can present four clinical forms: cutaneous (LC), disseminated (DL), mucosal (ML), and diffuse (CDL). The cutaneous form is the most

common presentation of the disease, accounting for more than 90% of cases in Brazil. ATL is an important dermatological affection, both because of the risk of deformities and the psychological involvement of patients. In view of this, ATL is a serious public health problem, requiring studies that portray its occurrence and clinical-epidemiological characteristics. **OBJECTIVE:** To describe the epidemiological profile of ATL cases in the Northeastern Brazilian states, in order to provide a statistical comparison between them in the period from 2016 to 2019. **METHODS:** We conducted a descriptive, quantitative study, in which the secondary data used were obtained from the Sistema de Informação de Agravos de Notificação (SINAN) and the Departamento de Informática do SUS (DATASUS). The confirmed cases notified in SINAN of ATL in all Northeastern states in the period between 2016 and 2019 were counted on a monthly basis, as well as their clinical manifestations. **RESULTS:** Bahia (BA) had the highest monthly average of registered cases (173.33) and Rio Grande do Norte (RN) the lowest (0.52). The absolute value for Bahia was 8,320 confirmed cases of ATL, while for Rio Grande do Norte it was 25, representing 0.06% and 0.00079% of the population of these states, respectively, according to the last census data. The cutaneous clinical form was registered, on average, about 19 times the mucosal form. June, September and December had the lowest rates of registered cases, while January, February and March had the highest, comparatively 50% more cases than the months with the lowest. No state showed a significant and steady reduction in the number of ATL infections and 6 states had more cases in 2019 than 2016. **CONCLUSION:** ATL is a disease that persists in northeastern Brazil and has increased in recent years, with summer being the season with more infections. It is important, then, that projects are carried out by the Ministry of Health in conjunction with State Governments for prevention, diagnosis, control of ATL and more accurate data collection.

96. PILOMATRIXOMA: A CASE REPORT

Lillian Maria Fernandes de Castro¹, Tallys Carvalho Mauriz¹, Victor Carvalho Alves¹, Agamenon Fernandes Neto², Gabriel Barboza de Andrade² and Thiago Pereira Diniz².

¹ University Center Unifacil

² University Center Uninovafapi

INTRODUCTION: Pilomatrixoma is a benign calcified and rarely invasive tumor of uncertain etiology that arises in the sebaceous glands. It presents through hardened nodules on the skin that can affect any part of the human body, despite being more frequent in the cervical and cranial region, affecting mainly children, adolescents, and young adults. **CASE REPORT:** An 18-year-old female patient sought specialized care due to a tumor on her back (interscapular region). On physical examination, a mobile nodule with central ulceration, drainage of serous secretion and no clinical evidence of adherence to deep planes measuring approximately 8 cm in its largest diameter was observed. In addition, mobile adenomegaly in the left axilla with reactive characteristics was observed. Anatomopathological and immunohistochemical examination favored the presence of pilomatrixoma and magnetic resonance imaging did not show invasion of deep planes. Based on the clinical history, excision of the tumor was indicated, and the pathological examination identified an exophytic ulcerated lesion consistent with a pilomatrixoma measuring 7 cm in its largest diameter, 0.8 cm from the nearest margin, presence of an area of central ulceration with a size of 2.2 cm in its largest diameter and, in the cuts, a necrotic area of 7.0 x 4.0 cm, with a distance of 1 cm from the deep margin was observed. **FINAL CONSIDERATIONS:** Most

patients cannot feel the nodulation and do not present specific symptoms, with only a feeling of discomfort to the touch, erythematous and swollen appearance. It is a differential diagnosis in cases of head and neck masses in people up to 21 years of age, the main diagnostic tool being incisional biopsy. However, as this is an invasive procedure, a clinical diagnosis is usually made, hampered by the lack of knowledge. Treatment consists of complete surgical excision of the mass.

97. MARJOLIN ULCER WITH DEGENERATION FOR SARCOMATOID SPINOCELLULAR CARCINOMA: CASE REPORT

Lillian Maria Fernandes de Castro¹, Caroline de Paulo Tajra¹, Sérgio Veiga de Carvalho¹, Agamenon Fernandes Neto², Ana Lúcia Nascimento Araújo³ and Sabas Carlos Vieira³.

¹ University Center UniFacid

² University Center UniNovafapi

³ Oncocenter Advanced Center of Radiooncology

INTRODUCTION: Marjolin ulcer is a chronic malignant ulcerated lesion resulting from chronic scarring, especially after burns. It is a rare entity and squamous cell carcinoma (SCC) is the most frequently found (75-96% of cases). The latency in malignant transformation is an average of 3 decades. **CASE REPORT:** A 65-year-old patient searched for specialized care because, on histopathological examination of a burn scar acquired in childhood in the sternal region, a sarcomatoid SCC with infiltration of the reticular dermis, without angiolymphatic or neural invasion. Two years earlier, excision of a sarcomatoid squamous cell carcinoma was performed; at the pathology exam measuring 2.5 cm and with free margins. The current physical examination showed the presence of extensive burns in the sternal region with ulceration around 5 cm in its largest diameter; imaging exams without evidence of bone invasion were performed. Based on the clinical history and complementary exams, surgery was indicated for resection of the lesion with a skin graft and immunohistochemistry, which was compatible with sarcomatoid SCC. **FINAL CONSIDERATIONS:** The development of SCC in chronic ulceration or scarring is a relatively rare event. The percentage of burn scars that will suffer malignant degeneration is estimated at 2%. The average latency time from the time of the injury to the proof of the neoplasm is about 30 years, however there are cases of acute evolution within a period of up to one year, especially when burn scars are the cause of the injury. Chronic scarring or ulcerated lesions that undergo changes in their clinical evolutionary appearance must be evaluated as potentially carcinomatous and ulcerations with a tendency to chronicity must be promptly addressed. The patient in question was referred to surgery for resection of the lesion with a skin graft; performed immunohistochemistry, which showed compatibility with sarcomatoid SCC and partial necrosis.

98. IMMEDIATE RECONSTRUCTION OF NASAL TRAUMA WITH MEDIOFRONTAL FLAP: CASE REPORT

Marina Silva Camarço Lima²; Maria Clara Mousinho Silva Rodrigues¹; Sarah Maria Monteiro Soares Costa de Holanda¹; Lucas Rodrigues Melo¹; Isabella Chaves Napoleon of Rego¹; Paulo Rocha de Padua Júnior¹

¹ Uninovafapi University Center

² Unifacid Wyden University Center

INTRODUCTION: One of the main etiological factors of nasal deformities is trauma, which can result in aesthetic, anatomical and

functional injuries. In these cases, nasal reconstruction can be challenging due to the centralized and protruding position of the nose, playing an important aesthetic role in the face. An adequate and easy-to-use nasal reconstruction technique is the mediofrontal flap. Studies show that this flap is a great option for nasal coverage, due to its safety, amount of skin obtained and similarity in skin color, texture and thickness. **CASE REPORT:** Male patient, 33 years old, victim of a motorcycle accident with tip trauma and left nasal wing with loss of substance. Opted for immediate reconstruction by making a mediofrontal flap supplied by the supraorbital artery. The flap had its pedicle released after twenty-five days. The patient returned for consultation nine days after the second procedure to remove the stitches. It evolved very satisfactorily with good perfusion, without losses. **FINAL CONSIDERATIONS:** Based on the above-mentioned case and the available literature, it could be seen that the use of the mediofrontal flap has a determinant value in nasal reconstruction with large losses, considering its similarities with the receiving area, in addition to vascular safety and amount of skin possible to obtain. Furthermore, there is minimal deformity in the donor area, in order to obtain an aesthetically favorable result.

99. LONG-TERM FOLLOW-UP OF A PATIENT WITH PANTOTHENATE KINASE-ASSOCIATED NEURODEGENERATION CAUSED BY MUTATION OF THE PKAN2 GENE

Joana Clara Oliveira Macêdo Lima¹, Isabel Maria Oliveira Macêdo Lima², Maria Luísa de Oliveira Franklin², Luma Rodrigues da Silva², Kelson James da Silva Almeida² and Raimundo Nonato Campos Sousa².

¹ State University of Piauí

² Federal University of Piauí

INTRODUCTION: Pantothenate Kinase Associated Neurodegeneration is an autosomal recessive disease caused by mutation of the PKAN2 gene. It has symptoms such as parkinsonism, dystonia, dysarthria, cognitive decline and iron accumulation in the brain. The case in question is characterized by the atypical form of the disease, due to its late onset, being less common than the classic form. Until then, several drugs are available and do not interfere in the progression of the disease, among them botulinum toxin and neuroleptics. **CASE REPORT:** A 38-year-old man was diagnosed with Pantothenate-Associated Neurodegeneration Kinase (APNK) 16 years ago. At the first consultation, he presented with stereotyped movements in the left hand, dysarthria, and generalized tonic-clonic seizures for about 2 years. Magnetic resonance imaging of the skull indicated the "tiger eyes" sign. Thus, neurodegeneration associated with PANK2 was found. In the following year, there were behavioral changes, with signs of insomnia, aggressiveness, depression, and anxiety, in addition to worsening of the motor picture, with the appearance of motor tics, progressive dystonia in the left foot, and difficulty walking. Over 15 years, a diverse drug therapy was introduced, with pimozide, memantine hydrochloride, baclofen, biperidene, levodopa, risperidone, sodium valproate, carbolothium, calcium pantothenate, coenzyme A, and several botulinum toxin applications in the affected muscles. However, the patient evolved with loss of deambulation and speech capacity, a marked cognitive decline and worsening of insomnia, depression, anxiety and aggressiveness. Thus, unusual clinical aspects were observed in the evolution of the condition, with a predominance of neuropsychiatric dysfunctions such as depression and psychosis, similar to schizophrenia. Skull MRI revealed a typical sign of the disease, the

"tiger's eyes": hyperintense lesion in the globus pallidus surrounded by T2-weighted hypointensity. **FINAL CONSIDERATIONS:** The case describes a variable course disease with difficult identification of diagnostic clinical features. Atypical form is infrequent a predominance of extrapyramidal symptoms, which analyzed in isolation could induce diagnostic error. Therefore, it is worth highlighting the importance of the "tiger eyes" sign in the MRI, as well as the confirmation by genetic test in order to exclude possible differential diagnoses, establishing appropriate prognosis and treatment.

69 years. Based on this prevalence, an intervention focused on the target profile is necessary.

100. HOSPITAL MORBIDITY DUE TO PULMONARY THROMBOEMBOLISM IN THE STATE OF PIAUÍ: EPIDEMIOLOGICAL ANALYSIS

Gilberto José De Melo Neto¹; Giovana Da Rocha Leal Dias²; João Pedro Rosal Miranda¹; Raul Veras Gomes¹; Wagner Feijó De Oliveira Filho¹; Ana Flávia Machado De Carvalho³;

¹ Unifacid student

² uninovafapi student

³ uespi and unifacid teacher

INTRODUCTION: Pulmonary thromboembolism is an acute cardiovascular disease with variable systemic repercussions, which basically occurs due to an obstruction of the pulmonary artery due to the accumulation of materials that circulate in blood vessels (emboli), such as blood clots (the main causes of the PTE). This pathology represents the third most serious cause of cardiovascular disease in the world, with a mortality rate above 65%. **OBJECTIVES:** To identify the epidemiological profile and outcome of patients hospitalized for PTE in the state of Piauí. **METHODS:** This is a descriptive, exploratory epidemiological study with a quantitative approach. The database used was the Mortality Information System, made available by the Information Technology Department of the Unified Health System (DATASUS), from 2011 to 2021. The analyzed aspects were: gender, age group, municipality, color/race and region. The data used in the preparation of this research are freely accessible, which justifies the absence of the opinion of the Research Ethics Committee. **RESULTS:** Between 2011 and 2021, there was a total number of 495 cases of hospitalizations and 63 cases of deaths from PTE in Piauí. In the state, the municipality of São Raimundo Nonato was the most affected in admissions with 116 cases (23.43%), followed by Teresina with 92 cases (18.59%), and the number of deaths prevailed in the municipality of Teresina with 23 cases (36.15%), followed by Parnaíba with 6 cases (9.52%). Among the reported cases, the highest number of admissions was male, with 350 cases (70.71%), and deaths were female, with 38 cases (60.32%). Regarding color/race, brown color was the most prevalent with 283 cases (57.17%) of hospitalizations and of these 14 (22.22%) were deaths, while black only registered 17 (3.43%). The age group from 60 to 69 years was the one with the highest number of hospitalizations with 30.51%, while cases of deaths predominated in the age group over 80 years, with 23 deaths (36.51%). These data rank Piauí at third place in the Northeast region in terms of hospitalizations and deaths due to PTE. **CONCLUSION:** It is concluded that PTE is a phenomenon that causes death and morbidity in the state of Piauí, mainly in São Raimundo Nonato, and that there is a predominance of individuals with brown color, men, despite not being the majority in the number of deaths, aged 60 to

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**ABSTRACTS OF THE 2021
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RADIOLOGY SYMPOSIUM
AT THE UNIVERSITY OF
LEEDS**

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Abstracts of the 2021 Yorkshire International Imaging and Interventional Radiology Symposium at the University of Leeds

01. ABLATIVE THERAPIES VERSUS PARTIAL NEPHRECTOMY FOR SMALL RENAL MASSES: A SYSTEMATIC REVIEW AND META-ANALYSIS.

Vinson Wai-Shun Chan¹, Ahmad Abul¹, Helen Hoi-Lam Ng¹, Filzah Hanis Osman¹, Kaiwen Wang¹, Jon Cartledge² and Tze Min Wah².

¹ School of Medicine, University of Leeds, Leeds, United Kingdom

² St.James' University Hospital, Leeds, United Kingdom

INTRODUCTION: The optimal treatment of small renal masses is unclear. As a potential alternative, ablative therapies(AT) have been favoured for their lower complication rates and non-inferior oncological outcomes. We conducted a systematic review to compare AT and partial nephrectomy (PN) in patients with T1aN0M0 renal masses. **METHODS:** This review is registered on PROSPERO (CRD42020199099). Medline, EMBASE, and Cochrane CENTRAL databases were searched to identify studies comparing AT and PN. Subgroups of different modalities and approaches were further analysed. Outcomes include cancer-specific survival (CSS), overall survival (OS), recurrence-free survival (RFS), metastatic-free survival (MFS), postoperative complications, and change in renal function. **RESULTS:** From 1,351 identified records, 30 studies involving 85,837 patients were included for meta-analysis. Patients receiving AT were found to have significantly worse CSS, OS, RFS in comparison to patients receiving PN ($p < 0.05$). Patients undergoing AT have a non-inferior MFS and significantly lower overall complication rates (HR: 0.79, 95% CI 0.41-1.51, $p = 0.48$; RR: 0.71, 95% CI 0.53-0.96, $p = 0.03$). Patients undergoing AT have a lesser decline in post-operative renal function (SMD: 0.30, 95% CI 0.11-0.50). When limited to studies with propensity score matching, CSS and RFS are no longer significantly different between the two groups (HR: 1.54, 95% CI 0.67-3.52, $p = 0.31$, HR: 1.72, 95% CI 0.90-3.28, $p = 0.10$). Subgroup analyses between different modalities and approaches of AT did not show significant differences in all outcomes. **CONCLUSION:** AT is potentially non-inferior to PN when managing small renal masses, and more high-quality propensity score-matched studies with long follow-up time are needed to confirm the non-inferiority.

02. ASSESSMENT OF TUBO-OVARIAN ABSCESS USING DIFFUSION-WEIGHTED MAGNETIC RESONANCE AMAGING: A LITERATURE REVIEW.

Thomas Ferenc¹.

¹ Merkur University Hospital, Zagreb, Croatia

OBJECTIVES: Objective of this review was to summarize and define the efficacy of combining conventional magnetic resonance imaging (MRI) with diffusion-weighted imaging (DWI) in the assessment of tubo-ovarian abscess (TOA) and distinguishing TOA from ovarian neoplasms. The use of DWI has been fairly documented, however limited reports are available on efficacy of combining DWI and MRI (DW-MRI) in the evaluation of patients with TOA. Literature searches of English-language articles were performed in PubMed and Google Scholar. The used keywords included: "Tubo-ovarian abscess" "Diffusion-weighted magnetic resonance imaging". Additional studies were noted by reviewing reference lists of found studies. Identified studies revealed that TOA presents on MRI as multilocular, mixed cystic to solid pelvic mass with heterogeneously high signal on T2-weighted and low signal on T1-weighted images. TOAs usually demonstrate high signal intensity on DWI with low apparent diffusion coefficient (ADC) values. Display of the invasion into adjacent organs and tubal dilatation is more frequent in TOA than in ovarian malignancy. The size of TOA is noticeably smaller compared to ovarian malignancy and in addition, neoplasms are not usually associated with dilated fallopian tube. In comparison to other methods (positron emission tomography/computed tomography (PET/CT), CT, MRI), DW-MRI possesses highest sensitivity, specificity, positive predicting value, negative predicting value and accuracy in the assessment of TOA. The addition of DWI, with corresponding ADC values, to conventional MRI improved the overall evaluation of TOA and its distinction from ovarian tumors. Therefore, combination of DWI with MRI in the assessment of TOA should become obligatory.

Key words: Diffusion-weighted imaging, Magnetic resonance imaging, Tubo-ovarian abscess, Pelvic inflammatory disease, Ovarian neoplasms.

03. **ATTEMPTED PLUG EMBOLISATION OF A CONGENITAL PORTOSYSTEMIC SHUNT WITH SUBSEQUENT PLUG EMBOLISATION INTO THE PULMONARY ARTERY AND SUCCESSFUL ENDOVASCULAR SNARE RETRIEVAL.**

Ellen Collingwood¹, Nasim Tahir¹.

¹ Leeds Teaching Hospitals NHS Trust

INTRODUCTION: We present a case of a 14-year-old with an intrahepatic Congenital Portosystemic Shunt (CPSS). The patient was referred following investigations for premature adrenarche which included abdominal ultrasound that incidentally showed abnormal portal venous anatomy. MRI confirmed drainage of the main portal vein into the right atrium via a large shunt with absence of the right and the left main portal vein branches. **TREATMENT AND RESULTS:** It was decided to attempt endovascular embolization of the shunt via a right internal jugular approach. A balloon occlusion test was performed, demonstrating no significant rise in portal pressure. An 18mm Cera vascular plug was deployed and remained in a stable position over a ten minute period. As expected, shunt occlusion did not occur immediately. The following day an ultrasound was performed to check for shunt patency and position of the plug. This showed that the shunt remained patent and the occlusion device could not be visualised. A chest x-ray demonstrated that the plug had embolized into the right pulmonary artery. The patient was asymptomatic. She subsequently returned to theatre and the plug was retrieved using an endovascular snare without further complication. **DISCUSSION:** CPSS are abnormal connections between the portal and systemic circulations. The risk of hyperammonaemia, portopulmonary syndrome, pulmonary hypertension and focal nodular hyperplasia means that if spontaneous closure does not occur shunt closure is recommended. Since the shunt remains patent, further MDT discussion will be undertaken to decide whether a repeat endovascular procedure or an open surgical procedure should be performed.

04. **DIAGNOSING PROSTATE CANCER WITH MRI.**

Aqua Asif¹, Alexander Ng² and Vinson Wai-Shun Chan³.

¹ Leicester Medical School, University of Leicester, Leicester, United Kingdom

² UCL Medical School, University College London, London, United Kingdom

³ School of Medicine, Faculty of Medicine and Health, University of Leeds, United Kingdom

BACKGROUND: Until 2019, serum PSA level and digital rectal examination followed by systematic transrectal ultrasonography (TRUS) guided prostate biopsy was the pathway in diagnosing PCa. However, this resulted in both over diagnosis of clinically insignificant PCa (cisPCa) and under diagnosis of clinically significant PCa (csPCa). Multiparametric MRI (mpMRI) has been shown to increase the sensitivity and specificity in diagnosing PCa. **OBJECTIVES:** To understand the limitations of the previous prostate cancer (PCa) diagnosis pathway, To understand the use and benefits of performing MRI in diagnosing PCa. To understand the future of MRI PCa diagnosis. **CLINICAL FINDINGS AND PROCEDURE DETAILS:** mpMRI generally consists of T1-weighted, T2-weighted, diffusion-weighted, and dynamic contrast-enhanced imaging. mpMRI is usually indicated for two main roles. Firstly, it allows MRI-targeted biopsies in addition to systematic core biopsies to reduce sampling error and underdiagnosis. Secondly, it allows triaging prior to biopsy, where only those with an mpMRI suspicious of PCa are offered a targeted biopsy, reducing potential overtreatment. The diagnostic accuracy of mpMRI for prostate cancer was established by the PROMIS study (2017). The landmark study, PRECISION (2018), found that amongst biopsy-naïve patients, mpMRI was superior to TRUS alone in diagnosing both csPCa and cisPCa. mpMRI involves a contrast sequence, which incurs longer scanner time and costs compared to biparametric MRI (bpMRI). The efficacy of bpMRI compared to mpMRI in diagnosing PCa is unknown. **CONCLUSION:** mpMRI is now the first-line investigation in the diagnosis of PCa. Future work aims to compare the diagnostic efficacy of mpMRI and bpMRI.

05. **THE STATE OF ULTRASOUND TEACHING IN UK MEDICAL SCHOOLS: A SYSTEMATIC REVIEW.**

Brendan Flanagan¹, Eva Sweeney¹.

¹ Queen's University Belfast

BACKGROUND AND PURPOSE: A centralised UK ultrasound curriculum for undergraduate medical schools currently does not exist. The aim of this review is to explore how ultrasound is integrated into medical education across undergraduate UK medical schools.

METHODS: A systematic review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Medline and Embase electronic databases were searched using the keywords ultrasound, ultrasonography, insonation, medical education and undergraduate medicine. A title and abstract screen was carried out and followed by a full-text review to assess eligibility for inclusion. Articles were removed based on pre-selected exclusion criteria. Included data was extracted using Excel and coded under multiple subheadings, including teaching methods, ultrasound skills being taught and student perceptions. **RESULTS:** 12 journal articles and seven conference abstracts were included in the review. A total of 10 UK medical schools have published articles relating to undergraduate ultrasound teaching. The number of students per ultrasound programme ranged from 7 students undertaking a student-selected component, up to 215 students for a year-wide teaching intervention. All studies involved 'hands-on' experience of using ultrasound and small-group didactic learning was the most popular method of teaching. Medical students could perform echocardiography and focused assessments with sonography in trauma to a clinically acceptable standard after a short period of training. Student and tutor perceptions of ultrasound teaching were largely positive.

CONCLUSION: Performing non-invasive ultrasound-guided procedures is a realistic teaching goal for undergraduate medical schools and is popular among both students and tutors.

06. **IRREVERSIBLE ELECTROPORATION OF HEPATOCELLULAR CARCINOMA WITH NAVIGATION ASSISTED CT GUIDANCE.**

Mahira Zahid¹, Daniel Stokes¹, James Lenton², Jonathan Smith¹, Tze Min Wah².

¹ Leeds Medical School, University of Leeds, Leeds, GB

² Diagnostic and Interventional Radiology, Institute of Oncology, St. James' University Hospital, Leeds Teaching Hospitals Trust, Leeds, GB

CLINICAL HISTORY: A 64 years old male patient presented with an 18 mm hepatocellular carcinoma (HCC) on the posterior aspect of segment III of the liver. The patient had a history of type II diabetes and liver cirrhosis secondary to hemochromatosis.

TREATMENT: The decision to use image-guided non thermal ablative technology-Irreversible Electroporation (IRE) was because the HCC was sited in close proximity to vascular pedicles and stomach. Needle placement was performed using the CAS-One IR navigation system (Cascination AG). The patient was under general anesthesia and suspended respiratory technique were employed during imaging and needle navigation. A four-needle configuration was planned and subsequently place under CT-navigation. All IRE needles were successfully placed with one needle required repositioning. IRE ablation was performed using the Nanoknife system (AngioDynamics), two overlapping ablations with 1cm pull-back. The three-month post ablation control scan showed a complete destruction of the HCC with no ablative injury to surrounding vital structure (Figure 1). **DISCUSSION:** IRE is a novel non thermal technology, and is increasingly used when treating tumours sited in close proximity to vital structures e.g. vessels, bile duct, gastro-intestinal tract. Precise needle positioning is crucial for effective delivering of IRE treatment (needles are required to be in parallel, inter-electrode distance of > 1.5cm and <2cm). Navigation assisted CT guidance appeared to be achievable with the CAS-One IR workflow after initial learning curve. **TAKE HOME POINTS:** Navigation assisted CT-guidance can potentially facilitate the ease of IRE treatment for more precise needle placement to ensure parallelism and stringent inter-electrode distance.

07. **FEASIBILITY AND ACCURACY OF DEEP LEARNING IN GLIOMA SEGMENTATION.**

Andrew Gregory¹, Stuart Currie², Ali Gooya¹, Andrew Scarsbrook¹.

¹ University of Leeds

² Leeds Teaching Hospitals NHS Trust

BACKGROUND AND PURPOSE: The objective of this study is to assess the feasibility and accuracy of deep learning segmentation of low grade gliomas on magnetic resonance images against that of an experienced neuroradiologist within Leeds Teaching Hospitals NHS Trust (LTHT). **METHODS:** Data from 30 patients referred to Leeds Teaching Hospitals NHS Trust for suspected glioma between September 2008 and December 2018 were collected. Patients with missing personal data were excluded. For the remaining 20 patients, FLAIR images were manually segmented by a consultant neuroradiologist working within the trust. Training of three models and testing of one pre-trained model was attempted. Dice similarity coefficients (DSCs) were to be calculated. **RESULTS:** All four models produced errors that could not be solved and so failed to produce segmentation masks. DSCs could not be calculated. **CONCLUSION:** Deep learning segmentation was shown to be unfeasible in the conditions of this study therefore accuracy of segmentation methods could not be compared. Errors were encountered that required greater experience with deep learning and more resources to solve. Virtual environments and large GPUs are recommended when training deep learning models, and macOS Mojave 10.14.4 is not the most suitable operating system on which to do this.

Key words: Glioma, segmentation, deep learning, CNN, error.

08. **PERCUTANEOUS TRANSHEPATIC OBLITERATION OF GASTRIC VARICES USING GLUE – A VIABLE ALTERNATIVE IN THE EMERGENT SETTING.**

ViMAL Chacko Mondy¹

¹ Department of Imaging Sciences and Interventional Radiology, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum 695011, Kerala, India

INTRODUCTION: 60-year-old male with chronic liver disease and history of hepatic encephalopathy presented with hematemesis and shock. He had one episode of hematemesis 2 years back due to bleeding gastric varices for which endoscopic ultrasound guided glue injection and coiling was done. His haemoglobin was 5.8g/dl. He was given RBC transfusions. Emergency esophago-gastro duodenoscopy revealed distended stomach with fresh blood, but site of bleeding could not be identified. CT of abdomen showed gastric fundal varices with afferents from short gastric vein and draining through gastrosplenic shunt, cirrhotic liver, pneumobilia and chronic thrombus in the main portal vein. **RESULTS:** Due presence of active hematemesis, unfavorable morphology of cirrhotic liver, pneumobilia hindering visualization of portal vein branch on ultrasound and past history of hepatic encephalopathy TIPS was not considered. BRTO was deferred due to large highly tortuous gastrosplenic shunt and near total chronic thrombosis of portal vein. It was decided to attempt percutaneous transhepatic obliteration of the gastric varices. Procedure was done under general anesthesia. Percutaneous transhepatic puncture of right branch of portal vein was done under ultrasound guidance with the NEFF set needle which was exchanged for 5F sheath. Splenic venograms showed gastric varices fed by afferents from short gastric vein and draining via splenorenal shunt. The afferent was selectively cannulated using Progreat microcatheter and was embolized with 50% glue. Concentrated glue to prevent systemic embolization. Post procedure venogram showed obliteration of gastric fundal varices. Transhepatic puncture tract was embolized with 50% glue. Post procedure, vitals stabilized with resolution of hematemesis and no further fall in hemoglobin. **DISCUSSION:** Percutaneous transhepatic obliteration of gastric varices using glue is a viable alternative in the emergent setting, especially when TIPS or trans TIPS balloon assisted antegrade obliteration or BRTO are not feasible.

09. **PLAIN BALLON ANGIOPLASTY FIRST FOR CEPHALIC ARCH FISTULA STENOSIS: NEED FOR A PARADIGM SHIFT!**Dhikshitha Nagaraj¹, Ahmad Abul¹, Gary Cuthbert², Simon McPherson², Sapna.Puppala².¹ School of Medicine, University of Leeds² Department of Vascular radiology, Leeds Teaching Hospital NHS Trust

BACKGROUND: Cephalic arch stenosis is a common complication with brachial artery-cephalic vein fistulas and frequently leads to loss of function of the fistula. This is treated by various percutaneous techniques. **AIM:** A service evaluation assessing the technical success and outcomes of intervention on the cephalic arch, using plain balloon angioplasty first followed by other techniques. **METHODS:** Retrospective study of cephalic arch procedures from 2009 to 2019. **RESULTS:** Out of 5000 fistuloplasties performed, a total of 267 cephalic arch angioplasties were performed. The plain balloon first approach was used in 132 patients as a primary procedure with 74% success. The rest of which required a further intervention on table used cutting balloon in 9.8%, high pressure dorado balloon in 6.82% and stent in 3.03%. Drug coated balloon used in 10 patients as an operator choice. Secondary intervention was performed in 56.8% (cutting balloon 14.6%, high pressure dorado 12%, both cutting and high pressure 1.33% and stent 9.3%). Tertiary intervention was done in 28.8% and 10.5% of patients had a stent placed. Quaternary intervention was carried out in 13.6% of patients and 16.67% had a stent placed. 3 fistulas were abandoned. No anticoagulation was used to assist patency, though 55 patients were on anticoagulation for other cardiac reasons. **CONCLUSION:** Our evaluation suggests that a primary plain balloon angioplasty was the standard approach with a 74% primary success rate however more than 50% had re-intervention. Drug coated balloon and stents were increasingly used suggesting a need to reassess the plain balloon first approach.

10. **SKELETAL FIBROUS DYSPLASIA IN MCCUNE-ALBRIGHT SYNDROME.**Anthony Jen -Yu Chung¹, Mahadura Eranda Mahesh Mendis¹.¹ Department of Radiology, Queen Elizabeth Hospital, Woolwich, London

INTRODUCTION: We present the clinical and imaging findings in a 46-year-old gentleman with known McCune-Albright syndrome who presented with worsening dyspnoea since being discharged from a different hospital 4 weeks ago where he was treated for a hospital acquired pneumonia (HAP). On admission he had a type 2 respiratory failure (pH 7.31, PaCO₂ 8.98, PaO₂ 11.5), normal inflammatory markers and was Covid-19 negative. He had an admission chest XR which was suggestive of inflammatory changes in the left lung base. He was started on IV Tazocin for treatment of HAP as his previous hospital admission was 8 months long. Throughout his current admission, he underwent a variety of imaging: 1) CT pulmonary angiogram – negative for pulmonary embolism, 2) Repeat chest XR before commencing non-invasive ventilation – negative for pneumothorax, 3) MRI lumbosacral spine due to new faecal incontinence and reduced sensation in L5 distribution – spinal stenosis at S2-S3 level without cord compression. Following a sleep study and respiratory input, it was felt that there was a chronic element to the patient's respiratory failure. He was established and optimised on home ventilation as an inpatient. **OBJECTIVES:** To recognise skeletal fibrous dysplasia on various imaging modalities including X-ray (XR), computed tomography (CT) and magnetic resonance imaging (MRI) using a case study of a patient with McCune-Albright syndrome. **CONCLUSION:** Fibrous dysplasia is associated with McCune-Albright syndrome. Fibrous dysplasia has a varied radiographic appearance across plain radiographs, CT imaging and MRI.

11. **TUBERCULOSIS WITH PARAVERTEBRAL ABSCESS.**Israah Amin¹, Wee Ping Ngu¹, Lee Wun Chong¹.
¹ Hull University Teaching Hospital NHS Trust

INTRODUCTION: 27 year old male, Sudanese national, came to the UK 11 months ago. No previous imaging or known past medical history. He presented to hospital febrile and tachycardic, on a background of a 4 month history of feeling generally unwell, including night sweats, haemoptysis and weight loss. **TREATMENT AND RESULTS:** A chest radiograph in A&E showed bilateral pleural effusions, but given how systemically unwell he was he soon proceeded to have a CT Thorax Abdomen Pelvis to further investigate for the source of his septic picture. This revealed multifocal patchy consolidation within bilateral upper lobes with hilar lymphadenopathy, suspicious for TB. Large bilateral pleural effusions were again demonstrated, along with partial collapse-consolidation of bilateral lower lobes and there were features of pulmonary oedema. However, in addition to the lung findings, there was a large paravertebral collection/abscess anterior to the upper thoracic spine. The report advised MRI of the Spine to look for features of spondylodiscitis – MR appearances suggested tuberculous spondylitis. **DISCUSSION:** In retrospect, there was some widening of the upper paratracheal region on the initial chest radiograph, which corresponded to the lateral borders of the later confirmed paravertebral collection. Following the CT and MRI imaging, the patient was put on empirical medical treatment for TB but eventually had several attendances to the Radiology department for Ultrasound and CT guided drainages of the collection. In the meantime, Interventional Neuroradiologists performed a spinal biopsy to help obtain a histological diagnosis, which confirmed TB.

12. **THE ON-CALL CT ABDOMEN: THE BASICS.**Wee Ping Ngu¹, Israah Amin¹.
¹ Hull University Teaching Hospital

BACKGROUND: There has been exponential increase in demand for Radiology services since the pandemic due to ease of accessibility and short scanning duration. This has inadvertently increased the workload particularly in the out-of-hours setting and resulted in delayed reporting. It is therefore helpful for junior doctors to be familiar and to recognize the abnormal radiological features of common pathologies. **OBJECTIVES:** To review the CT appearances of common causes for the acute abdomen. To be aware of the strengths and limitations of CT. To be aware of the indications for specific protocols on a CT abdomen. **CLINICAL FINDINGS:** Pictorial review of acute abdominal pathologies on CT e.g. appendicitis, bowel obstruction, bowel ischaemia, cholecystitis, perforation, pancreatitis, renal stone, AAA rupture, ovarian torsion. **CONCLUSION:** To recognize the appearances of common acute pathologies on the CT abdomen.

13. **PROGNOSTIC VALUE OF NEUTROPHIL TO LYMPHOCYTE RATIO AND PLATELET TO LYMPHOCYTE RATIO FOR SMALL RENAL CELL CARCINOMAS AFTER IMAGE-GUIDED CRYOABLATION (CRYO) OR RADIO-FREQUENCY ABLATION (RFA).**Aqua Asif¹, Filzah Hanis Osman¹, Jasmine Sze-Ern Koe¹, Alexander Ng¹, Jon Cartledge¹, Michael Kimuli¹, Naveen S. Vasudev¹, Christy Ralph¹, Satinder Jagdev¹, Selina Bhattarai¹, Jonathan Smith¹, James Lenton¹, Vinson Wai-Shun Chan¹, Tze Min Wah¹.¹ University of Leeds, Leeds Teaching Hospitals NHS Trust

BACKGROUND AND PURPOSE: This is the first study investigating the relationship between NLR or PLR and outcomes of percutaneous cryoablation or RFA for small RCCs with long-term outcomes.

METHODS: All patients undergoing cryoablation or RFA for small RCCs (<7cm) from 2003-2016 at a regional centre for RCC were included. Optimal cut-offs for NLR/PLR were determined using the ROC curve and AUC using the Youden method. Outcomes were compared using Cox or logistic regression. **RESULTS:** 203 patients (Cryoablation:103, RFA:100) were included. Median follow-up was 75 months and 98 months, respectively. Using the Youden method, high post-operative NLR values were associated with worsened local recurrence-free survival (LRFS) (NLR >5.38; HR: 5.13, p=0.037) and worsened Overall Survival (OS) (NLR >6.42; HR: 3.40, p<0.001) in all patients. High post-operative PLR values were associated with worsened OS in all patients (PLR >192; HR:2.31, p=0.006) and RFA patients alone (n=100; PLR >260; HR: 8.27, p<0.001). Using continuous Cox regression model, greater changes in peri-operative NLR were associated with worsened LRFS in cryoablation alone and all patients (Continuous; HR: 1.09, p=0.028). Higher post-operative NLR was also associated with worsened LRFS in cryoablation patients alone (HR: 1.10, p=0.046). Post-operative NLR (HR:1.17, p=0.002), change in peri-operative NLR (HR:1.19, p=0.001), and change in peri-operative PLR (HR:1.20, p=0.009) were all associated with worsened CSS in all patients. Pre-operative PLR and NLR were not associated with complications and change in renal function.

CONCLUSION: NLR and PLR are valuable prognostic factors for this group of patients and should be used to guide subsequent follow-up and monitoring of recurrence.

14. **THE CHANGING TRENDS OF IMAGE GUIDED BIOPSY OF SMALL RENAL MASSES BEFORE INTERVENTION- AN ANALYSIS OF EUROPEAN MULTINATIONAL PROSPECTIVE EURECA REGISTRY.**

Vinson Wai-Shun Chan¹, Francis Xavier Keeley, Jr², Brunolf Lagerveld³, David J. Breen⁴, Alexander King⁴, Tommy Kjærgaard Nielsen⁵, Marco van Strijen⁶, Julien Garnon⁷, Des Alcorn⁸, Ole Graumann⁹, Eric de Kerviler¹⁰, Patricia Zondervan¹¹, Miles Walkden¹², Giovanni Lughezzani¹³, Tze Min Wah¹⁴

¹ School of Medicine, Faculty of Medicine and Health, University of Leeds, Leeds, United Kingdom

² Bristol Urological Institute, North Bristol NHS Trust, Bristol, United Kingdom

³ Department of Urology, OLVG, Amsterdam, the Netherlands

⁴ Department of Radiology, Southampton University Hospitals, Southampton, United Kingdom

⁵ Aarhus University Hospital, Department of Urology, Aarhus, Denmark

⁶ Department of Radiology, St Antonius Hospital, Nieuwegein, The Netherlands

⁷ Department of Interventional Radiology, Nouvel Hôpital Civil, 1 place de l'Hôpital 67000 Strasbourg, France

⁸ Department of Interventional Radiology, Gartnavel General Hospital, Glasgow, United Kingdom

⁹ Department of Radiology, Odense University Hospital, Denmark

¹⁰ Radiology Department, Saint-Louis Hospital, AP-HP, 1, avenue Claude-Vellefaux, 75475 Paris cedex 10, France

¹¹ Department of Urology, 26066Amsterdam UMC, University of Amsterdam, the Netherlands.

¹² Department of Imaging, University College London Hospitals NHS Foundation Trust, London, United Kingdom

¹³ Vita-Salute San Raffaele University, Department of Urology, Milan, Italy

¹⁴ Department of Diagnostic and Interventional Radiology, Institute of Oncology, Leeds Teaching Hospitals Trust, St. James's University Hospital, Leeds, United Kingdom

OBJECTIVES: To evaluate the use of pre-cryoablation biopsy for small renal masses (SRMs) and the effects of increasing up take on histological results of treated SMRs. **METHODS:** From 2015 to 2019, patients with sporadic T1N0M0 SRMs undergoing percutaneous, laparoscopic or open cryoablation from 14 European institutions within the European Registry For Renal Cryoablation (EuRECA) were included for the retrospective analysis. Univariate and multivariate logistic models was used to evaluate the trends, histological results and the factors influencing use of pre-cryoablation biopsy. **RESULTS:** 871 patients (Median [IQR] age, 69[14], 298 women) undergoing cryoablation were evaluated. The use of pre-cryoablation biopsy has significantly increased from 42% (65/156) in 2015 to 72% (88/122) in 2019 ($p < 0.001$). Patients treated for a benign histology are significantly more likely to have presented later in the trend, where pre-cryoablation biopsy is more prevalent (OR: 0.64, 95% CI 0.51-0.81, $p < 0.001$). Patients treated for undiagnosed histology are also significantly less likely to have presented in 2018 compared to 2016 (OR 0.31, 95% CI 0.10-0.97, $p = 0.044$). Patients aged 70+ are less likely to be biopsies pre-cryoablation ($p < 0.05$). R.E.N.A.L. nephrometry score of 10+ and a Charlson Comorbidity Index > 1 are factors associated with lower likelihood to not have received a pre-cryoablation biopsy ($p < 0.05$). **CONCLUSION:** An increased use of pre-cryoablation biopsy was observed and cryoablation patients treated with a benign histology is more likely to have presented in periods where pre-cryoablation biopsy is not as prevalent. Comparative studies are needed to draw definitive conclusions on the effect of pre-cryoablation biopsy on SRM treatments.

15. **MULTIMODAL IMAGE-GUIDED ABLATION ON MANAGEMENT OF RENAL CANCER IN VON-HIPPEL-LINDAU SYNDROME PATIENTS FROM 2004-2021 AT A SPECIALIST CENTRE: A LONGITUDINAL OBSERVATIONAL STUDY.**

Vinson Wai-Shun Chan¹, James Lenton², Jonathan Smith², Satinder Jagdey³, Christy Ralph³, Selina Bhattarai⁴, Andrew Lewington⁵, Michal Kimuli⁶, Jon Cartledge⁶, Tze Min Wah².

¹ School of Medicine, Faculty of Medicine and Health, University of Leeds, Leeds, LS2 9JT, United Kingdom

² Division of Diagnostic and Interventional Radiology, Institute of Oncology, St. James's University Hospital, Beckett Street, Leeds LS9 7TF, United Kingdom

³ Division of Medical Oncology, Institute of Oncology, St. James's University Hospital, Beckett Street, Leeds LS9 7TF, United Kingdom

⁴ Division of Pathology, Institute of Oncology, St. James's University Hospital, Beckett Street, Leeds LS9 7TF, United Kingdom

⁵ Division of Nephrology, St. James's University Hospital, Beckett Street, Leeds LS9 7TF, United Kingdom

⁶ Division of Urology, Institute of Oncology, St. James's University Hospital, Beckett Street, Leeds LS9 7TF, United Kingdom

OBJECTIVES: To analyse the safety, technical feasibility, long-term renal function-, and oncological outcome of multi-modal technologies in image-guided ablation (IGA) for renal cancer in Von-Hippel-Lindau (VHL) patients and evaluate factors that may influence the outcome. **METHODS:** Retrospective analysis of a prospective database of VHL patients who underwent IGA at a specialist centre. Patient's demographics, treatment energy, peri-operative outcome and oncological outcomes were recorded. Statistical analysis was performed to determine factors associated with complication and renal function reduction. The overall, 5 and 10-year cancer-specific (CS), local recurrence-free (LRF) and metastasis-free (MF) survival rates were presented with Kaplan-Meier Curves. **RESULTS:** From 2004-2021, 17 VHL patients (age 21-68.2) with a mean (\pm SD) RCC size of 2.06 ± 0.92 cm received IGA. Median (IQR) RCCs per patient was 3 (2-4) over the course of follow up. Fifty-four RCCs were treated using radiofrequency ablation ($n=11$), cryoablation ($n=38$) and irreversible electroporation ($n=8$) in 50 sessions. The primary and overall technical success rates were 94.4% (51/54) and 98% (53/54). One CD-III complication with proximal ureteric injury. Five patients in seven treatment sessions experienced a $>25\%$ reduction of eGFR immediately post-IGA. All patients have preservation of renal function at a median follow-up of 79 (51-134) months. The 5 and 10-year CS, LRF and MF survival rates are 100%, 97.8% and 100%. Whilst, the 5 and 10-year overall survival rates are 100% and 90%. **CONCLUSION:** Multi-modal IGA of de novo RCC for VHL patients is safe and has provided long term preservation of renal function and robust oncological durability.

16. **TEACHING ULTRASOUND-GUIDED CANNULATION TO FOUNDATION YEAR 1 DOCTORS.**Rebecca Morris¹, J Gleeson¹, H Boal¹, T Sharp¹, A Wragg¹, E Dodd¹, J Thompson¹¹ Mid Yorkshire Hospitals NHS Trust

BACKGROUND: A new programme called STRIDE (Simulation, Teaching, and Reflection for FY1 Development & Education) has been introduced in 2021-22 for Foundation Year 1 Doctors at Mid Yorkshire NHS Trust. The first day of teaching with the theme of "Surviving F1" included a session teaching ultrasound guided cannulation. **OBJECTIVES:** Identify patients where Ultrasound (US) guided cannulation may be applicable. Demonstrate how to perform US guided cannulation. Apply the technique using mannequins. Build confidence to utilise US on the wards. **PROCEDURE DETAILS:** The one-hour teaching session began with an introduction and discussion of the context of the skill. There was an explanation of how the US machine works and a demonstration into how it is used to guide cannulation. The doctors then had 30 minutes to practice using mannequins with the last ten minutes of the session concluding the teaching, answering any questions and encouraging the students to use what they have learnt in their jobs on the wards. **CONCLUSION:** The teaching session was successful across all groups with feedback demonstrating that the doctors appreciated learning the skill, they enjoyed the session and they felt more confident to use US in practice with patients. There certainly seems to be a place for introducing junior doctors into radiology and the applications of it in terms of procedures and there is hope that this session can lead the way for more education to be delivered with a radiology and interventional radiology focus.

17. **A REVIEW OF IMAGE GUIDED LOCALISATION OF LUNG LESIONS FOR VIDEO ASSISTED THORACOSCOPIC SURGERY (VATS).**Omar Mostafa¹, Derek Grokeutz².¹ Walsall Healthcare NHS Trust, U.K² Quinnipiac University, Hamden, Connecticut, U.S.

BACKGROUND: The use of different imaging modalities in management of tumours has led to early detection of primary and secondary lesions at early stages of tumour progression. Coupled with the emergence of wire guided localisation in 1993, this has facilitated precise targeting of deep and challenging lung tumours not fit for surgical excision. Subsequently, the role of interventional radiology has become influential in improving surgical outcomes. Localisation can be performed using two techniques: 1) Percutaneous hook-wire placement. 2) Dyes, oil or radioisotopes (Injections of). **OBJECTIVES:** Describe and explore the use of imaging in localising lesions peri-operatively prior to surgical resections. **RESULTS:** Reviews in this field are limited. Multiple studies have reported a high success rate (>95% of cases) with percutaneous hook-wire placement and up to 100% with injections. Minor complications with hook-wire were reported in up to 50% of cases; those included small pneumothoraces, pain and wire-dislodgment. Major complications included large or tension pneumothoraces (<2%). On the contrary, complications from injections were <10% overall, including minor allergic reactions (<1%). **CONCLUSION:** Commonest reason for VATS conversion to thoracotomy is failure of lesion localisation. Image guided localisation, whether by wire or dyes, significantly increases the technical success of VATS. Minor complications are more common in wire-guided procedures than in dyes or radioisotopes.

18. **LONG-TERM OUTCOMES OF IMAGE-GUIDED ABLATION AND LAPAROSCOPIC PARTIAL NEPHRECTOMY FOR T1 RENAL CELL CARCINOMA.**Vinson Wai-Shun Chan¹, Filzah Hanis Osman¹, Jon Cartledge², Walter Gregory³, Michael Kimuli², Naveen S. Vasudev⁴, Christy Ralph⁴, Satinder Jagdev⁴, Selina Bhattarai⁵, Jonathan Smith⁶, James Lenton⁶, Tze Min Wah⁶¹ School of Medicine, Faculty of Medicine and Health, University of Leeds, Leeds, England, United Kingdom² Department of Urology, St. James's University Hospital, Leeds, United Kingdom³ Leeds Institute of Clinical Trials Research, University of Leeds, Leeds, United Kingdom⁴ Department of Medical Oncology, St. James's University Hospital, Leeds, United Kingdom⁵ Department of Pathology, St. James's University Hospital, Leeds, United Kingdom⁶ Department of Diagnostic and Interventional Radiology, Institute of Oncology, Leeds Teaching Hospitals Trust, St. James' University Hospital, Leeds, England, United Kingdom

OBJECTIVE: To compare long-term outcomes and peri-operative outcomes of image-guided ablation (IGA) and laparoscopic partial nephrectomy(LPN). **METHODS:** This is a retrospective cohort study of localised RCC (T1a/bN0M0) patients undergoing cryoablation (CRYO), radio-frequency ablation (RFA) or LPN at our institution from 2003 to 2016. Oncological outcomes were compared using Cox regression and log-rank analysis. eGFR changes were compared using Kruskal-Wallis and Wilcoxon-rank tests. **RESULTS:** 296 (238 T1a, 58 T1b) consecutive patients were identified, 103, 100 and 93 patients underwent CRYO, RFA and LPN, respectively. Median follow-up time was 75, 98 and 71 months, respectively. On univariate analysis, all oncological outcomes were comparable amongst CRYO, RFA and LPN ($p > 0.05$). On multivariate analysis, T1a patients undergoing RFA had improved local-recurrence-free survival (LRFS) (HR 0.002, 95%CI 0.00-0.11, $p=0.003$) and metastasis-free survival (HR 0.002, 95%CI 0.00-0.52, $p=0.029$) compared to LPN. In T1a and T1b patients combined, both CRYO (HR 0.07, 95%CI 0.01-0.73, $p=0.026$) and RFA (HR 0.04, 95%CI 0.03-0.48, $p=0.011$) had improved LRFS rates. Patients undergoing CRYO and RFA had a significantly smaller median decrease in eGFR post-operatively compared to LPN (T1a: $p < 0.001$; T1b: $p=0.047$). Limitations include retrospective design and limited statistical power. **CONCLUSION:** IGA is potentially as good as LPN in oncological durability. IGA preserves kidney function significantly better than LPN. More studies with larger sample size should be performed to establish IGA as a first-line treatment alongside LPN.

19. **IMAGING RECOMMENDATIONS DURING THE COVID PANDEMIC FOR THE INVESTIGATION OF RIGHT ILIAC FOSSA PAIN: AN UNACHIEVABLE AND UNNECESSARY BURDEN ON RADIOLOGY SERVICES?**

Alice Doughty¹, S Cheetham¹, M Kenber¹, E Smellie, A Saha¹
¹ Calderdale Huddersfield Foundation Trust

AIMS: Initial Covid-19 surgical guidance, produced without radiological input, recommended that patients with right iliac fossa (RIF) pain should have imaging before intervention. This study quantified the burden on imaging services from these guidelines. **METHODS:** Patients who presented to a DGH general surgical unit with RIF pain from March to October 2020 were identified. Clinical parameters, radiology and final diagnosis were recorded. Minimum follow-up was 12 months (October 2021) to identify re-admissions and morbidity. **RESULTS:** There were 417 patients. There was a drop in admissions in the first months of each new wave of Covid (March/April, September/October) compared with intervening months (36% vs. 64%, $P=0.036$). 266 patients (64%) had a CT scan increasing from 42% of patients in March to 75% in September ($P=0.019$). The proportion of patients with normal imaging increased correspondingly with over a third (34%) of CT scans being normal. 93 CT scans (35%) showed appendicitis, which was the suspected diagnosis in all but 7 of these patients. Patients with normal imaging had lower white cell counts (Mean 10.1×10^9 vs. $14.8 \times 10^9/L$, $P<0.001$) and CRPs (Mean 21 vs. 99, $P<0.001$). Patients seen first by a consultant were less likely to require imaging. **CONCLUSION:** During the first year of Covid-19, two-thirds of patients with RIF pain had a CT scan with a third being normal. Most scans showing appendicitis had clinical parameters consistent with this diagnosis. Current guidelines may lead to unsustainable pressures on radiology services; ensuring consultant assessment prior to imaging requests may reduce the burden on these teams.

20. **CASE REPORT – HYBRID REPAIR OF RUPTURED SUPRARENAL ANEURYSM.**

Lois Scoffield¹.
¹ Leeds Teaching Hospitals

BACKGROUND: A 54 year old male gardener presented to a District General Hospital with sudden onset lower abdominal and back pain. He had a tender abdomen and was haemodynamically unstable. An urgent CT scan demonstrated a ruptured suprarenal abdominal aortic aneurysm. **RESULTS:** The patient was transferred to the regional tertiary vascular centre. With no “off the shelf” branched stent graft immediately available locally, nor surgical expertise for complex thoracoabdominal repair, the on-call surgical and interventional radiological team devised a hybrid repair. His coeliac axis was embolised prior to an SMA chimney EVAR covering his renal arteries. This was immediately followed by a laparotomy and bilateral surgical CIA-renal artery PTFE bypass grafts. After two weeks the left renal bypass underwent stenting of a stenosis at the distal anastomosis, the right renal bypass had occluded. After a long recovery on intensive care he was ultimately discharged without requiring renal replacement therapy. Three months later he underwent embolization of a bleeding hepatic artery pseudoaneurysm which had possibly developed as a result of liver infection, ischaemia or an initial wire injury. After six months the patient is recuperating at home. **DISCUSSION:** Whilst pure surgical or endovascular solutions to this complex aneurysm are possible, the hybrid repair performed was a unique solution utilising the local skills and available equipment of both interventional radiology and vascular surgery. Having required two further endovascular procedures and a long stay on intensive care he will be closely followed up clinically and radiologically.

21. **AUDIT OF THE CONSENT PROCESS IN INTERVENTIONAL RADIOLOGY AND PATIENT PERSPECTIVES.**

Iman Sulevani*¹, Bipima Gurung*¹, Jim Zhong², Chris Hammond², Oliver Hulson²

*Joint first author

¹ School of Medicine, University of Leeds

² Department of Diagnostic and Interventional Radiology, Leeds Teaching Hospitals NHS Trust, Leeds, UK

OBJECTIVE: The current guidance on the pre-procedural consent from the General Medical Council recommends a two-stage process. In many interventional radiology (IR) departments, patients are consented on the same day of their procedure, often immediately prior to their procedure, in breach of GMC guidance. The aim of this two-cycle audit was to evaluate patients' perspectives on consenting processes in an IR department. **METHODS:** A prospective audit was carried out between December – March 2016 (cycle 1), and March – August 2021 (cycle 2). Patients were invited to complete a questionnaire after they were consented for IR procedures (angiographic and US guided interventions). Patients self-rated their understanding of the procedure and its risks and benefits before- and after consent on a Likert scale from 0 (no understanding) to 5 (full understanding). Patients also rated their overall satisfaction level with the consent process and were asked their preferences for additional face-to-face or virtual consenting appointment pre-procedure. **RESULTS:** A total of 345 questionnaires were completed: 194 patients in cycle 1 and 151 in cycle 2. The median age of patients was 63 years (range: 21-83). 222 patients (64%) were undergoing the procedure for the first time. Overall, patients felt that they had enough time to weigh up risks (90%, n=312/345), did not receive information during consent that they were unaware of beforehand (65%, n=223/345) and were satisfied with the consent process (92%, n=316/345). Most of the patients did not desire a separate consent appointment pre-procedure (89%, n=134/154). **CONCLUSION:** Despite clinicians' concerns and GMC guidance, the majority of patients feel the current consent processes are satisfactory and do not want an additional consultation for consenting.

22. **QUALITY OF ULTRASONOGRAPHY FINDINGS IN BILIARY OBSTRUCTION WITH POSITIVE MRCP SCAN.**

Yi Wah Wong¹

¹ Department of Respiratory Medicine, Pinderfields General Hospital, Mid Yorkshire Hospitals NHS Trust, United Kingdom

BACKGROUND: Abdominal ultrasound is often the first line investigation for biliary obstruction. However, sensitivity of abdominal ultrasound in detecting extrahepatic biliary dilatation secondary to biliary obstruction can be affected by operator and patient factors. The Royal College of Radiologists (RCR) recommended that where magnetic resonance cholangiopancreatography (MRCP) demonstrates common bile duct (CBD) dilatation, at least 90% of abdominal ultrasound performed beforehand should identify this. This audit is performed to investigate this in a district general hospital. **METHODS:** All MRCP performed between 15th July 2021 to 31st December 2021 were screened. Only MRCP with evidence of biliary dilatation were included. Among this cohort of patients, reports of abdominal ultrasound performed prior to MRCP were obtained and reviewed. The report should contain specific comments on presence or absence of extrahepatic biliary dilatation, cause of dilatation if known and recommendation for further imaging or referral if required. **RESULTS:** A total of 74 patients who fitted the predetermined criteria were included in this audit. Among these patients, sensitivity of abdominal ultrasound in detecting biliary dilatation is 82.4% (n=61). 4.1% (n=3) had identifiable cause of biliary dilatation, with all three due to presence of CBD stones. All ultrasound reports, (n=74) commented on the presence or absence of extrahepatic dilatation and 45.9% (n=34) documented recommendations for further actions in ultrasound report. **CONCLUSION:** Abdominal ultrasound is sensitive in identifying biliary dilatation, but has limited use in identifying its cause. The overall quality of ultrasound abdominal performed in this DGH is satisfactory.

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Poster Session

01. EPIDEMIOLOGIC ANALYSIS OF SERPENT INJURIES IN PIAUÍ BETWEEN THE YEARS OF 2012 and 2022

Ingrid Brandão Cardoso Paz¹, João Victor Carvalho Barbosa¹, Julliana Emily Matos e Silva¹, Luana Mazza Malta¹, Deodato Narciso de Oliveira Castro Neto¹.

¹ Federal University of the Delta of Piauí

INTRODUCTION: Serpent accidents are present all over Brazil, and are related to a great number of injuries that represent high morbidity and mortality. These events are considered by WHO as neglected diseases, due to its higher frequency in low socioeconomic status regions, poor populations from rural areas. Thus, it is configured as a public health issue that must be discussed. **OBJECTIVES:** To analyze the epidemiological profile of serpent accidents in Piauí between the years of 2012 to 2022. **METHODS:** This is a quantitative epidemiological study, with secondary data from DATASUS, through the Mortality Information System. The collected data about serpent accidents in Piauí in the years between 2012 and 2022 were analyzed by type of accident, evolution according to the type of accident from venomous animal, type of serpent and evolution according to the type of serpent accident. **RESULTS:** Between the years of 2012 and 2022, there were 31.876 accidents by venomous animals in Piauí, from which 9,2% (n = 2.876) happened by serpents. Among the accidents by venomous animals, serpents are the most lethal animals, with 0,59% (n = 17) fatality rate by number of accidents, followed by spiders, with 0,209% (n = 3). Specifically about spiders, the Bothrops gender is the one with the highest accident rate, with 38,49% (n = 1107), followed by white, with 25,73% (n = 740), followed by Crotalus, with 23,01% (n = 662). In addition, when it comes to lethality among serpents, the Crotalus gender has 0,9% (n = 6), followed by Bothrops, with 0,54% (n = 6). **CONCLUSION:** In spite of the low prevalence of serpent accidents, they represent the highest mortality rate. In addition, the Bothrops gender serpents are the ones responsible for the highest number of accidents, but the Crotalus gender is the most lethal one, reaffirming literature consensus. In this scenario, it is important to highlight the need of more researches in the area, due to the underreporting of the accidents, with the aim to estimate the real picture and guide public policies of prevention of serpent attacks, lowering the local mortality rate by these animals. Furthermore, it is valid to raise awareness to these accidents and how to manage the first aid in these occasions, in order to reduce the mortality of serpent attacks.

02. **TREATMENT WITH RIOCIQUAT IN A HIGH-RISK SURGICAL PATIENT WITH CHRONIC THROMBOEMBOLIC PULMONARY HYPERTENSION (CTEPH): CASE REPORT**

Camila Maria Coelho Moura¹, Antônia Marcia Souza Cardoso¹, Paulo Airton Cordeiro de Souza Júnior¹, Regiane Maria Batista Costa¹, Paulo Antônio de Morais Faleiros².

¹ Satate University of Piauí

² specialist in pulmonology by the Brazilian Society of Pulmonology and Tisiology.

INTRODUCTION: Pulmonary Hypertension (PH) is a hemodynamic state defined by the increase in mean pulmonary artery pressure (MPAP) during right heart catheterization (RCC). It is a finding commonly found in the daily life of cardiologists, being identified through echocardiograms (ECO). It can be subdivided into five classes, according to the Venice classification, with chronic thromboembolic pulmonary hypertension (CTEPH) being a rare form of the disease. The treatment of pulmonary hypertension involves monitoring different biological parameters and, according to recent articles, the use of soluble guanylate cyclase stimulators, such as Riociguat, and surgical intervention. **CASE REPORT:** A 85-year-old woman attended the pulmonologist in 2017 with complaints of asthenia and dyspnea for about 4 months. She denied cough, fever, nasal and joint symptoms, lack of concentration and daytime sleepiness. She denied smoking, however she used a wood stove for many years. Previous history of Diabetes Mellitus. On physical examination, normal respiratory and cardiac auscultation, Blood Pressure 120 x 80 mmHg, Heart Rate 92 bpm, Saturation of 88% in ambient air and spirometry with mild restrictive respiratory disorder (forced ventilatory capacity of 75%). She had a previous ECHO with a diagnosis of significant PH, showing Pulmonary Artery Systolic Pressure (PASP) of 77 mmHg. Some tests were requested, which the patient only underwent in 2018, especially pulmonary artery computed tomography angiography, with signs of PH and a fine linear thrombus isolated in the right inferior lobar artery, suspected of chronic Pulmonary Thromboembolism (PTE). After the examination, the use of oral anticoagulant Xarelto 20 mg was started. A new ECHO was performed, with PASP of 60 mmHg, ejection fraction of 69%, altered right ventricular (RV) diastolic fraction, moderate tricuspid regurgitation and slight increase in the right atrium and RV. Later, still in 2018, due to progressive dyspnea, a Ventilation Perfusion (V/Q) Scintigraphy was requested, which, after finding changes compatible with chronic PTE, was prescribed a RCC that found moderate pulmonary hypertension (PMAP 36 mmHg). The diagnostic hypothesis was CTEPH and, as she was a high-risk surgical patient and because she refused surgery, pharmacological treatment with Riociguat was chosen, which started only in 2019. She is currently using Xarelto and Riociguat, so that the degree of dyspnea improved considerably after using the medication, going from level 3 to level 1 according to the modified Medical Research Council (mMRC) scale and the PASP significantly reduced up to 38 mmHg. **FINAL CONSIDERATIONS:** The use of Riociguat provided a good evolution of the patient's dyspneic clinical status and quality of life, evidencing hemodynamic results consistent with the expected outcome of this medication, especially in pulmonary vascular resistance and mean pulmonary artery pressure.

03. **EPIDEMIOLOGICAL PROFILE OF MATERNAL DEATH CASES OF WOMEN OF FERTILE AGE IN THE STATE OF PIAUÍ (2010-2020)**

Ludmila Carvalho de Araújo¹, Suyanne Victoria Pereira Fonseca¹, Sara Cristina Saraiva Batista Diniz¹, Thicianne Reis Soares¹, Bianca Holanda Ladeira¹, Klégea Maria Cância Ramos Cantinho¹.

¹ Differential Integral Faculty.

INTRODUCTION: Maternal mortality is defined as the death of a woman during pregnancy or within 42 days of termination of pregnancy, regardless of the duration or location of the pregnancy. It is one of the most serious violations of human rights, since its causes are avoidable in 92% of cases. Among its causes, hypertension, hemorrhages and sepsis can be highlighted as the main ones.

OBJECTIVES: To analyze the epidemiological profile of cases of maternal deaths of women of childbearing age in the state of Piauí, from 2010 to 2020. **METHODS:** A retrospective longitudinal study was carried out, of a descriptive nature, with a quantitative and qualitative approach. Data were obtained from the Mortality Information System (SIM/SUS) - DATASUS in the state of Piauí in the period from 2010 to 2020, totaling 11 years. The following variables were analyzed: total number of cases, place of occurrence, age group, schooling, color/race and period of pregnancy/puerperium. **RESULTS:** During the study period, 11,307 cases of maternal deaths of women of childbearing age were reported in the state of Piauí. Of these, 7,517 (66.48%) occurred during childbirth. The predominant age group was 40 to 49 years old, with 4,931 cases (43.61%). Of the cases, 7,667 (67.81%) were brown, 1,979 (17.50%) were white, 932 (8.24%) were black and 6 (0.05%) were indigenous. As for education, 2,611 (23.09%) of the cases attended school up to 7 years of age, having incomplete education. **CONCLUSION:** Therefore, the profile analyzed showed a predominance of the age group from 40 to 49 years old, of mixed race and with incomplete elementary education. The study made it possible to understand the pattern of deaths and its relationship with the level of education and the most predominant age group.

04. **EPIDEMIOLOGICAL PROFILE OF CASES OF INTERPERSONAL/SELF-PROVOTED VIOLENCE IN THE STATE OF PIAUÍ OVER 5 YEARS**

Ludmila Carvalho de Araújo¹, Bianca Holanda Ladeira¹, Nagilla Ferraz Lima Verde¹, Francisco Arlen Silva Rodrigues¹, Letícia Ferreira Lessa¹, Klégea Maria Cândio Ramos Cantinho¹.

¹ Differential Integral Faculty

INTRODUCTION: The World Health Organization defines violence as the intentional use of physical force, threatened or actual, against oneself, another individual, or group, which can result in injury, psychological harm and death. Currently, it is a public health problem that requires from health professionals an ethical and careful attitude towards the victim and their families. **OBJECTIVES:** To analyze the epidemiological profile of cases of interpersonal/self-inflicted violence in the state of Piauí, from 2017 to 2021. **METHODS:** A retrospective, descriptive longitudinal study with a quantitative qualitative approach was carried out. Data were obtained from the Notifiable Diseases Information System (SINAN/SUS) - DATASUS in the state of Piauí in the period from 2017 to 2021, totaling 5 years. The following variables were analyzed: total number of cases, sex, education, race, author's life cycle and place of occurrence. **RESULTS:** During the study period, 17,040 cases of interpersonal/self-inflicted violence were reported. 12,115 (71%) were female and 4,921 (28.9%) were male. As for education, 5,837 (24.2%) had the data ignored at the time of filling, being from the 5th to 8th incomplete grades of elementary school, which prevailed with 2,208 (12.9%). Of the cases, 10,618 (62.3%) were of mixed race, 3,541 (19.6%) also had the data ignored when filling in the notification form, 1,539 (9%) were of white race, 1,193 (7%) were the black race and 34 (0.2%) belonged to the indigenous race. As for the author's life cycle, 10,843 (63.6%) had the data ignored when filling out the notification form, 2,990 (17.5%) were adults, 1,520 (8.9%) were young people, 1,321 (7.7%) were adolescents, 192 (1.1%) were children and 174 (1%) were elderly people. Of the cases, 11,242 (66%) had the residence as the place of occurrence. **CONCLUSION:** The study demonstrates that there has been a growing increase in interpersonal/self-inflicted violence in the State of Piauí. As for the victims, there was a predominance of females, adults, of mixed race and people with incomplete education, as for the place of occurrence, it occurred in greater numbers in homes. The study allowed us to understand the pattern of violence and its relationship with the social conditions in the territory over time. Thus, knowing the epidemiological situation, it is possible to concentrate efforts, sounding alert for the necessary interventions.

05. **EPIDEMIOLOGICAL PROFILE OF PATIENTS WITH SYPHILIS ACQUIRED IN PIAUÍ**

João Victor Costa Uchôa¹, Manuela Luiza de Souza Fernandes¹, Ana Leticia Almendra Freitas do Rego Monteiro¹, Julia Pessoa Portela de Sá¹, Josielly Ferreira Bacelar¹, Augusto César Evelin Rodrigues².

¹ Academics of the Medical course. Unifacid/Teresina-Pi University Center

² Professor of Medical School. Unifacid/Teresina-Pi University Center

INTRODUCTION: Syphilis is an infectious and compulsory-notifying disease, whose etiological agent is the bacterium *Treponema pallidum* of the spirochete class. **OBJECTIVE:** To trace the epidemiological profile of syphilis acquired in the state of Piauí, from 2011 to 2021. **METHODS:** This is an epidemiological, documentary and quantitative study of exploratory, descriptive and retrospective nature, based on data obtained from syphilis cases acquired in SINAN-DATASUS in the period from 2011 to 2021, where the following variables were analyzed: gender, age group, race, schooling and case evolution. **RESULTS:** In the period studied, 3,784 cases of syphilis acquired in the state of Piauí were reported. Of these, 2,165 (57.2%) occurred in males. The prevalent age group was 20 to 39 years, with 2,146 cases (56.7%). The brown race was the most prevalent, with 2,669 cases (70.5%). Regarding education, individuals with complete high school had a higher prevalence of 679 cases (17.9%). Regarding the evolution of the disease, 2,052 cases (54.22%) obtained cure and only 2 cases (0.052%) died from the reported disease and 1,722 cases (45.5%) of the notifications had this information ignored. The year 2019 represents the peak of notifications, with 1,134 cases (29.96%). **DISCUSSION:** Data analysis showed that the most affected group were men, aged 20 to 39 years. A fact corroborated by this group seeking less health service and having greater risky sexual behavior. The brown race prevails in relation to the others due to cultural, environmental and historical factors of the population of Piau. Moreover, low schooling implies an increased risk of contracting syphilis because, in this group, there is greater difficulty in adhering to condom use and prevention campaigns. The few evolutions to death can demonstrate the efficiency of care to patients with acquired syphilis, the ease of access to rapid tests and treatment, and with this, the interruption of the transmission cycle. Regarding evolution, there was a significant growth in syphilis cases, reaching a peak in 2019, given the improvement of epidemiological surveillance, with reduced underreporting and an increase in the number of infected people. **CONCLUSION:** The knowledge of the epidemiological profile of acquired syphilis is an important indicator of public health, given that from it measures to control the disease are proposed.

06. **BOUVERET SYNDROME: CASE REPORT**

Yaskara Raissa De Pádua Sampaio¹, Anderson Martins Dantas¹, Iran Batista De Brito¹, Isadora Rênia Lucena Oliveira¹, Heitor Rodrigues Lobo¹, Thiago Pereira Diniz¹.

¹ State University of Piauí

INTRODUCTION: Bouveret syndrome (BS) is a rare form of duodenal obstruction, caused by the passage and impaction of a large gallstone through a cholecysto-duodenal fistula, resulting in gastric outlet obstruction. Predominantly, it occurs in elderly women, with a mean age of 70-75 years. The clinical picture is nonspecific, being commonly reported as a triad of epigastric pain, nausea and vomiting. Classically, the diagnosis is made through imaging tests, such as simple abdominal radiography, computed tomography of the abdomen and upper gastrointestinal endoscopy. Therapy consists of surgical intervention by enterolithotomy or stone extraction by gastrotomy, cholecystectomy and simultaneous repair of the fistula. In cases of patients with higher surgical risk, endoscopic or percutaneous methods have been described for treatment. **CASE REPORT:** A 70-year-old male patient with a previous history of recurrent cholecystitis was admitted to the emergency department with hematemesis that had started 48 hours before. Upper digestive videoendoscopy was performed, in which esophageal stasis, "Mallory-Weiss" type lacerations and pyloric obstruction by stone were visualized. After several unsuccessful attempts to mobilize and remove the calculus, the patient was referred for laparoscopic surgery (gastrostomy + gastrorrhaphy). **FINAL CONSIDERATIONS:** It is important to highlight that, despite being rare, BS is associated with a non-negligible mortality rate (15%), and an adequate diagnosis and therapeutic approach are essential to avoid the high morbidity and mortality inherent to the syndrome.

07. **PULMONARY ATRESIA WITH INTACT INTERVENTRICULAR SEPTUM: A CASE REPORT**

Mariana de Souza Arêa Leão¹, Manuela de Souza Arêa Leão¹, Débora Medeiros Carvalho¹, Ana Leticia Freitas Andrade do Rego Monteiro¹, Maria Eduarda de Souza Arêa Leão¹, Marcelo Moreira Arêa Leão¹.

¹ University Center Faculty Integral Differential

INTRODUCTION: Pulmonary atresia is a severe heart disease characterized by occlusion of the pulmonary valve and involvement of the right ventricle. This pathology is responsible for preventing the passage of blood from the right ventricle to the pulmonary artery. It can be divided into two groups: with intact interventricular septum or with interventricular communication. In pulmonary atresia with an intact septum, the entire right side of the heart is affected, because there is tricuspid valve dysfunction and underdevelopment of the right ventricle. **CASE REPORT:** Female, 4 years old, Recife. Presented cyanosis since birth and was discharged from hospital on the 2nd day of life. During a routine consultation, in the first month of life, a continuous murmur was auscultated in the left sternal border and the patient was referred for evaluation with a pediatric cardiologist, who requested a Doppler echocardiogram: congenital heart disease, severe hypoplasia of the tricuspid valve and pulmonary trunk, hypoplasia and hypertrophy of the right ventricle, pulmonary atresia, and presence of ductus arteriosus. Pulmonary atresia with an intact interventricular septum was diagnosed, and a non surgical approach was chosen for the moment, maintaining a biweekly evaluation. Two months later, a diagnostic catheterization was performed for a new surgical discussion and it was decided to perform a central pulmonary systemic shunt and ligation of the ductus arteriosus, being prescribed after discharge furosemide and digoxin. After one month, a new echocardiogram was performed, showing high pressures in the pulmonary artery and increased left ventricular volume, and it was decided to perform the bicaval Glenn procedure and central shunt ligation. The patient was discharged with a referral for clinical follow-up and programming for subsequent Fontan surgery, which was unsuccessful, with multiple organ failure and cardiogenic shock. **FINAL CONSIDERATIONS:** For the heart disease, the protocol of drug treatment was verified, followed by cardiac catheterization and central and Glenn shunt surgery. Due to the critical evolution, it was also performed the Fontan procedure analogous to univentricular correction, but this technique in evolution, has many complications, especially in cases of late follow-up and deficit in the individual assessment of the patient, and in the absence of surgical success, Fontan failure occurs, as in the aforementioned case.

08. **8. EPIDEMIOLOGIC PROFILE OF DEATHS SECONDARY TO MALIGNANT NEOPLASIA OF THE PANCREAS IN THE STATE OF PIAUÍ FROM 2015 TO 2019**

Bárbara de Alencar Nepomuceno¹, Beatriz Bandeira Mota¹, Belquior Gomes de Aguiar Filho¹, Felipe de Jesus Machado¹, Bruno Gusmão Menezes de Aguiar¹.

¹ University Center Uninovafapi

INTRODUCTION: The high mortality rate due to malignant neoplasm of the pancreas is attributed to its biological aspects, as well as difficulties in early diagnosis and the lack of guidelines for effective evaluation of suspected cases in early stages. Despite the identification of some risk factors, the causes of the disease are still not fully known, which makes the understanding of its epidemiology essential for the development of intervention strategies.

OBJECTIVES: To demonstrate the epidemiological characteristics related to the number of deaths resulting from malignant neoplasm of the pancreas in the state of Piauí between the years 2015 and 2019.

METHODS: This is a retrospective, observational and descriptive study carried out from epidemiological data from the System Information on Mortality (SIM) for the state of Piauí, covering the period from 2015 to 2019. According to Resolution No. 510, of April 7, 2016, of the National Health Council, it was not necessary to submit the work to the Committee of Research Ethics. **RESULTS:** From 2015 to 2019, a total of 483 deaths secondary to malignant neoplasm of the pancreas were recorded in Piauí. Of these, 53.83% occurred among males, and 46.17% among females. Of the total number of deaths, individuals aged between 70 and 79 years made up the most affected group, representing 28.57% of the cases. It was also observed that 302 patients were of mixed color/race and that 138 had no level of education. Among the investigated period, the year in which the highest number of deaths was found was 2019, totalizing 116 deaths. **CONCLUSION:** The analysis of the data obtained allows us to affirm that male individuals, of mixed race and aged between 70 and 79 years old constitute the groups with the highest number of deaths secondary to malignant pancreatic neoplasia in Piauí, in the period of 2015 to 2019. It is worth noting that, sometimes, the lack of knowledge about the disease and/or the difficulty in accessing health services can contribute to the delay in the diagnosis and treatment of the disease, resulting in death. Therefore, knowledge about the epidemiological profile of the affected population is of great importance, as it serves as a subsidy for the planning and implementation of effective and targeted interventions.

09. **ACUTE INTERMITTENT PORPHYRIA, RARE DIFFERENTIAL DIAGNOSIS OF ABDOMINAL PAIN: CASE REPORT**

Paulo Airton Cordeiro de Souza Júnior¹, Marcus Vinicius Costa Fernandes¹, Lucas de Paiva Donato Gonçalves¹, Classira Viveiros Lima², Marcelo Cunha Lima³.

¹ Student of the Federal University of Piauí

² resident at the university hospital of the Federal University of Piauí

³ Physician at the university hospital of the Federal University of Piauí

INTRODUCTION: Porphyria encompasses a group of diseases resulting from excess porphyrins and their precursors, components of hemoproteins, such as hemoglobin. It is classified into two groups: (1) acute and non-acute and (2) cutaneous and non-cutaneous, with acute intermittent porphyria (AIP) belonging to non cutaneous manifestations, with a prevalence of 5:100,000. The diagnosis of acute porphyria is obtained from the high dosage of porphobilinogen (PBG) in a urine sample. Treatment can be started before classifying the type of acute porphyria, with some exceptions. In AIP crises, symptomatic control is done, along with suspension of porphyrinogenic drugs, high glucose intake, use of heme or heme arginate, depending on the severity. **CASE REPORT:** Patient R.S.M., female, 20 years old, from União - Piauí, presented, in April 2022, with intense and diffuse abdominal pain after alcoholic libation, requiring the use of opioids for analgesia. Transferred to the University Hospital (HU) for etiological investigation on 04/27/22. Admitted with diffuse abdominal pain without signs of peritonism and vomiting, lasting 2 weeks, elevation of pancreatic and liver enzymes, mild hyponatremia, moderate thrombocytopenia, tachycardia and arterial hypertension. She denied fever, chest pain or altered level of consciousness. An abdominal tomography (04/29/22) showed mild homogeneous splenomegaly. In family history, record of an uncle diagnosed with porphyria. After the hypothesis of AIP, a qualitative test of PBG was requested in an isolated urine sample (11/05/22), with a positive result, in addition to a genetic test (25/05/22), confirming AIP. While waiting for the PBG result, treatment with venous and oral glucose overload was started. After confirming the hypothesis, we requested the gold standard treatment for AIP – the derivative of the heme group HEMATIN. Given its unavailability, treatment with glucose overload was maintained, with progressive opioid (morphine) weaning according to clinical/laboratory improvement. On 05/26/22, the qualitative PBG test was requested (due to the unavailability of a quantitative test) and the result was negative. After transition from analgesia to the oral route and improvement of clinical parameters, although with mild abdominal pain, the patient was discharged and is awaiting HEMATIN. **FINAL CONSIDERATIONS:** Porphyria should be remembered as a differential diagnosis of abdominal pain, combined with the greater availability of gold-standard tests and medications.

10. **BEHAVIORIAL AND MENTAL DISORDERS HOSPITALIZATIONS SECONDARY TO THE USE OF ALCOHOL IN THE STATE OF PIAUÍ FROM 2016 TO 2019: AN EPIDEMIOLOGIC STUDY**

Bárbara de Alencar Nepomuceno¹, Beatriz Bandeira Mota¹, Felipe de Jesus Machado¹, Mariana Barboza de Andrade¹, Susy Canuto de Oliveira Fenelon¹, Bruno Gusmão Menezes de Aguiar¹.

¹ University Center Uninovafapi

INTRODUCTION: Disorders originated from alcohol use are frequent in developed countries and have lower, but still substantial, rates in countries under development, in addition to being more common in men than in women. Despite their high prevalence, they are underdiagnosed and undertreated due to the lack of effective triage by primary health care, as well as the stigma related to patients affected by it. **OBJECTIVES:** To identify the epidemiological characteristics related to mental and behavioral disorders due to alcohol use in Piauí between the years 2016 and 2019. **METHODS:** This is a retrospective, observational and descriptive study based on epidemiological data from the SUS Hospital Information System (SIH/SUS) referring to the state of Piauí, englobing the period from 2016 to 2019. According to Resolution No. 510, of April 7, 2016, of the National Health Council, it was not necessary to submit this paper to the Research Ethics Committee. **RESULTS:** There were 1,382 hospitalizations secondary to mental and behavioral disorders due to alcohol use in Piauí, from 2016 to 2019. In this scenario, there were 445 hospitalizations in 2019 and, in 2016, 273 hospitalizations, which correspond to the highest and lowest total number of cases per year, respectively. Regarding the profile of patients, individuals between 45 and 49 years old are part of the most affected age group, totalizing 217 hospitalizations. It was also observed that there was a predominance of males, corresponding to 89.65% of the cases. The data showed that the mixed-race population had the highest rate of hospitalizations, accounting for 88.9% of the total. **CONCLUSION:** The analysis of the data obtained allows us to affirm that male individuals, of mixed race and aged between 45 and 49 years old are the groups with the highest number of hospitalizations secondary to mental and behavioral disorders due to alcohol use in the state of Piauí, from 2016 to 2019. In this context, despite the stigma intrinsically related to the condition, the epidemiological knowledge of the groups involved is of fundamental importance so that effective intervention activities are carried out by the health teams.

11. **EPIDEMIOLOGICAL DESCRIPTION OF PRENATAL CARE AND TREATMENT OF CONGENITAL SYPHILIS IN THE STATE OF PIAUÍ**

Leticia Raquel Machado Lima¹, Gustavo Henrique Silva Rocha¹, Maria Eduarda Paulo Paes Landim de Moura¹, Ana Maria Costa Alves¹, Bianca Lorena Farias Mendes¹, Renandro de Carvalho Reis².

¹ Student of Centro Universitário Uninovafapi

² Teacher of Centro Universitário Uninovafapi

INTRODUCTION: Syphilis is a sexually transmitted infection caused by the bacterium *Treponema pallidum*, potentially serious for the fetus and newborn, in case of inadequate treatment of infected pregnant women, promoting vertical transmission of the disease. Therefore, screening during prenatal care is crucial for early diagnosis, adequate treatment and prevention of mother-to-child transmission. In this sense, the recent increase in cases of Congenital Syphilis in Piauí requires an epidemiological study of this disease. **OBJECTIVES:** To report the cases of congenital syphilis in Piauí, from 2017 to 2021. **METHODS:** The research was a descriptive, retrospective and quantitative epidemiological study, which used secondary data from theof Notifiable Diseases Information (SINAN), available in the DATASUS database, in the period from 2017 to 2021, in the state of Piauí. The three variables addressed for the topic Congenital Syphilis were prenatal care, time of diagnosis of maternal syphilis and treatment of partners of diagnosed pregnant women. **RESULTS:** From the research with the variables in the DATASUS platform, the total number of cases of congenital syphilis found in Piauí, in the determined period, was 1649. Of these, 86.6% of the cases had prenatal care, 11.6% did not take place and the rest were unreported cases. Regarding the time of diagnosis of maternal syphilis, 61% occurred during prenatal care, 32.4% was at the time of delivery or curettage and 14.5% was after delivery, with the excess being cases in which there was no diagnosis maternal. The last variable revealed that in only 33,83% of the cases of congenital syphilis the partners were treated, in 51.42% of the cases the partner was not treated, and the remaining percentage are cases without this information. **CONCLUSION:** The expressive number of diagnoses of maternal syphilis made during childbirth, or after, reflects a probable failure in prenatal screening for the disease, either due to reinfections, or due to abandonment or inadequate follow-up of treatment by pregnant women, although most of them had prenatal care. In addition, there was a low adherence of partners to the treatment of syphilis, which may contribute to the reinfection of pregnant women and an increase in cases of congenital syphilis.

12. **IMPACT OF THE COVID-19 PANDEMIC ON THE DIAGNOSIS OF MELANOMA IN PIAUÍ: EPIDEMIOLOGICAL ANALYSIS**

Virna de Moraes Brandão¹, Denise Coelho de Almeida¹, Silmara Ferreira de Oliveira¹, Amanda Tauana Oliveira e Silva².

¹ Uninovafapi University Center | Afya

² Unifacid University Center

INTRODUCTION: Melanoma skin cancer (MSC) is the main fatal skin-related disease. Since 12% of patients with metastatic melanoma survive more than five years, the chance of curing this disease is directly related to diagnosis and treatment early in its development.

OBJECTIVES: To compare the epidemiological and clinical profile of MPS cases diagnosed in Piauí before and during the pandemic.

METHODS: This is a descriptive epidemiological study with a quantitative approach. For this, we used the data made available by the Department of Informatics of the Unified Health System (DATASUS). It was made a comparison of cases diagnosed before the pandemic, from 2018 to 2019, and during the pandemic, from 2020 to 2021. The diagnoses were analyzed by year, sex, age group and staging. **RESULTS:** In the period between 2018 and 2021, 103 cases of MPS were diagnosed in Piauí, and of these, 64 cases were diagnosed in 2018 and 2019, the period before the pandemic. In 2020 and 2021, 29 and 10 cases were diagnosed, respectively, demonstrating a 39.0% reduction in CPM diagnoses in the two years after the beginning of the covid-19 pandemic. Regarding sex and age, the profile observed was the same among cases diagnosed before and after the pandemic, with a prevalence of males (58/56.3%) aged between 60 and 69 years (26/25.2 %), followed by the age group between 70 and 79 years (24/23.3%). Regarding staging, there was no change in profile before and during the pandemic; stage 4 predominated, with 32 cases (31.0%), with no change in profile before and during the pandemic. The large percentage of ignored data regarding staging (54/52.4%) is also noteworthy, which may compromise the analysis of this variable. **CONCLUSION:** It is concluded that there was a gradual decrease in the number of MPS diagnoses in the years after the beginning of the pandemic, especially in 2021, which may be related to the periods of outbreaks that occurred this year. The covid-19 pandemic impacted the daily life of humanity and the world health system, influencing the tracking, diagnostic investigation and treatment of diseases, a fact that was also observed in Piauí, among the diagnosed cases of MPS in this period.

13. **DEATH FROM PARACOCIDIOIDOMYCOSIS IN THE NORTHEAST REGION: EPIDEMIOLOGICAL ANALYSIS**

Virna de Moraes Brandão¹, Denise Coelho de Almeida¹, Silmara Ferreira de Oliveira¹, Amanda Tauana Oliveira e Silva².

¹ Uninovafapi University Center | Afya

² Unifacid University Center

INTRODUCTION: Paracoccidioidomycosis (PCM) is a systemic mycosis, with a geographic distribution limited to the Americas, with a predilection for Latin American countries and whose etiologic agent is the dimorphic fungus *Paracoccidioides brasiliensis*. **OBJECTIVES:** To verify the epidemiological profile of PCM deaths in the northeast region from 2000 to 2020. **METHODS:** This is a descriptive epidemiological study with a quantitative approach. For this, data made from the Department of Informatics of the Unified Health System (DATASUS) were used. The following variables were analyzed: deaths per year and per federation unit (FU), sex, color or race, age group, schooling, marital status and place of occurrence. **RESULTS:** Between 2000 and 2020, there were 74 deaths from PCM in the Northeast region, being uniform over the years. The state with the highest prevalence of deaths was Maranhão, with 30 cases (40.5%), followed by Bahia with 22 cases (40.8%). Men constituted the vast majority, with 64 deaths (88.8%), and the predominant race was brown, with 48 cases (64.8%). Regarding the age group, the groups from 50 to 59 years old prevailed, with 19 cases, and from 40 to 49 years old, with 17 cases, corresponding to 48.6% of the total number of deaths. Regarding education, most of the registered cases had only 1 to 3 years of study (18 cases) and 4 to 7 years (18 cases), corresponding to 48.6% of the total records. In addition, 13 deaths were of people with no education, in addition to 22 deaths with unknown records. Regarding marital status, singles predominated, with 32 cases 43.2%. The most common place of occurrence of deaths was the hospital, with 70 records, corresponding to 94.6% of all cases. **CONCLUSION:** The present study explains that during the period analyzed, the Northeast region presented a worrying number of cases of deaths from paracoccidioidomycosis. Furthermore, it was observed that the epidemiological profile was of men, hospitalized, single, with little schooling and of mixed race, thus reinforcing the need to expand educational policies to prevent the disease for this sample of the population. The importance of health promotion, prevention, and ensuring effective treatment for patients is notorious.

14. **EPIDEMIOLOGICAL ANALYSIS OF EXOGENOUS POISONING IN CHILDREN AND ADOLESCENTS IN THE STATE OF PIAUÍ FROM 2017 TO 2021**

Francisco Augusto Coelho da Silva¹, Lorena Kelly Fernandes de Carvalho², Daniella Clarisse Pereira Brito², Snayla Natyele Costa Fernandes², Maria Eduarda Farias de Carvalho³, Antônio Tiago da Silva Souza⁴.

¹ Federal University of Piau

² Uninovafapi University Center

³ UniFacid University Center

⁴ State University of Piau

INTRODUCTION: Exogenous poisoning is configured as a biological imbalance due to harmful agents that can manifest in a clinical and/or laboratory manner, causing harmful effects to the body. **OBJECTIVES:** To know epidemiological aspects of cases of exogenous poisoning in children and adolescents reported in the state of Piau from 2017 to 2021. **METHODS:** Descriptive, documentary, epidemiological study with a quantitative approach using data compiled from the Notifiable Diseases Information System of the Ministry of Health and the Department of Informatics of the Unified Health System. Cases of exogenous poisoning in children and adolescents in Piau were evaluated in the period from 2017 to 2021 around the selected variables: sex, age group, toxic agent, circumstances, final classification and evolution. **RESULTS:** After analyzing the data obtained, 3536 cases of exogenous poisoning were reported in children and adolescents in Piau during this period, an average of 707.2 cases/year, 1603 in children aged 0 to 9 years and 1933 in adolescents aged 10 to 19 years. A higher amount of notification was observed in females (62.36%, n=2205), which is very much associated with suicidal attitudes in young women. The age group of 15-19 years predominated (40.30%, n=1425), which may be linked to suicidal behaviors, related to the transformations that occur in this period and the presence of risk factors, and 0-4 years (36.60%, n=1294), which may be related to accidental poisoning, associated with curiosity and exploration of environments, typical of this phase. Medications as the main toxic agent (59.22%, n=2094) may be associated with self-medication, abusive use, individual accident, suicide attempt and therapeutic use. As for the circumstances, violence/homicide (37.31%, n=598) predominated in children, differing from several studies, and suicide attempt (65.39%, n=1264) in adolescents. Regarding the final classification, most notifications had confirmed intoxication (61.96%, n=2191). Regarding the evolution, there was a predominance of healing without sequelae (64.20%, n=2270). **CONCLUSION:** Considering the analyzed data, exogenous poisoning remains an obstacle in Piau, which reinforces the importance of managers in the development of actions aimed at preventing new cases, with population awareness and rational use of medicines. Furthermore, it is essential to train professionals to improve the notification of this condition.

15. **SACROCOCCYGEOUS TERATOMA TYPE IV DIFFERENTIAL DIAGNOSIS WITH LYMPHATIC MALFORMATION: CASE REPORT**

Yaskara Raissa De Pádua Sampaio¹, Auriane De Sousa Alencar¹, Selinaldo Amorim Bezerra¹, Edinaldo Gonçalves De Miranda¹, Francisco Tiago De Sousa Amaral¹, Ivo Lima Viana¹.

¹ State University of Piauí

INTRODUCTION: Germ cell tumors have a gonadal and extragonadal location, being the second most common in the sacrococcygeal region and having an incidence of one case in every 35000 live births, and may have a solid, multicystic presentation and a single cyst. Age is an important predictor of malignancy when the diagnosis is made at two months the incidence ranges from 7% in girls and 10% in boys after this period increases dramatically to 47% and 67% respectively. Histologically, it can be classified as: immature, mature and with a neoplastic component. It can be classified according to its location, with type IV being the rarest with pre-sacral predominance without significant external presentation or pelvic extension and therefore difficult to diagnose, with constipation being the most common symptom. **CASE REPORT:** 10-month-old patient, born and resident in Teresina - Piauí, with a diagnosis of rectal cyst on morphological ultrasound and a history of intestinal constipation for about two months. On physical examination, no bulging in the sacral region was observed, with alpha fetoprotein measurement with a result of 45.40 and abdominal resonance that showed a multiloculated cystic formation with thin and regular walls located in the ischio-anal and ischiorectal fossa on the right, determining a compressive and contralateral displacement of the rectum without significant enhancement after contrast measuring 2.2 x 3.5 x 4.2 cm as a diagnostic possibility for lymphatic malformation. The patient underwent excision of the multicystic lesion and the coccyx with anatomopathological diagnosis of mature teratoma. **CONCLUSION:** It is important to note that teratoma will not always have an external presentation as in Altman's type IV and may not be diagnosed on physical examination, delaying therapy. Mature teratoma has a cure rate of about 95% when the lesion and the coccyx have their complete surgical resection, and the prognosis will be better when the diagnosis and treatment are earlier to avoid its malignancy.

16. **GUILLAIN BARRÉ SYNDROME AS A COMPLICATION OF DENGUE AND CHIKUNGUNYA: CASE REPORT**

Eulalia Barbosa da Paz Neta¹, Bianca Marques de Sousa¹,
Thiago de Sousa Coelho Porto¹, Marcela Andrade Rodrigues
da Costa¹, Raul Veras Gomes¹, João de Jesus Cantinho Júnior¹.
¹ IDOMED Unifacid University Center

INTRODUCTION: Guillain Barré Syndrome (GBS) is an acute autoimmune inflammatory demyelinating polyradiculoneuropathy. Clinical manifestations are sensory loss, paresis and/or limb plegia, usually symmetrical and hypo or areflexia. It is mainly caused by previous reactions to viral and bacterial infections. Although rare, this syndrome has an increased incidence due to epidemics of arboviruses, such as dengue and chikungunya. **CASE REPORT:** A 56-year-old man started on May 22, 2022, with joint pain, asthenia and fever, with positive serology for dengue. After 1 week he reported onset of foot plegia. On 06/01 he developed severe dyspnea, being referred the next day by the neurologist for immediate hospital admission at the HUT due to signs of hypercapnic acute respiratory failure and electroneuromyography compatible with GBS. He was admitted with unreflexed flaccid tetraparesis and orotracheal intubation was performed on mechanical ventilation (MV), with thick secretions coming out. Head CT was requested, without alterations and serology for Dengue and Chikungunya IgM and IgG reagents and Zika IgM and IgG non-reactive. On the second day of hospitalization, Tazocin was started due to bronchoaspiration pneumonia. In addition, immunoglobulin (Ig) was prescribed after analysis of the cerebrospinal fluid with low cellularity, negative ink, protein orrachia, starting only on the fourth day. On the seventh day, sedoanalgesia was discontinued and a chest X-ray showed consolidation in bilateral hemithorax bases, maintaining the use of Tazocin. On the eighth day, he evolved with cardiorespiratory arrest, which was reversed after 4 minutes. She had a negative tracheal secretion culture, negative blood and urine cultures. Then he was tracheostomized and transferred to the ICU, continued MV and ended the use of Ig. On the tenth day, he evolved with discrete respiratory movements and absence of the cough reflex on aspiration. He started weaning from MV and using Meropenem after a fever, with cervical strength grade 0, weak eye opening to painful stimuli and not responding to commands. He progressed to a severe and hemodynamically stable general condition. **FINAL CONSIDERATIONS:** This case report, as it is a rare syndrome, is of wide relevance for discussion in the academic scenario, since, by recognizing the clinical case and reaching an earlier diagnosis, treatment can be initiated more quickly. agile, to reduce the risks to the patient and accelerate their recovery process.

17. **EPIDEMIOLOGICAL ANALYSIS IN THE HOSPITALIZATIONS OF CANCER SKIN NEOPLASM IN STATE OF PIAUÍ**

Louise Mota da Rocha Sady¹, Frank Castelo Branco Marques Filho¹, Raquel Leal de Melo Medeiros¹, Amanda Tauana Oliveira e Silva¹.

¹ University Unifacid IDOMED

INTRODUCTION: Malignant skin neoplasia is very common around the world, constituting a serious public health problem. Basal cell carcinoma is the most common of the skin carcinomas. Followed by Squamous Cell Carcinoma. Finally, melanoma, which is the least frequent among the main skin carcinomas, but has a higher morbidity and mortality in relation to the others. **OBJECTIVES:** This study aimed to determine the epidemiological profile of Malignant Skin Neoplasia in the state of Piauí, from 2008 to 2021. **METHODS:** An epidemiological, descriptive, demographic study was done. The SUS Hospital Morbidity System, provided by the Information Technology Department of the Unified Health System, was used. An evaluation by the Ethics and Research Committee was not necessary, since these are population-based data. The following variables were selected: Hospitalizations according to year of occurrence, age group, color or race, gender, and state administrative division. **RESULTS:** Between 2008 and 2021, 501 cases of hospitalizations by malignant skin neoplasms were reported, with a higher occurrence in 2008, with 48 hospitalizations (9.58%) and 2018 with 45 hospitalizations (8.98%). As for the age group, most were between 50 and 59 years old, with 98 hospitalizations (19.5%), followed by 60 to 69 years old, with 91 hospitalizations (18.16%). Regarding gender, females had 261 hospitalizations (52.09%) and males had 240 hospitalizations (47.9%). The majority happen in the capital Teresina, with 426 of the hospitalizations (85%). Followed by, the city of Parnaíba with 32 hospitalizations (6.38%). The color/race group that suffered the most was mulatto, with 45 hospitalizations (86.82%). Followed by the white color group, with 12 hospitalizations (2.39%). **CONCLUSION:** Malignant neoplasm of the skin, in Piauí, is an important reason for both men and women, especially between the age of 50 and 69 and of the group skin color "pardos". Being a predominant amount of hospitalizations in the capital Teresina. Therefore, it is clear that malignant skin neoplasm is a serious public health problem. Therefore, it is necessary to reinforce primary cancer prevention measures, and secondary skin cancer prevention measures, such as detection campaigns, especially among brown people residing in the capital Teresina, which, in turn, have levels of exposure to ultraviolet radiation (UV) and a higher incidence. of skin cancer in Piauí.

18. **BODY MASS INDEX IN NORTHEAST PREGNANT WOMEN BETWEEN THE YEARS OF 2018 and 2022**

Marianne Magalhães Fortes¹, Maria das Dores Sousa Nunes¹, Denise Coelho de Almeida¹, Flávia Corado Cavalcante Barros¹, Jailson de Sousa Oliveira Júnior¹, Iluska Guimarães Rodrigues¹.

¹ Uninovafapi University Center

INTRODUCTION: Fetal growth and development may be associated with maternal weight gain. An inadequate supply of nutrients can lead to high rates of infant morbidity and mortality. In this context, the Body Mass Index (BMI), despite differing opinions, it is still an essential tool for determining the nutritional status of pregnant women due to the low cost and great utility in establishment of nutritional modifications. **OBJECTIVES:** Study the BMI of pregnant women in Northeast region of Brazil, between the years 2018 to 2022. **METHODS:** It is a cross-sectional study, Quantitative and Epidemiological Analysis. The data were collected from the System of Food and Nutrition Surveillance. The period analyzed was from 2018 to June 2018 - 2022. The variables studied were: BMI (low weight, adequate, overweight and obesity), age, color/race and education of pregnant women. **RESULTS:** During the period studied, the BMI of a total of 2,556,813 pregnant women in the Northeast region of Brazil was identified. At adult pregnant women of mixed race and with incomplete primary education represent the most common variables in the period from 2018 to 2022. As for BMI, every year studied showed a similar pattern, with a predominance of pregnant women with adequate, followed by overweight, obesity, and underweight, in that order. In the year 2018 pregnant women with adequate BMI corresponded to 37%, while those with overweight corresponded to 28%, with obesity at 18% and those with low weight at 17%. In 2019, the adequate BMI value was 36%, obesity was 19% and the percentages of overweight and underweight were maintained, 18% and 17%, respectively. In 2020, 35% of the pregnant women had an adequate BMI, 29% were overweight, 21% were obese and 15% underweight. The years 2021 and 2022 presented equal percentages in all BMI classifications, with 34% of pregnant women with an adequate index, 29% with overweight, 23% obese and 14% underweight. **CONCLUSION:** The BMI of Northeast pregnant women, between the years 2018 to 2022, was adequate for most of the women studied. This indicates good control of nutrient intake during pregnancy in this population. However, the increase in overweight and pregnant women with obesity are worrying indicators that can lead to changes in the BMI pattern in a recent future and consequently of maternal and fetal morbidity and mortality.

19. **CEREBRAL ASPERGILLOSIS: A CASE REPORT**

Láyla Lorrana de Sousa Costa¹, Anderson Gustavo Santos de Oliveira¹, Cristiane Vieira Amaral¹, Bruno Sampaio Santos¹, Gabriel Felipe Teixeira Freire de Oliveira¹.

¹ State University of Piau

² Getúlio Vargas Hospital / State University of Piau

INTRODUCTION: Cerebral aspergillosis is an invasive infection by fungi of the genus *Aspergillus*, of rare occurrence, with an annual incidence of 12 cases per 1,000,000 inhabitants, commonly associated with immunosuppression. Due to a nonspecific clinical presentation, the diagnosis is usually late, and in the absence of treatment, mortality reaches 90% of those affected. The aim of this report is to present a case of cerebral aspergillosis in an immunocompetent patient. **CASE REPORT:** Male, 58 years old, carpenter, from Brasileira - PI. Six months ago, he started with headache, mental confusion, action tremors in the upper limbs and two generalized tonic-clonic convulsive episodes, being admitted to a tertiary hospital for investigation. Hypertensive for 3 years, without other comorbidities. He denied smoking, drinking, drug abuse or previous infections. On neurological examination, Glasgow 15, phasic, isophotoreactive pupils and absence of motor deficits. The laboratory had normal inflammatory tests and non-reactive viral serologies. Magnetic resonance imaging (MRI) of the skull showed an extra-axial solid expansive lesion with heterogeneous contrast enhancement, in the midfrontobasal region, infiltrating the meningeal planes and extending to the adjacent ethmoid cells, measuring 5 x 3.5 x 3.3 cm., in addition to collections with hypersignal on T2, hyposignal on T1, with diffusion restriction, measuring 1.0 and 3.7 cm each, with edema in the adjacent brain parenchyma. The hypotheses of central nervous system neoplasm, brain abscess, mucormycosis and neurotoxoplasmosis were raised. Due to the absence of risk factors and specific findings, an excisional biopsy was chosen. The histopathological examination showed suggestive of infection alterations, such as probable fungal meningoencephalitis, which corroborated the material culture which was positive for *Aspergillus* spp., concluding the diagnosis of cerebral aspergillosis. Treatment with liposomal amphotericin B was started, followed by gradual improvement of the condition. **FINAL CONSIDERATIONS:** In view of the above, it is clear how the neurological manifestations that are initially unspecific for the condition of cerebral aspergillosis can generate a series of differential diagnoses. In this sense, being aware of rarer conditions in medical practice is a factor that can be decisive for the clinical definition and, consequently, an adequate therapy with a significant impact on the prognosis of patients.

20. **CEREBRAL VENOUS THROMBOSIS: REPORT OF TWO CASES**

Demerval de Moraes Machado Neto¹, Láyla Lorrana de Sousa Costa¹, Anderson Gustavo Santos de Oliveira¹, Cristiane Vieira Amaral², Jozelda Lemos Duarte², Tibério Silva Borges dos Santos².

¹ State University of Piauí

² Getúlio Vargas Hospital / State University of Piauí

INTRODUCTION: Cerebral Venous Thrombosis (CVT) is a rare disease, but it represents an important cause of cerebrovascular accident (CVA) in young people and adults. It has an estimated mortality of 8 to 10% and an incidence of 0.1 per 100,000 people, being more common in women, which is justified by specific risk factors, such as the use of oral contraceptives, pregnancy and the puerperium. CVT manifestations can be grouped into four clinical syndromes: intracranial hypertension, focal neurological deficits, lowered level of consciousness, and seizures. The objective of this work is to present two cases of CVT admitted to a public reference hospital in Teresina - PI. **CASE REPORT:** Case 1: Female, 30 years old, with Crohn's disease, in regular use of azathioprine and infliximab. She reports a progressive holocranial headache that is refractory to simple analgesics, followed by an episode of short-term generalized tonic-clonic seizures (GCT). Admitted to the internal medicine sector three days after the event, maintaining the headache complaint. After cranial computed tomography (CT) without alterations, cranial magnetic resonance imaging (MRI) with venography was performed, which described areas of ischemia in the left frontoparietal and right posterior frontal regions, venous thrombosis in the superior sagittal sinus and mild left frontoparietal subarachnoid hemorrhage, completing the CVT diagnosis. Case 2: Female, 36 years old, with a history of Rheumatoid Arthritis (RA) for five years, in irregular treatment with methotrexate, started with a sudden onset of GCT seizures, being admitted to an emergency hospital. She was on continuous use of combined oral contraceptives. MRI with venography showed signs of CVT at the level of the superior sagittal sinus and a small subacute intraparenchymal hematoma in the left angular gyrus. Screening for thrombophilia was performed in both patients, negative for the first case, but with the presence of heterozygosity for the mutation in the prothrombin gene 20210A in the second case. Anticoagulation with dabigatran was instituted in both cases. **FINAL CONSIDERATIONS:** CVT represents an underdiagnosed clinical condition, due to the initial manifestation being very variable, from headache to generalized seizures. Thus, it is essential that there is a high suspicion for this pathology in acute neurological conditions, allowing timely treatment and prevention of debilitating sequelae to patients.

21. **IMPACT OF THE COVID-19 PANDEMIC ON MAMMOGRAPHY IN MARANHÃO AND ITS CONSEQUENCES**

Ana Clara Tavares Dantas Nogueira¹, Luan de Sousa Oliveira¹, Marcelo Hubner Moreira².

¹ State University of the Tocantina Region of Maranhão

² Graduated in Nursing from the Federal University of Espírito Santo - UFES, Specialist in Obstetrics from UFES, Master's Degree in Biotechnology from RENORBIO/UFES, Doctorate in Biotechnology from the Oswaldo Cruz Foundation - FIOCRUZ-RO/BIONORTE

INTRODUCTION: Breast cancer is a disease of many etiologies, in which main risk factors includes age, genetics, endocrine factors, reproductive history and environmental factors. Among women, it possesses the second biggest incidence according to the primary tumor's location, representing 20.95% of all cancers, and it is the main cause of death, representing 16.28% of all cancers. In this context, early detection of breast cancer in women improves better prognosis and increases treatment and healing chances. To this end, Health Ministry recommends cancer screening as primary prevention through mammography in women from 50 to 69 years old. In this preventive scenario, Covid-19 pandemic has negatively impacted breast cancer's screening and early diagnosis, as health attention was focused at fighting the Sars-cov-2 virus. Based on this, it is very important to investigate this phenomenon's impact on women's health. **OBJECTIVES:** To evaluate covid-19 pandemics influence on mammography exam realization in Maranhão. **METHODS:** Quantitative and retrospective cross-sectional study, with use of data from the DATASUS and INCA platform. Data on mammography in the years 2016 to 2021 were collected at DATASUS and data on breast cancer mortality in the years 2016 to 2020 were collected on the INCA online platform. **RESULTS:** In pre pandemic analyzed period (2016 to 2018) 153,008 mammograms were performed in the state of Maranhão. In the pandemic period (2019 to 2021), there was a decrease in mammography exam realization, leading to a 130,500 total. Nevertheless, in relation to the breast cancer's mortality in Maranhão, an average of 6.94 was recorded per 100,000 brazilian women, during pre pandemic period. In relation to pandemic years from 2019 and 2020 this average increases to 7.32, considering the same scenario. Data on female breast cancer's mortality in 2021 were not included in the consultation platform. **CONCLUSION:** There is a relation between pandemic period and mammography exam realization's decrease and breast cancer's mortality increase in Maranhão. On the other side, with pre pandemic period data, a relation between early diagnosis and mortality decrease was noted, as more mammograms were performed, and females breast cancer's mortality rates decreases. In a view, this decrease is a possible injury determinant in breast cancer cases, while early detection prerogative are left aside amid the risk of contracting a disease that killed over than 230,000 individuals in Brazil only in 2020

22. **ASSOCIATION BETWEEN GUILLAIN-BARRÉ AND ATYPICAL SYSTEMIC LUPUS ERYTHEMATOSUS IN A YOUNG ADULT PATIENT: A CASE REPORT**

Monique Melo Fortaleza¹, Anderson Gustavo Santos de Oliveira¹, João Victor Coimbra França¹, Calvin Gabriel Pierre dos Santos¹, Gabriel Cipriano Feitosa Oliveira², Raimundo Feitosa Neto².

¹ State University of Piauí

¹ Federal University of Piauí

INTRODUCTION: Neuromuscular manifestations in Systemic Lupus Erythematosus (SLE) may be part of the clinical picture of the disease or compete with other autoimmune pathologies. Disorders of the Peripheral Nervous System in SLE are uncommon and may be associated with Guillain-Barré Syndrome (GBS), with a pathogenesis not yet elucidated, but involving humoral and cell-mediated processes. It is understood that the early diagnosis of the association of these entities is essential for a satisfactory prognosis and, due to its rarity, it is unique to report the present case. **CASE REPORT:** Female, 29 years old, nulliparous, from Teresina (PI), with a nonspecific history of autoimmune condition in the paternal family. Five years ago, after repeated gastroenteritis, she presented paresthesia and numbness in the lower limbs, ascending to the upper limbs. The suspicion of GBS was confirmed by clinical association with electroneuromyographic findings and albumin-cytological dissociation in liquor analysis. She was treated only with the prescription of Etna®, maintained after medical release, without use of immunoglobulin. After a few months, the patient developed severe debilitating weakness, being managed only with physiotherapy, improving after 5 months, and returning to daily activities. However, 3 years ago, she developed disabling asthenia, alopecia, edema in the lower limbs and daily afternoon fever, not achieving a diagnosis even after numerous medical consultations. In 2 months, she progressed to acute kidney injury, secondary hypertension and pleural effusion, being admitted in 2019 to the Intensive Care Unit where she remained for 12 days, showing improvement after pulse therapy with methylprednisolone and cyclophosphamide. Based on the finding of reactive ANA (1:640, speckled nuclear pattern) and the clinical picture, the diagnosis of SLE was concluded, and hydroxychloroquine, azathioprine and corticosteroids were initiated, with resolution of the acute condition and establishment of outpatient follow-up. **FINAL CONSIDERATIONS:** Although the coexistence of autoimmune conditions is not uncommon, the association of SLE and GBS, as in the present case, is quite rare. In addition, there was a clear difficulty in diagnosing and managing the conditions, as the patient did not receive adequate treatment for GBS, and it took months for the diagnosis of SLE. Thus, the need for the medical community to turn its attention to the correct approach to these pathologies and to be aware of the debilitating possibility of their association is exposed.

23. **EPIDEMIOLOGICAL PROFILE OF DENGUE CASES IN THE STATE OF PIAUÍ, FROM 2019 TO 2021 AND THEIR RELATION TO COVID-19**

Mariana Barboza de Andrade¹, Bárbara de Alencar Nepomuceno¹, Beatriz Bandeira Mota¹, Felipe de Jesus Machado¹, Susy Canuto Felon¹, Antônio Felipe Felon Aguiar¹.

¹ Uninovafapi University

INTRODUCTION: Arboviruses are very common viral infectious diseases in the Americas, especially in Brazil. The most common infection is Dengue, whose transmitting vector is the female mosquito *Aedes aegypti*, an insect infected with one of the four serotypes of the virus. According to the World Health Organization, it's estimated that 500 million people in America can contract this tropical disease, despite its seasonal characteristic. However, the COVID-19 pandemic caused isolation and increased focus on intensive care for this, in congruence with the decrease in vigilance standards and preventive measures for arboviruses, placed in a secondary role. At the same time, there was a decrease in the number of Dengue cases reported in this period, possibly justified by the pandemic or by a cross-relation between the diseases, which made it difficult to manage, cure and evaluate the existing cases in this period in the state of Piauí. **OBJECTIVES:** This study consists of an epidemiological analysis of Dengue cases and their progressive decline in the state of Piauí from 2019 to 2021, including the influence of the COVID-19 pandemic. **METHODS:** This is an epidemiological study, in which references were searched in the following databases: Virtual Health Library (BVS), PUBMED and DATASUS/Information System for Notifiable Diseases (SINAN), covering the years from 2019 to 2021. **RESULTS:** It was found that in the period from 2019 to 2021 a total of 13,948 cases of Dengue were registered. The year with the fewest notifications of this disease was 2020, the exponential year of the COVID-19 pandemic, with 2,215 cases (15.9%), less than half of those notified in 2019, with 7,987 diseases (57.2%). During 2020, studies revealed an immunological cross-reaction between SARS-COV-2 and dengue, leading to false positive serology between this condition and patients with COVID-19 and vice versa, which made notifications difficult. Furthermore, this antigenic cross-reactivity raises questions about the possibility of overlapping protective immunity between these 2 diseases. Regarding the occurrence of dengue notification in the elderly, a risk group for SARS-COV-2, there was a slight decrease in its occurrence in 2020. In 2021, there was an increase in arboviruses of 10.9% compared to the previous year, related to the progressive increase in COVID-19 cases. **CONCLUSION:** Dengue is a public health problem in Brazil, being found on the SINAN compulsory notification list. However, it is not possible to justify the underreporting of cases of this arbovirus by its cross-reaction with SARS-COV-2, or by the indifference caused in the approach to the Coronavirus, with the need for a greater approach in studies towards it to evaluate the phenomenon of interaction between Dengue and COVID-19. Thus, it is essential to notify and carry out a survey of the diseases of this arbovirus and its contexts, assess its occurrence between 2019 and 2021, and correlate with the pandemic, implementing health vigilance actions in Piauí, and in Brazil.

24. **REVERSIBLE CEREBRAL VASOCONSTRICTION SYNDROME AS A PUERPERAL NEUROLOGICAL COMPLICATION**

Gabriel Nunes Dantas¹, Júlia Rabêlo Evangelista¹, Bruna Tavares Falcão¹, Cristiano Ribeiro Soares², Raimundo Nonato Marques Filho³, Elizeu Pereira dos Santos Netos⁴.

¹ University Center UniFacid

² University Center Uninovafapi

³ Federal University of Piauí

⁴ Interventional Neurologist

INTRODUCTION: Reversible cerebral vasoconstriction syndrome (RVCS) is a rare condition characterized by dysregulation of vascular tone, responsible for pictures of severe and recurrent headaches associated or not with other neurological symptoms, and diffuse segmental narrowing of cerebral arteries, with possible spontaneous resolution within a period of 3 months. This condition can occur spontaneously or related to several other conditions, which include the postpartum state. Diagnosis and treatment of RVCS are essential for the management of possible secondary neurological deficits and ischemic or hemorrhagic strokes. **CASE REPORT:** A 37-year-old postpartum woman on the fourth day after cesarean section presented with sudden onset headache associated with decreased level of consciousness, Glasgow Coma Scale 12, and right hemiplegia. He was admitted to the ICU, evolving with worsening of the level of consciousness, Glasgow 6, being promptly submitted to endotracheal intubation. During further investigation, a computed tomography scan of the skull revealed a bilateral nucleocapsular hematoma worse to the right, and evidence of intracranial hypertension. Cerebral angiography showed mild vascular deviation of the A2 segment of the right anterior cerebral artery medially and mild narrowing in temporal and frontal branches of the middle cerebral arteries compatible with reversible cerebral vasoconstriction syndrome. Intensive patient support was performed, with a decompressive craniectomy and clinical treatment for reversible cerebral vasoconstriction syndrome, and the patient was discharged from the ICU about one month after admission. **FINAL CONSIDERATIONS:** This case report highlights the importance of early diagnosis and approach of reversible cerebral vasoconstriction syndrome in the context of the puerperal patient.

25. **ANALYSIS OF THE EPIDEMIOLOGICAL PROFILE OF DEATHS FROM VISCERAL LEISHMANIASIS IN BRAZILIAN NORTHEAST IN THE YEAR 2020**

Gabriela Victor Alencar Borges¹, Maria Camylle de Oliveira Sousa¹, Maria Keury Araújo da Silva¹, Dannyellen Lorena Sampaio Alves¹, Sâmia Gonçalves de Moura¹, Augusto Cesar Evelin Rodrigues².

¹ Unifacid Wyden University Student

² Unifacid Wyden University Teacher

INTRODUCTION: Visceral Leishmaniasis (VL), popularly known as Kala-azar is an infectious disease caused by the protozoan *Leishmania chagasi*. Also, its transmission occurs through the bite of the phlebotomus insect that can affect people and animals. In Brazil, especially in the Northeast region, there is still a high occurrence of cases of this disease and the vaccine for it is not currently available.

OBJECTIVES: The study aimed to determine the epidemiological profile of VL deaths in Brazil northeastern. **METHODS:** The research was a quantitative and descriptive study, with a comparative-statistical approach. The data used regarding deaths from VL in the Northeast they were collected from epidemiological bulletins granted by the SUS Department of Informatics (DATASUS) platform in the year 2020, covering all deaths that occurred in the northeast region of Brazil. The variables of this study were region, sex, and age group. **RESULTS:** In the analyzed period, 112 deaths from VL were reported, of which 84 (75%) occurred in males and 28 deaths (25%) in females. In Maranhão, there were 42 deaths; in Piauí, 10; in Ceará, 13; in Rio Grande do Norte, 4; in the state of Paraíba, 3; in Pernambuco, 10; in Alagoas, 8 and, in Bahia, 18 deaths. When looking at the age group most affected, it is possible to see that adults were the most affected by the infection, aged between 20 and 59 years, with 57 deaths (50.89%), data that differ from the Brazilian epidemiological profile from 2010 to 2019. In which children aged 1 to 4 years were more affected, this result seems to be unprecedented in epidemiological studies on visceral leishmaniasis. For this reason, there is a need for further studies on the behavior of the disease among adults, especially with regard to mortality. **CONCLUSION:** The results showed a higher incidence of deaths in male adult people. Moreover, poverty creates conditions that favor the spread of disease and prevents affected people from obtaining adequate access to prevention and care, as in the case of visceral leishmania. Hence, the prevention and treatment of VL must be better developed, either through public policies with more emphasis on combating vectors, as well as the identification of reservoirs and the cessation of stigmas characteristic of this pathology.

26. **CERVICAL CANCER DIAGNOSES: EPIDEMIOLOGICAL STUDY PERFORMED IN THE STATE OF PIAUÍ**

Nivya Emanuele Vilarinda dos Santos¹, Camila Holanda de Sousa¹, Fernanda Jorge Martins¹, Hellen Cristina Pimentel Andrade¹, Maysa Gabriela Costa Cruz¹, Maria das Dores Sousa Nunes².

¹ Student of the Medicine course at Centro Universitário UNINOVAFAP| afya

² Professor of the Medicine course at Centro Universitário UNINOVAFAP| afya

INTRODUCTION: Cervical Cancer (CC) is caused by persistent infection of the human papillomavirus. Its pathophysiology occurs in the disordered proliferation of cells in the lower part of the uterus, reaching near and far tissues. One of the main risk factors is the age, affecting women mainly between 40 and 50 years old and its prevention includes vaccination, use of condoms during sexual relation and regular cervical uterine cytopathological examinations.

OBJECTIVE: Evaluate the prevalence of confirmed cases of cervical cancer of uterus in the State of Piauí, from 2018 to June 2022.

METHODS: It was held retrospective, descriptive and quantitative study of secondary data from CC diagnoses registered in the Cancer Information System and available on the Informatics Department website of the Unified Health System, in the State of Piauí, in the period between 2018 to June 2022. The State of Piauí and the year of competence were selected by using the filters: squamous cell atypia, type of procedure and histopathological report. **RESULTS:** From the obtained data, 1,292 cases of CC diagnoses were recorded in the state of Piauí. Based on this total, the year 2018 had the highest number of cases with 509 (39.3%), followed by 2019 with 476 (36.8%). In relation to squamous cell atypia, 8.4% of the cases had a high-grade lesion and 4.4% had a low-grade lesion. According to the type of procedure, 90% of the cases were confirmed by biopsy of the material collected. When analyzing the histopathological report, 70.6% benign cases were found, 10.2% cases of Cervical Intraepithelial Neoplasm type I (CIN I), 7.7% of CIN II and 6.02% of CIN III. **CONCLUSION:** It is concluded that the number of CC diagnoses counted was higher in pre-pandemic years, with 2018 being the period with the highest number of cases. Considering squamous cell atypia, the cases identified with high-grade lesions, stood out in relation to the number of cases with high grade injury, stood out in relation to the number of cases with low-grade lesions. By procedure types, most CC diagnoses were confirmed by biopsy of collected material. In addition, through the analysis of the histopathological reports, the largest number of cases proved to be benign, followed, respectively, by cases of CIN I, CIN II and CIN III. However, there were fewer notifications during the covid pandemic, because on this occasion, health care was more focused on the problems arising from the Covid-19.

27. **CLINICAL-EPIDEMIOLOGICAL PROFILE OF PATIENTS UNDERGOING COLORECTAL CANCER TREATMENT IN AN ONCOLOGICAL CLINIC IN A NORTHEAST CAPITAL**

Daniele Ribeiro Câmara¹, Camila Santana de Carvalho¹, Anna Beatriz de Quadros Viganó¹, Suilane Coelho Ribeiro Oliveira¹.

¹ State University of Piauí

INTRODUCTION: The National Cancer Institute (INCA) estimated colorectal cancer (CRC) as the second most frequent in Brazil, for both sexes, in 2020. Age is an important risk factor for this type of cancer, being uncommon before the age of 40 and increasing in incidence with age. The most common histological type is adenocarcinoma. And CRC staging at diagnosis is critical for determining the therapy and prognosis. **OBJECTIVES:** To describe the clinical-epidemiological profile of patients undergoing treatment for CRC in an oncology clinic in a capital city in the Northeast between 2015 and 2021. **METHODS:** This is a documentary, retrospective, descriptive and cross-sectional study, previously submitted to Plataforma Brasil and approved by the Research Ethics Committee, report number 4,311,835. The sample was obtained from the electronic medical record system of patients monitored/treated for colorectal cancer from 2015 to 2021, searching for the codes assigned to CRC diagnoses in the tenth version of the International Classification of Diseases (ICD-10). Data were collected from August 2021 to March 2022, using a specific instrument, organized and processed in Microsoft Excel Version 2019. **RESULTS:** 35 patients over 18 years of age and with anatomopathological confirmation of CRC were included. Three patients with inconclusive anatomopathological examination were excluded. The female sex made up 60% (21) of the sample and the male sex represented 40% (14). Patients were diagnosed between 32 and 81 years of age, with a mean age of 60 years. The most affected age group was between 61 and 70 years, with 37.14% of cases. About 22.8% were diagnosed before the age of 50 and of these, 25% (2) before the age of 40. Adenocarcinoma was the most common histological type (94.3% of cases). One case of neuroendocrine tumor and one case of fusocellular mesenchymal neoplasia (GIST) were found. At diagnosis, 54.3% (19) of the patients were in stage IV, 31.4% (11) in stage III, 14.3% (5) in stage II and none in stage I. **CONCLUSION:** The analysis of Data showed adenocarcinoma as the most common histological type of CRC, being more prevalent in females and aged over 50 years. In addition, it shows that early diagnosis is still a challenge, given that more than 50% of patients had metastatic disease at diagnosis.

28. **ADENOID HYPERTROPHY AS A SUSPECTING FACTOR FOR HIV INFECTION IN ADULTS**

Raquel Helena Kader de Sousa Lopes¹, Catarina Carvalho Fontenelle de Araújo¹, Marcelo Francisco Patrício Silva¹, Luciana Almeida Moreira da Paz Oliveira².

¹ Academic of Medicine - Federal University of Piauí

² Otorhinolaryngologist and professor of the discipline of otorhinolaryngology at the Federal University of Piauí

INTRODUCTION: About 920,000 Brazilians are currently living with the human immunodeficiency virus (HIV). It is known that otorhinolaryngological symptoms are of fundamental importance for the initial suspicion of Human Immunodeficiency Syndrome (AIDS), since 80% of the initial symptoms of the infection are located in the head and neck region. Thus, the otolaryngologist may be the first physician to suspect the diagnosis early. There are multiple and diverse otorhinolaryngological manifestations of infection by the virus that causes AIDS, the most common being oral, followed by nasosinus and, finally, otological. Within the group of otological manifestations, Secretory Otitis Media (OMS) is noteworthy, which occurs very frequently in patients with HIV, as a result of tubal dysfunction due to repeated Upper Airway Infections (URI), nasopharyngeal tumors or hypertrophy of adenoid. The latter, as it is a known physiological condition in children, should be considered an important differential diagnosis for HIV infection, when present in adults. **CASE REPORT:** A 58-year-old man with bilateral ear fullness, mainly on the left side, in which he also reported hearing loss, and tinnitus for 6 months. On physical examination, otoscopy showed left serous otitis media (OMS). The requested nasolaryngoscopy showed an irregular and friable tumor with hyperemia occupying 45% of the rhinopharynx, obstructing the tubal ostia bilaterally. Computed tomography, preoperative exams for biopsy in the operating room and HIV serology were requested. Once HIV infection was confirmed, the request for preoperative tests was suspended and antiretroviral therapy (ART) was started. Three months after starting antiretroviral therapy, on return, the patient reported improvement in serous otitis media and in all otorhinolaryngological symptoms, without the need for further interventions. In addition, nasolaryngoscopy was requested again, demonstrating a reduction of approximately 90% of the tumor. **FINAL CONSIDERATIONS:** Through the report, it is possible to verify the importance of the suspicion of HIV in the face of a condition of lymphoid hypertrophy in an adult patient and, in this way, to enable an early diagnosis and the institution of specific treatment, sufficient to improve the manifestations. laryngological procedures without the need for any other specific procedure.

29. **SOCIOEPIDEMIOLOGICAL PROFILE OF HEART FAILURE IN INFANTS UNDER ONE YEAR OLD IN BRAZIL**

Andreza Alves da Silva¹, Ana Paula Leal Lisboa¹, Lucas Luan Gonçalves Barros Leal¹, Bianca Marques de Sousa¹, Eulalia Barbosa da Paz Neta¹, Augusto César Evelin Rodrigues¹.

¹ University Center Unifacid Wyden

INTRODUCTION: Heart failure (HF) is defined as a progressive clinical syndrome whose pathophysiology involves reduction of cardiac output, being an important cause of death when present in the pediatric population. In the neonate and in the child presents a high complexity. Clinical signs of HF in the infant are comprehensive and include signs and symptoms of neonatal heart failure associated with hepatomegaly, excessive sweating, mainly in sucking, recurrent respiratory infections and low post-height gain. **OBJECTIVES:** To analyze the epidemiological profile of HF cases in infants under one year of age in Brazil, from February 2013 to February 2022. **METHODS:** This is a descriptive, quantitative, retrospective epidemiological study conducted with data obtained from the Information System of Notifiable Diseases - SINAN/ DATASUS, from February 2013 to February 2022. We included all cases of HF in children under one year of age, according to the variables of hospitalization and deaths per year of care, region of the country, sex, type of care, race/color and deaths. **RESULTS:** In the period analyzed, there were 11,499 hospitalizations and 1,180 deaths due to heart failure. The year of greatest care and deaths was 2013, with 1,422 hospitalizations (12.36%) and 164 deaths (13.8%). The Northeast region stood out for the greater number of hospitalizations with 3,632 (31.5%) and 357 deaths (30.2%). There was a male prevalence both in hospitalizations with 5,922 (51.5%), and in deaths with 596 (50.5%) cases. Regarding race/color, the brown population stood out with 37.7% hospitalizations and 440 cases (37.2%) of deaths. Regarding the nature of care, 80.47% hospitalizations and 1,025 deaths (86.8%) were urgent. **CONCLUSION:** Given the above, it was observed that cases of heart failure in the country in infants under one year, despite decreasing over the years, remains of great relevance among this pediatric group, because it affects the morbidity and mortality of the same. In addition, the Northeast region is the place most affected by this pathology, this shows factors that corroborate the ignorance of this condition, namely: poor socioeconomic conditions and low level of education of the population, inefficiency of the local health system in the care of these patients, indicating the greater need for educational and health investments in the region.

30. **EPIDEMIOLOGICAL OVERVIEW OF NOTIFIED CASES OF HOSPITAL MORBIDITY BY DIABETES MELLITUS IN THE STATE OF PIAUÍ BETWEEN THE YEARS 2018 TO 2021**

Milena Viana Freire¹, Manoel Victor Carvalho Coelho¹, Maria Clara Martins Costa¹, Virna de Moraes Brandão¹, Ângela Maria leal Bezerra Silveira².

¹ Uninovafapi University Center

² University Federal of Piau

INTRODUCTION: Diabetes Mellitus (DM), a syndrome of multiple etiology, is characterized by persistent hyperglycemia with disturbances in the metabolism of carbohydrates, lipids and proteins. This pathology is associated to micro and macrovascular chronic complications and high morbidity and mortality. In Brazil, DM has a high prevalence and represents almost 5% of the diseases in the country. In addition, due to late diagnosis and/or neglect of the disease, DM clearly may be associated with higher rates of hospitalizations. So it is a public health problem. **OBJECTIVES:** The objective of this task is to evaluate the epidemiological situation of reported cases on Hospital Morbidity of DM cases from the SUS (SIH/SUS) in Piau (PI) between the years 2018 to 2021. **METHODS:** This is an observational and descriptive epidemiological study with a quantitative approach, about DM cases in the years 2018 to 2021, in Piau. The database chosen to collect information was the Department of Informatics of the Unified Health System in Brazil (DATASUS), from which were used data of the SUS Hospital Morbidity Information System (SIH/SUS) in Piau. **RESULTS:** Between 2018 and 2021, there were reported 12,297 hospitalizations for DM in Piau. The number of hospitalized patients had a decreasing pattern from 2018 (3,450) to 2021 (2,635), and the city with most reports was Teresina (1,996). It was observed that there was a higher prevalence of hospitalizations in females (54.71%) compared to males (45.29%). Furthermore, up to the age of 69 years old, the number of hospitalizations increased with advancing age; the age group most affected, both for men and women, was between 60 to 69 years old (2,959). In the analyzed period, there were 368 deaths, which represents a mortality rate of 2.99%. The pathology was more lethal in the elderly aged 80 years and over, where the mortality rate was 5.81%. **CONCLUSION:** The number of reported cases of hospitalizations for DM in Piau during the years 2018 to 2021 is worrying; despite the decrease in the number of cases during the years evaluated. In addition, it was possible to observe that females were the most affected, as well as elderly people, and this age group is responsible for the highest percentage of lethality of the pathology. Thus, one of the challenges for public health is to optimize early diagnosis as well as patient adherence to treatment; in order to achieve greater control of the disease.

31. **NOTIFIED CASES OF HOSPITAL MORBIDITY DUE TO THYROID DISORDERS IN THE STATE OF PIAUÍ BETWEEN 2017 AND 2021: AN EPIDEMIOLOGICAL ANALYSIS**

Milena Viana Freire¹, Manoel Victor Carvalho Coelho¹, Maria Clara Martins Costa¹, Virna de Moraes Brandão¹, Ângela Maria leal Bezerra Silveira².

¹ Uninovafapi University Center

² University Federal of Piau

INTRODUCTION: The thyroid is an endocrine gland located in the anterior region of the neck over the thyroid cartilage. It is responsible for the production of the hormones T3 (triiodothyronine) and T4 (thyroxine). Those hormones regulate the metabolism of all cells and ensure the proper functioning of the body. Therefore, disorders that occur in this gland affect, directly or indirectly, all physiological functions of the body, and that is due to an excessive or insufficient amount of circulating thyroid hormones. **OBJECTIVES:** The objective of this task is to assess the epidemiological situation of reported cases of Hospital Morbidity in cases of Thyroid Disorders in the SUS (SIH/SUS) in the state of Piau (PI) between the years 2017 to 2021. **METHODS:** This is an observational and descriptive epidemiological study with a quantitative approach, concerning cases of Thyroid Disorders in the years 2017 to 2021, in the state of Piau. The database chosen to collect information was the Department of Informatics of the Unified Health System in Brazil (DATASUS), from which were used data of the SUS Hospital Morbidity Information System (SIH/SUS) in Piau. **RESULTS:** Between 2017 and 2021, 181 hospitalizations were reported for thyroid disorder related to iodine deficiency, thyrotoxicosis, calcitonin hypersecretion, dysormonogenic goiter, other specific thyroid disorder and unspecified thyroid disorders. From the total admissions, 85 were elective and 96 were urgent. Patients remained hospitalized for an average of 5.9 days. Only emergency hospitalizations resulted in death, which in total were 9, with a mortality rate of 4.97%. Most cases were in females (81.21%), although the mortality rate was higher in males (5.88%). Regarding age, the most affected age group was the one with people between 40 and 49 years old (37). In the analyzed period, the average price of hospital services per year was 14,997.31 reais. **CONCLUSION:** It was observed that thyroid disorders can lead to high rates of hospitalizations and, sometimes, result in death. This scenario corroborates to high costs to the health system. Among the patients observed, it is noted that there is a higher prevalence in females, as predicted in the literature and in the fourth decade of life. However, it appears that when thyroid disorders affect males, they tend to progress to death more easily.

32. **NECROTIZING PNEUMONIA IN NURSING: A CASE REPORT**

Maria Eduarda de Sousa Vieira¹, Francisco Sales da Silva Júnior¹, João Vitor Monteiro Santos², Lia Leal Laurini¹, Salomão Xavier Sobrinho Junior¹, Paloma Almeida Santana³.

¹ Uninovápi University Center

² Federal University of Piauí

³ Uninovápi University Center

INTRODUCTION: The necrotizing pneumonia (NP) is a rare complication of the pneumonia acquired in the community (PNA), yet it is being more and more diagnosed in the paediatric age group, predominantly in children below 3 years of age. It's characterised by the occlusion of the pulmonary vessel and consequent reduction of the vascular suppression, consolidation and necrosis, the latter evolves to the cavitations, as it is visible in computerized tomography. The most common etiological agents are the *Staphylococcus aureus*, the *Streptococcus pyogenes*, and the pneumococcus. **CASE REPORT:** 3-month-old nursing, previously healthy, male, with absence of pneumococcal inoculated protection, hospitalized with 4 degrees of fever and irritability 2 days straight, x-ray of initial thorax indicating pneumonia, with discrete opacity in the left lower lobe, with applied intravenous Ampicillin and Gentamicin. After 10 days, the patient worsened clinical-radiologically, with cough and a raise in the opacity of the radiography, suggesting pleural effusion. The therapeutical scheme has been, therefore, altered to Ceftriaxone and Oxacillin and past 8 days a computerized tomography (CT) of the thorax with areas of pulmonary cavitation in the basal anteromedial of the left lower lobe and lingula, bilateral atelectasis and a diminutive consolidation in the right apex, compatible findings with necrotizing pneumonia. After 2 weeks of the new combination of antibiotics, it has again presented feverish peaks, accompanied by nasal obstruction, cough and worsening of pulmonary auscultation. Substituting the treatment for Vancomycin + Meropenem for more 14 days, totalizing more than 2 fortnights, with cystic residual image in the left pulmonary basis. It followed well after the medical discharge, discarded immunodeficiencies, with outpatient follow-up. **FINAL CONSIDERATIONS:** The necrotizing pneumonia (NP) is a complication that maybe associated with the lack of pneumococcal vaccine. Therefore, the immunoprevention of medical conditions like these must be reinforced. Notwithstanding the gravity, the NP can evolve with a good prognostic, if its precocious recognition and the adequate therapeutical antibiotics and/or surgery is deemed necessary, thus reducing the morbimortality of the affected children.

33. **DERMATOFIBROSARCOMA PROTUBERANS WITH UNFAVORABLE OUTCOME: CASE REPORT**

Alexandre de Sousa Barbosa¹, Maria Luiza Lima Arraes¹, Letícia Farias Oliveira¹, Sabas Carlos Vieira².

¹ Uninovafapi University Center

² Oncocenter Advanced Radioncology Center

INTRODUCTION: Dermatofibrosarcoma protuberans (DFSP) is a rare locally aggressive cutaneous malignancy, with an incidence of 0.8 to 5 cases/million inhabitants per year, corresponding to less than 0.1% of all cancers and about 1 % of soft tissue sarcomas. In general, it has a good prognosis with a survival of more than 10 years in 99.1% of cases. However, local recurrence is common, with the main risk factor being the status of the surgical margins. On the other hand, metastases occur in only 2 to 5% of cases and have the lungs as the main site, with multiple recurrences and the fibrosarcomatous variant being the main risk factors. The main predictors of mortality, in turn: age over 50 years, male gender, location (head, neck, and limbs), black ethnicity, high mitotic index, increased cellularity, and fibrosarcomatous variant. **CASE REPORT:** An 82-year-old male patient, without comorbidities, with a history of four recurrences of DFSP in the left scapular region, came to the consultation with a new multinodular, mobile cutaneous lesion, in the same topography, measuring approximately 20 x 15 cm in diameter. extension. The staging was carried out, which did not show metastases, and the subsequent resection of the lesion was programmed, whose histopathological examination was compatible with dermatofibrosarcoma protuberans, with focally compromised margins, with both subcutaneous and muscular involvement. Therefore, we opted for therapeutic complementation with twelve radiotherapy sessions. During the early follow-up, the patient evolved with four more local recurrences, which were promptly submitted to resection with compromised margins. Therefore, the patient has submitted to radiotherapy again. After the last resection, the histopathological examination showed histological grade II and mitotic index 3/10 CGA, and chemotherapy treatment was initiated. After approximately eighteen months of treatment, the patient died due to disease progression. **FINAL CONSIDERATIONS:** Dermatofibrosarcoma protuberans rarely have an unfavorable evolution, which can be predicted through the identification of risk factors, which in turn allows the programming of an individualized follow-up aimed at the early characterization of eventual local recurrences and distant metastases and better therapeutic planning.

34. **CHARACTERIZATION OF BREAST CANCER IN THE CITY OF TERESINA-PI FROM 2016 TO 2021, ACCORDING TO BREAST CYTOPATHOLOGICAL EXAMINATION DATA**

Francisca Maria Luz¹, Maysa Gabriela Costa Cruz¹, Maria do Carmo de Carvalho e Martins².

¹ Student of the medical course at the UNINOVAFAPI University Center, Teresina, Piauí, Brasil.

² Teacher, Department of Biophysics and Physiology, Federal University of Piauí; UNINOVAFAPI University Center, Teresina, Piauí, Brasil.

INTRODUCTION: Breast cancer, excluding non-melanoma skin tumors, is the most frequent type of cancer in the Brazilian female population. As an action of secondary prevention, that is, early detection of breast cancer, complementary strategies are among themselves, which consist of: breast self-examination, clinical examination and mammography. Other tests are intended for cytological and histological confirmation of lesions detected by clinical practice and imaging methods. Breast cytopathology is an examination that can be used to aid in the diagnosis, avoiding unnecessary biopsies and, as a consequence, lower cost and discomfort for patients. **OBJECTIVES:** To describe characteristics of breast cancer cases based on the cytopathological examination in the city of Teresina-PI from 2016 to 2021. **METHODS:** This is an ecological epidemiologic study with analysis of information on breast cancer cases that occurred in the city of Teresina, capital of the state of Piauí, between the years 2016 to 2021. Health data collected were those made available by TABNET/DATASUS/MS in the Cancer Information System (SISCAN). The variables of this study were: number of cases reported according to breast cytopathological examination, existence, type and uni or bilateral involvement, year of competence, and age group and education. Descriptive statistical analysis was performed with absolute and relative frequency measurements. **RESULTS:** Based on the cytopathological examination, 41 cases of breast cancer were identified in Teresina during the period considered, all in women, 63.41% in the age group from 35 to 59 years. Regarding the frequency of cases per year, almost half occurred in 2019 (46.34%) and the lowest numbers in 2016 and 2018 (two cases each year). Regarding the presence of nodule(s), they were present in 75.61% of the cases, and most of the cases were unilateral (70.7%) with nodules present, with the solid nodule as the predominant type (41.46%). **CONCLUSION:** The age group most affected in cancer cases analysed was similar to that described in other studies, but there was also a high frequency of cases among younger women (less than 35 years old), in which this type of cancer is uncommon. Solid unilateral nodule was present in most cases of breast cancer, and the year with the highest number of cases was 2019.

35. **DERMATOFIBROSARCOMA IN SPERMATIC FUNICLE:
CASE REPORT**

Maria Luiza Lima Arraes¹, Alexandre de Sousa Barbosa¹, Letícia Farias Oliveira¹, Sabas Carlos Vieira².

¹ Uninovafapi University Center

² Oncocenter Advanced Radioncology Center

INTRODUCTION: Dermatofibrosarcoma protuberans (DFSP) is a rare, locally aggressive cutaneous neoplasm of soft tissues, often confused with other lesions that share a similar external character, such as neurofibroma, epidermal cyst, malignant melanoma, basal cell carcinoma, keloid, dermatofibroma, lipoma, sarcoidosis and other cutaneous soft tissue sarcomas, which makes their diagnosis difficult. Anatomically, the most common location of DFSP is in the trunk and proximal extremities, usually in the chest and shoulders as seen in a series of 6,817 patients reported to the Surveillance, Epidemiology and End Results (SEER) database, which had a distribution of 42 % for the trunk, 21% for the lower extremity, 21% for the upper extremity, 13% for the head and neck and only 1% for genital organs. As it is an aggressive tumor with high recurrence rates, appropriate primary resection is essential, aiming to completely remove the tumor and maintain negative resection margins. **CASE REPORT:** 47 years old male patient, married, coming from Teresina-PI, referred by another professional, complaining of an inguinal nodule in the left region with swelling for two months. Upon performing the biopsy, the diagnosis of dermatofibrosarcoma protuberans with a sparse margin came. The S-100 immunohistochemistry test showed positive vimentin, and positive CD34, confirming the diagnosis of DFSP. When performing the ultrasound, an expansive, heterogeneous lesion was noted in the region of the left pampiniform plexus, measuring 5.2 cm in nature. As conduct, we chose to operate through the small margin and place a testicular prosthesis. On reassessment, he had no active disease. After two months, resection of the scar of the left inguinal region was performed, with histopathology indicating the absence of neoplasia, but with a foreign body reaction. **FINAL CONSIDERATIONS:** The presentation of dermatofibrosarcoma protuberans in genital organs is uncommon, however, due to the complexity of the affected structures, it requires better surgical planning, sometimes requiring a multidisciplinary team.

36. **EPIDEMIOLOGY OF FEMORAL FRACTURES AND ITS COST FOR THE STATE OF PIAUÍ FROM 2017 TO 2021**

Mauro Fernando Ramos de Moraes Filho¹, Denise Marques Costa Pereira da Silva¹, Víctor Setúbal Sampaio¹, Igor Santiago Silva Duarte¹, Samuel Lucas Silva Rosmann¹, Isanio Vasconcelos Mesquita¹.

¹ State University of Piau

INTRODUCTION: Femur fractures represent an entity of social impact and significant financial burden for the Sistema Único de Saúde (SUS). They can be classified anatomically into proximal, diaphyseal and distal fractures. In that regard, while in the proximal fracture the senility is an important risk factor, in the diaphyseal and distal fractures the energy involved in the trauma stands out rather than individual factors. Moreover, the repercussions of fractures are associated with extensive surgical procedures, long periods of hospitalization and recovery of patients, as well as high rates of morbidity and mortality, especially in the elderly (> 60 years), and postoperative incapacity, resulting in higher costs, both for the family and for the SUS. Under this scenario, it is perceived that it is inherent to evaluate the costs involved in the processes of this event in Piau.

OBJECTIVES: To outline an epidemiological profile of femur fractures occurred in the state of Piau from 2017 to 2021, as well as the costs associated with this trauma. **METHODS:** Epidemiological, descriptive and quantitative study, featuring femur fractures occurred in Piau from January 1, 2017, to December 31, 2021. Data were collected from the Departamento de Informática do Sistema Único de Saúde (DATASUS) and analyzed according to sex, age, mortality and total cost of hospitalizations, comparing state data with those obtained for the capital Teresina. The results were grouped into spreadsheets, graphs and tables by Microsoft Excel. **RESULTS:** During the study period, 8,095 fractures were recorded, 47.5% in women and 52.5% in men. Mortality was 2.45%. There was a predominance of fractures in the elderly (50.7%), where 69.4% of fractures occurred in women, and the age group most affected was above 80 years of age, corresponding to 25.6%. The total cost for the state of Piau was R\$15,099,617.92, wherever 90.7% of the value was allocated to Teresina, but only 38.5% of the money was used to treat inhabitants of the capital. **CONCLUSION:** Thereby, it is inferred that the femur fractures affected the female elderly population in greater proportion and with higher prevalence in the age group above 80 years, with large mobilization of costs aimed mainly for patients outside the capital. This emphasizes the need for adequate prevention and treatment in order to provide benefits to civil society and the state, reducing morbidity and costs.

37. **PRUNE-BELLY SYNDROME: A CASE REPORT**

Beatriz Bandeira Mota¹, Elenilta Maria de Araújo Viana¹, Felipe de Jesus Machado¹, Karolayne Maria de Araújo Viana¹, Ana Paula Rodrigues Melo¹.

¹ University Center Uninovafapi

INTRODUCTION: Prune-Belly Syndrome (PBS) is a rare congenital condition, characterized by the total or partial absence of abdominal wall muscles, urinary tract malformation, followed by bilateral cryptorchidism. In the description of this paper, ethical precepts were followed, such as the Free Informed Consent Term (TCLE). **CASE REPORT:** A 37-week-old male newborn, 2 months old, born by cesarean section due to ultrasound exam alterations that showed oligohydramnios and malformation of the abdominal wall and urinary tract. He had a low birth weight of 1900g, Apgar 9/9, and was hospitalized for a long period in a local maternity hospital due to complications. Infant with PBS presented urinary infections evolving to chronic kidney disease, requiring blood transfusion. He presented yellowish secretion from the vesicostomy for 7 days, without other associated signs and/or symptoms. Entry physical examination: regular infant, general condition, malnourished, anicteric, acyanotic, afebrile, tachypneic, hydrated and pale, "batrachian" abdomen, reduced abdominal wall tone, presence of a good-looking and functioning orifice below the umbic scar, male genitalia and absence of testes bilaterally. Laboratory tests: Blood count (Hb: 6.2g/dl; Ht: 18.5%; MCV: 92u3; HCM: 30.8uug), PCR: 36.60mg/dl, Potassium: 7.6mol/l, Urea: 76mg/dl, Creatinine: 1.50 mg/dl. Diagnosis: Prune Belly Syndrome, Urinary Tract Infection and Chronic Kidney Disease. **FINAL CONSIDERATIONS:** The clinical evolution is considerably related to the possible complications and malformations present, but mostly due to urinary and/or respiratory complications. Therefore, it requires early and adequate diagnosis and interference in any alteration of the urinary tract. Since patients with this syndrome predispose to recurrent infections, due to malformation and incomplete bladder emptying, in addition to chronic kidney disease and its complications such as anemia. Therefore, rigorous monitoring of patients and their clinical presentations is essential in order to increase life expectancy.

38. **EPIDEMIOLOGICAL PROFILE OF SELF-HARM IN TERESINA PIAUÍ FROM 2010 TO 2021**

Denise Marques Costa Pereira da Silva¹, André Mendes de Carvalho Castelo Branco¹, Ana Raquel Lopes Visgueira¹, Aline Gomes da Costa¹, Jones Roger Prestes da Silva¹, Ana Rosa Rebelo Ferreira de Carvalho¹.

¹ State University of Piauí

INTRODUCTION: Self-harm is the result of violence that a person inflicts on themselves and can be subdivided into suicidal behavior and self-mutilation, both of which can cause suicide, when leading to death. Suicide is considered a serious public health problem and corresponds to the fourth leading cause of death among young people aged between 15 and 29, after traffic accidents, tuberculosis, and interpersonal violence. **OBJECTIVES:** To determine the epidemiological profile of self-harm in Teresina/Piauí from 2010 to 2021. **METHODS:** Epidemiological, descriptive, and quantitative study. The data were obtained through the Department of Informatics of the Unified Health System (DATASUS) and the Notifiable Diseases and Health Hazards Information System (SINAN), evaluating the epidemiological profile of people who were victims of self-harm, in Teresina, in the period from January 1st, 2010, to December 31st, 2021. Therefore, the evolution of the case was investigated to identify whether the suicide attempt was complete, gender, age group, race, place of occurring and schooling. The results were grouped in spreadsheets, graphs and tables using Microsoft Excel. **RESULTS:** Between 2010 and 2021, 4,458 cases of self-harm were reported in Teresina, with 69.51% of victims being female and 30.40% being male. Of this total, 802 cases lead to suicide, with 25% of lethal victims being female and 75% being male. Regarding the age group, most cases occurred among individuals between 20 and 29 years old (32%), followed by the group between 15 and 19 years old (21%). As for race, 43% were identified as being of mixed race (pardos); however, 35% of cases did not specify the victim's race. As for the educational level, there was no information in 40% of the cases, and there was no prevalence of any level over the others in the cases where the information was available. Finally, regarding place of occurrence, 70% of the cases took place at the victim's residence. **CONCLUSION:** From this scenario, we can better understand self-harm in the city of Teresina, identifying that most cases occur in the victim's own homes, that the most affected demographic is mixed-race (pardo) women aged between 20 and 29 years old. Most cases that lead to suicide, however, were among males. Based on the data obtained, it is necessary to develop more effective strategies to prevent this health hazard, adapting public policies to better focus on the identified epidemiological profile..

39. **ARTERIAL BLOOD GAS PARAMETERS IN PATIENTS UNDERGOING CARDIAC SURGERY WITH CARDIOPULMONARY BYPASS IN A PRIVATE HOSPITAL**

João Victor Alves Oliveira¹, Bruna Wendy Capistrano Pinto¹, Phillip Heron Sousa e Silva Nolêto¹, Rafaela da Costa Rodrigues¹, Cláudio Mendes Silva², Brenda de Jesus Moraes Lucena¹.

¹ Centro Universitário Uninovafapi

² Santa Maria Hospital.

INTRODUCTION: Cardiovascular diseases' treatment can be clinical or surgical, and in the last, the cardiopulmonary bypass (CPB) is critical to success. The acid-base disorders that occur in surgery can be investigated through blood gas analysis. These imbalances are associated with an increased risk of organ and system dysfunction and mortality in patients undergoing surgery. **OBJECTIVES:** This study aimed to analyze arterial blood gas parameters of patients undergoing cardiac surgery with CPB in a private hospital in 2021. **METHODS:** Data were collected from medical records of adult patients undergoing cardiac surgery with CPB in 2021 at a private hospital in Teresina, Piauí, Brazil. Data were presented as mean \pm standard deviation. **RESULTS:** 135 medical records were analyzed. Most patients were men (68.9%), with a mean age of 61 ± 10.9 years, undergoing coronary artery bypass graft surgery (68.9%). At the beginning of the surgery, they did not present any acid-base disorders (pH 7.37 ± 0.06 ; PaCO₂ 42.6 ± 6.1 mmHg; PaO₂ 210.8 ± 84.0 mmHg; SatO₂ $99.5 \pm 1.0\%$; HCO₃⁻ 24.5 ± 2.3 mEq/L; BE -0.7 ± 2.8). In all procedures, the CPB devices were filled with lactated ringers' solution with the addition of sodium bicarbonate, and during the technique, there was a continuous supply of air and oxygen. The blood gas parameters remained normal after starting CPB (pH 7.38 ± 0.05 ; PaCO₂ 39.6 ± 5.1 mmHg; PaO₂ 304.2 ± 126.4 mmHg; SatO₂ $99.6 \pm 1.4\%$; HCO₃⁻ 23.7 ± 1.9 mEq/L; BE -1.7 ± 2.4) and in the second CPB blood gas analysis (pH 7.39 ; PaCO₂ 40.1 mmHg; PaO₂ 264.2 mmHg; SatO₂ $99, 8\%$; HCO₃⁻ 23.3 mEq/L; BE -2.1). **CONCLUSION:** The arterial blood gas parameters were within the reference values both at the beginning of the surgery and during the CPB. We believe that priming preparation and adequate oxygen supply were critical to maintenance. Despite the physiological changes promoted by the technique, it is important that parameters have remained stable to provide a homeostatic balance to patients.

40. **EPIDEMIOLOGIC ASSESSMENT OF THE NOTIFIED CASES OF VISCERAL LEISHMANIASIS IN THE STATE OF PIAUÍ : ASSESSMENT OF A DECADE**

Laís Ponte Pimentel¹, Joyce Mara Alves da Silva¹, Kélita Vitória Freitas de Sousa¹, Sara Raabe Rocha Teixeira Sousa¹, Virna de Moraes Brandão¹, Renandro de Carvalho Reis Silva¹.

¹ UninovaFapi University Center/Afya

INTRODUCTION: The etiologic agents of Visceral Leishmaniasis (VL) are protozoan parasites of the Trypanosomatidae family, Leishmania genus, which are intracellular parasites of the phagocytory mononuclear system's cells. Common symptoms are: prolonged fever, splenomegaly, hepatomegaly, leukopenia, anemia, hypergammaglobulinemia, cough, abdominal pain, diarrhea, weight loss and cachexia. Thus, considering its high incidence and lethality, it is a compulsory notification disease and with severe clinical evolution, whose diagnosis must be concluded as soon as possible.

OBJECTIVE: To assess the epidemiologic profiles of the notified Visceral Leishmaniasis cases in the state of Piauí between the years of 2011 and 2020. **METHOD:** It is a descriptive and quantitative retrospective epidemiologic study, organized utilizing data obtained from the Sistema de Informação de Agravos de Notificação's (SINAN NET) secondary databases, provided by the Departamento de Informática do Sistema Único de Saúde (DATASUS). The data contains notified cases of Visceral Leishmaniasis in the state of Piauí between the years 2011 and 2020. The profiles were organized according with age group, sex, evolution, HIV co-infection and scholarship. **RESULTS:** 2,034 cases were notified in Piauí during the assessed period. The HIV co-infection were present in 256 cases, which represents 12.6% of the total notified cases. The male gender was the most affected (68.3%) while the most affected age group was between 20-39 years (26.4%). A significant part of the cases was of people with scholarship from the 6th to the 9th year (unconcluded) of secondary education, with 319 cases (15.7%). 954 cases (46.9%) had evolution to cure, while 124 other cases (6.1%) ended in death. **CONCLUSION:** This study explains that, during the assessed period, the state of Piauí reported an alarming quantity of notified cases of Visceral Leishmaniasis. The prevailing epidemiologic profile was of males, between 20 to 39 years old, and with unconcluded secondary education. The majority of the cases had evolution to cure. Thus, it is evident the need for more investment on the diagnosis and early treatment in order to lower the mortality index.

41. **ADVANCED CERVICAL CARCINOMA IN A 27-YEAR-OLD PATIENT: CASE REPORT**

Isabella Barros Castelo Branco¹, Rafael Everton Assunção Ribeiro Da Costa¹, Calvin Gabriel Pierri Dos Santos¹, Maria Tereza Eulálio Portela Melo¹, Simone Madeira Nunes Miranda¹.

¹ Uninovafapi University Center

INTRODUCTION: Cervical cancer is an important public health problem, being, in Brazil, the most frequent malignant neoplasm of the female genital tract. Its peak incidence is between 40 and 60 years of age. The main agent promoting precursor lesion is the Human Papillomavirus (HPV). In addition, factors linked to immunity, genetics and sexual behavior influence regression or progression to precursor lesions or cancer. In Brazil, the beginning of cervical cancer screening, by Pap smear, is recommended by the Ministry of Health from the age of 25. **OBJECTIVES:** The aim of this study is to present a case of advanced invasive cervical carcinoma in a 27-year-old female patient. **CASE REPORT:** A 27-year-old female patient sought gynecological care complaining of intense transvaginal bleeding associated with progressive pelvic pain, sinus bleeding and deep dyspareunia for one year. He evolved with marked hematuria and severe anemia, requiring blood transfusion in the last 20 days. She reports sexarche at 12 years of age and the only oncotic cytology performed at 15 years of age, during prenatal care. Specular gynecological examination revealed a friable and bleeding vegetating lesion in the topography of the cervix (causing architectural distortion), invading the vagina up to the lower third. On vaginal and rectal examination, significant bulging in the anterior wall of the rectum with total invasion of parametrium up to the bone plane, clinically configuring clinical stage IIIB and, possibly, already IVA due to the presence of referred hematuria. The histopathological report brought by the patient was moderately differentiated grade squamous cell carcinoma (G2). Imaging exams showed infiltration into the parametrium and vagina, with compression of the rectum, contiguous wall of the bladder and distal portions of the ureters, determining bilateral ureterohydronephrosis. **CONCLUSION:** Although cervical cancer usually has a slow evolution, it is not uncommon for it to evolve quickly, affecting a younger age group, mainly related to the early onset of sexual activity, as in this report. The presentation of the case raises the question whether, in specific populations, unvaccinated and with very early onset of sexual activity, screening should be offered at the age of less than 25 years.

42. **LARGE MALIGNANT MELANOMA WITH EXTENSIVE VEGETATING LESION ON THE DORSUM WITHOUT METATHESIS, ONE OF THE ONLY ONES EVER REPORTED IN THE LITERATURE**

Kalvin Gabriel Pierrri Dos Santos¹, Isabella Barros Castelo Brancos¹, Luis Felipe Rodrigues Brandão De Barros¹, Francisco Aragão De Sousa Neto¹, Valéria Maria Caland Morais¹, Edison De Araujo Vale¹.

¹ State University of Piauí

INTRODUCTION: Skin cancer is the most frequent type in Brazil, accounting for 30% of all malignant cancers. Of this amount, melanoma represents 3%, and is the most serious type and most likely to lead to metastasis and/or death. The main risk factors are cellular exposure, fair skin, family history and large numbers of moles. To report a case of malignant melanoma with an extensive vegetating lesion on the dorsum without the presence of metastasis, one of the few cases ever reported. **OBJECTIVES:** To report a case of malignant melanoma with an extensive vegetating lesion on the dorsum without the presence of metastasis, one of the few cases ever reported. **CASE REPORT:** A 54-year-old female patient presented with a vegetating lesion on the back, with progressive growth over the last 3 years, evolving, 10 months ago, with itching, pain and local secretion. She developed an infection at the wound site, which motivated her to seek medical attention. She came to the service without a previous biopsy. Macroscopically, she presented a blackened lesion, poorly defined, measuring 19.5x12.5cm, with an extensive central ulcerative-vegetative area. In the CT scans of the skull and upper abdomen, there were no findings suggestive of neoplasia. Excision of the lesion was performed and the anatomopathological study by freezing the resection product concluded with microstaging at Clark V level and Breslow thickness of 44mm, with blood, lymphatic and perineural invasion. The cut surface had a maximum thickness of 4.4 cm and a distal thickness of 3.5 cm, with a deep magnification of 3.6x2.5x0.04cm. All margins were free of neoplasia. In a second intervention, all skin and subcutaneous synthesis was performed, with good healing progress and no signs of infection. **CONCLUSION:** Melanoma has good survival rates and low morbidity in its early stages, however, if not detected early, it can progress to extensive lesions and metastases. After reviewing the literature, it is believed that the case described is one of the largest primary melanomas ever reported. In addition, it is uncommon for a lesion with such proliferation to not have metastasized, since much smaller melanomas with a shorter proliferation time often evolve with distant metastases. This finding corroborates others reported in the literature, and may be indicative of a behavior not yet well studied, demonstrating an area of promising potential for research and development of more effective treatments.

43. **HEPATITIS B DIAGNOSIS IN PREGNANT WOMEN: EPIDEMIOLOGICAL STUDY CONDUCTED IN BRAZIL NORTHEAST REGION**

Sheylla Maria da Silva Santos¹, Ana Lisia Albuquerque Gayoso Castelo Branco¹, Leticia Kisley Leite de Carvalho¹, Liana Lima Duarte¹, Milena Valdineia da Silva¹, Maria das Dores Sousa Nunes².

¹ Student of the Medical course of the UNINOVAFAPI University Center| Afya

² Professor of the Medical Course of the UNINOVAFAPI University Center| Afya

INTRODUCTION: Hepatitis B represents a serious public health problem because of its high prevalence. It is a disease caused by DNA viruses and its transmission occurs through exposure of mucous membranes to blood or body fluids contaminated with the virus both vertical transmission, mainly at the time of delivery and in the perinatal period. Hepatitis B has great importance in pregnancy due to the possibility of maternal-fetal transmission. In this way, up to 90% of children whose mothers were infected with hepatitis B virus during pregnancy develop chronic infection if they do not receive adequate immunisation as in the first dose of the vaccine at birth and specific immunoglobulin anti-hepatitis B (HBIG), rather within 12 hours of birth. **OBJECTIVE:** To know by means of epidemiological data the cases of hepatitis B diagnosis reported in pregnant women in northeastern Brazil. **METHODS:** It was made a retrospective, descriptive and quantitative research of secondary data on hepatitis B HbsAg reagent in pregnant women registered in the Notification Diseases Information System and made available at the Department of Informatics of the Unified Health System, in the Northeast of Brazil, in the period from 2018 to 2020, in the age of 10 to 59 years old. **RESULTS:** In the analyzed period, 742 cases of hepatitis B were reported in pregnant women in the Northeast region. The state with the highest number of cases was Bahia, with 228 (30.72%), followed by the state of Maranhão with 158 cases (21.59%) and Pernambuco with 99 cases (13.34%). Lastly number of notifications was Piauí with 17 cases (2.29%) and the other 5 states of the reported together notified 240 cases corresponding to 32.34%. In addition, it is worth mentioning 314 cases were diagnosed in the third trimester of pregnancy (42.31%), followed by 262 cases in the second trimester (35.30%), 146 cases in the first quarter (19.67%) and 20 cases in which gestational age was not identified (2.69%). This study found that 403 cases in field 12 of the notification form have either not been completed or have been marked as ignored, being an obstacle to the fidelity of the information due to the limitation of the total cases calculation of hepatitis B in pregnant women. **CONCLUSION:** In view of this, the greatest number of cases in the state of Bahia when compared to the other states, with Piauí being the state with fewer notifications, possibly due to different coverage vaccination between these states. Its probably that the cases decrease in some states is likely to have as a justification for greater prenatal care in primary health care associated with immunization of pregnant women against hepatitis B virus.

44. **EVALUATION OF LUNG FUNCTION OF PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE TREATED AT THE HOSPITAL GETÚLIO VARGAS, IN TERESINA - PIAUÍ IN THE YEAR 2018 TO 2020**

Johanna Lis De Sousa Aguiar Düpont Schuck¹, Joana Clara Oliveira Macêdo Lima¹, Dorllane Loiola Silva¹, Camila Vilarinho da Rocha Silva¹, Ana Carla Souza Menezes¹, Samylla Miranda Monte Muniz¹.

¹ State University of Piauí

INTRODUCTION: Chronic Obstructive Pulmonary Disease (COPD) is characterized by airflow limitation and is the result of a complex interaction between exposure to noxious gases and particles and host-related factors. The diagnosis of the disease is made through clinical data collected from the patient, including productive cough, and spirometry (lung volume measurement). Due to its systemic involvement and because it is an important risk factor for other comorbidities, COPD has a growing impact worldwide, and chronic airflow limitation due to abnormalities in the alveolar airways is its most striking feature, the principal symptom of which is dyspnea.

OBJECTIVE: To evaluate pulmonary function by analyzing the medical records of patients diagnosed with COPD at the Getúlio Vargas Hospital in Teresina, PI, Brazil, during the years 20018 to 2020.

METHODS: Epidemiological, descriptive and retrospective study containing data in the medical records of patients diagnosed with COPD in the year 2018 to 2020. The data were obtained from existing medical records at the Hospital Getúlio Vargas, in the city of Teresina Piauí evaluating sociodemographic, anthropometric data, lung functionality and correlation with associated comorbidities. **RESULTS:** During the period from 2018 to 2020, 13 cases of hospitalization for Chronic Obstructive Pulmonary Disease with unspecified exacerbation were recorded at the Hospital Getúlio Vargas in Teresina-Pi, with 7 (53.85%) males and 9 (69.23%) elderly patients. Regarding the classical clinical picture of COPD, 12 patients presented cough, expectoration and dyspnea at rest, 8 (61.54%) presented on pulmonary auscultation reduced vesicular murmurs in at least one hemithorax and, it is noteworthy that, 10 (76.92%) had associated comorbidities. 12 patients had prolonged contact with toxic gases or substances during their lives, either through smoking, wood stoves or animals, exacerbating the COPD symptoms. 11 patients fit as a relapsing case due to worsening and 1 case of death was recorded.

CONCLUSION: COPD generates limitations at the systemic level, with profound impact on the quality of life and psychic-emotional well-being of the patient. Associated with this are comorbidities that are initiated or aggravated by the systemic inflammatory response of COPD, which, in its great majority, was triggered by prolonged contact with toxic gases or substances. Noteworthy are alterations not only in the ventilatory pattern, but cardiovascular, metabolic, neurological, and emotional disturbances.

45. **CORRELATION BETWEEN LENGTH OF STAY IN UTI, USE OF MECHANICAL VENTILATION AND DEATH IN PATIENTS HOSPITALIZED FOR COVID-19 IN A TERTIARY CARE HOSPITAL IN TERESINA - PI**

Joana Clara Oliveira Macêdo Lima¹, Isabel Maria Oliveira Macêdo Lima², Johanna Lis De Sousa Aguiar Düpont Schuck¹, Dorllane Loiola Silva¹, Camila Vilarinho da Rocha Silva¹, Liline Maria Soares Martins¹.

¹ State University of Piau

² Federal University of Piau

INTRODUCTION: COVID-19 is a new disease with broad clinical manifestations, ranging from asymptomatic/mild upper respiratory tract illness to severe viral pneumonia with acute respiratory distress syndrome (ARDS) and even death. While most infected persons develop mild to moderate illness and recover without hospitalization, about 14% have severe symptoms requiring intensive care, and one-third of hospitalized patients require invasive mechanical ventilation.

OBJECTIVES: To analyze the correlation between length of ICU stay, use of mechanical ventilation (MV) and death in patients with COVID-19 in a public hospital in Teresina - PI between 2020-2021.

METHODS: This is an observational, retrospective, description study that included 300 critically ill patients with laboratory-confirmed COVID-19 referred for admission to the ICU of a public hospital in the state of Piau. All were adult patients with confirmed infection defined by the presence of a positive culture, associated with clinical signs of infection and/or worsening organ failure. Mann-Whitney test and risk estimation in samples were used. **RESULTS:** When calculating the risk estimate in the sample studied, the individual who required MV had a 16.714 times higher prevalence of the outcome "death" than those who did not use it (CI 7.164 - 38.994). In relation to the ICU time, according to the nonparametric Mann-Whitney test, there was no significant difference between patients who evolved to death and those who did not evolve to death, $U = 4291.500$, $z = -0.375$, $p = 0.708$. **CONCLUSION:** The study shows that most of the patients evaluated were intubated and required mechanical ventilation due to respiratory failure. This finding corroborates the results of previous studies that reported respiratory failure and development of ARDS were the main reasons for intubation and ICU admission among critically ill patients with COVID-19. ICU length of stay had no impact on the outcome of death, since the patients, due to the severity of the disease, died early. Moreover, the use of MV increased the prevalence of death outcome, which confirms findings from other studies showing that MV is a major predictor of poor clinical outcome in ICU patients with COVID-19.

46. **INFLUENCE OF SMOKING ON PROGRESSION AND DEATH FROM COVID-19 BY CESSATION OF THE HABIT AND THE ONSET OF IRREVERSIBLE PULMONARY CHANGES**

Joana Clara Oliveira Macêdo Lima¹, Isabel Maria Macêdo Lima², Johanna Lis De Sousa Aguiar Düpont Schuck¹, Camila Vilarinho da Rocha Silva¹, Liline Maria Soares Martins¹.

¹ State University of Piauí

² Federal University of Piauí

INTRODUCTION: In Brazil, about 200,000 people die each year from the complications of smoking in the airway epithelium of smokers and patients with COPD, there is overexpression of angiotensin II-converting enzyme (ACE-2), potentiating its effects on the risk of severe disease due to covid-19. **OBJECTIVES:** To evaluate the influence of smoking on the progression of and death from COVID-19 by analyzing smoking cessation and the onset of irreversible pulmonary changes. **METHODS:** This is an observational, retrospective and qualitative study that included 300 patients with COVID-19 admitted to the ICU of a public hospital in Teresina - PI between 2020 and 2021, classifying them as smokers, former smokers and patients with COPD (Chronic Obstructive Pulmonary Disease). **RESULTS:** We evaluated 300 patients, 66 of them were smokers/ex-smokers, 29 were former smokers and 3 of them had COPD, and 37 smokers and 22 of them had COPD. Individuals with a history of smoking (current or past) did not have a higher prevalence of "death" than those patients without a history of smoking, since the prevalence ratio had the value of 1.024 and the confidence interval ranged from 0.373 to 2.810. However, 45% of the patients had COPD, and of these, 90% died. According to the cross-tabulation analysis and calculation of the risk estimate, the individual with COPD, when contracting COVID-19, has a 3.137 times greater risk of evolving to death. Smoking is likely associated with negative progression and adverse outcomes in patients with COVID-19, whereas it is related to inflammatory cascade, resulting in alveolar wall destruction, small airway fibrosis, and mucosal hypersecretion. However, 68% of the patients in the sample are former smokers, and upon cessation of smoking, lung recovery begins immediately, as the epithelial cells regenerate and resemble cells unscathed by exposure. Therefore, the presence of chronic inflammatory and fibrotic changes already installed contribute to a decline in lung function and capacity, and that although smoking cessation improves dyspnea and reduces exacerbations, a COVID-19 infection significantly reduces the chances of survival. **CONCLUSION:** Individuals with a history of current or prior smoking, without COPD, did not have an elevated "death" outcome compared with nonsmokers COPD patients have a 3.137-fold increased risk of dying.

47. **ANALYSIS OF COMORBIDITIES AND CLINICAL OUTCOME OF PATIENTS HOSPITALIZED FOR COVID-19 IN THE INTENSIVE CARE UNIT OF A PUBLIC HOSPITAL IN TERESINA-PI**

Joana Clara Oliveira Macedo Lima¹, Dorllane Loiola Silva¹, Camila Vilarinho da Rocha Silva¹, Johanna Lis Aguiar Düpont Schuc¹, Ana Carla de Souza Menezes¹, Liline Maria Soares Martins¹.

¹ State University of Piau

INTRODUCTION: The importance of determining the comorbidities associated with COVID-19 is twofold. It allows physicians to personalize treatment for patients and governments to modify their public health recommendations according to a stratified risk strategy. This strategy will raise the safety of the most vulnerable population and increase the effort to keep those who may require more intense care out of hospitals. Furthermore, identifying which comorbidities are most associated with COVID-19 will lead to more extensive research on understanding the pathophysiology of SARS-CoV-2 infection in these underlying diseases and vice versa. **OBJECTIVE:** To analyze clinical characteristics, including prior comorbidities and the relationship with clinical outcome of patients admitted to the ICU for COVID-19. **METHODS:** This is an observational, retrospective, descriptive study that included 300 critically ill patients with laboratory-confirmed COVID-19 referred for ICU admission to the largest public hospital in the state of Piau. Comorbidities and outcome were listed by analyzing the medical records of each patient. **RESULTS:** According to the cross tabulation analysis and risk estimate calculation, the individual with a comorbidity, when contracting COVID-19, has a 3.39 times higher risk of dying (CI 1.599 - 7.202). Such results matched the result of meta-analysis that revealed higher prevalence of comorbidities in fatal cases. Hypertension (57.47%) and diabetes (33.17%) were significantly more prevalent in patients with severe and fatal disease. This may be explained due to SARS-CoV-2 using its spike protein S to bind to cells via the angiotensin-converting enzyme-2 (ACE2) receptor, part of the renin-aldosterone-angiotensin system (RAAS), and enter cells. In hypertension, the RAAS is dysregulated and patients usually take angiotensin-converting enzyme inhibitors (ACEis), which have been experimentally shown to increase ACE2 expression. In diabetic patients there is overexpression of pro-inflammatory cytokines, which may contribute to the cytokine storm in severe cases of COVID-19. **CONCLUSION:** In this study, we evaluated the comorbidities associated with COVID-19 among severe cases and deaths. In this setting, cardiovascular diseases as well as hypertension, diabetes, and respiratory diseases showed significantly higher prevalence in COVID-19 fatal cases.

48. **BACTERIAL AND/OR FUNGAL COINFECTION IN PATIENTS WITH PATIENTS WITH COVID-19 IN THE INTENSIVE CARE UNIT OF A PUBLIC HOSPITAL IN TERESINA- PIAUÍ IN 2021**

Aline Reis Barros¹, Joana Clara Oliveira Macêdo Lima¹, Isabel Maria Oliveira Macêdo Lima², Ana Carla Souza Menezes¹, Dorllane Loiola Silva¹, Liliane Maria Soares Martins¹.

¹ State University of Piau

² Federal University of Piau

INTRODUCTION: The SARS-CoV-2 pandemic has been made more critical by the large number of patients who need to be under intensive care in Intensive Care Units (ICU). These tend to develop bacterial/fungal co-infections frequently and have an increased risk of death. **OBJECTIVES:** To investigate the clinical characteristics of bacterial and fungal infections of patients with COVID-19 in the ICU environment and their impact on the course of critical illness in a public hospital in Teresina- Piauí in the year 2021. **METHODS:** This is an observational, retrospective, descriptive study that included 300 critically ill patients with laboratory-confirmed COVID-19 referred for ICU admission in the largest public hospital in the state of Piauí. All were adult patients with confirmed infection defined by the presence of a positive culture, associated with clinical signs of infection and/or worsening organ failure. **RESULTS:** It was observed that in the sample studied, among the patients who contracted fungal or bacterial infection, only 1 did not evolve to death. Meanwhile, 83% of the cases with no other infection other than COVID-19 had the same outcome. In other words, coinfection increases the risk of death by 1.1 times. Several antibiotics, such as azithromycin, the main antibiotic used by the sample, have been employed for the prevention and treatment of bacterial coinfection and secondary bacterial infections in patients with viral respiratory infection. It is possible that some patients die from bacterial or fungal co-infection at the expense of the virus itself. Thus, the positive cultures are mostly from microorganisms that are multidrug resistant to the antibiotics used in the ICU since all patients used empiric/prophylactic antibiotic therapy and that, in general, the culture gives false negatives when the antibiotic is effective. **CONCLUSION:** A considerable number of bacterial strains have been resistant to several antibiotics, such as azithromycin, and overuse may make these or other antibiotics even less effective. In this regard, bacterial/fungal coinfection and secondary bacterial infection are considered critical risk factors for the severity and mortality rates of COVID-19. In addition, antibiotic resistance as a result of overuse should be considered.

49. **INCIDENCE OF SELF-PROMOTED INTERPERSONAL VIOLENCE IN NORTHEASTERN BRAZIL**

José Paulo Rosal Arnaldo¹, Paula Fernanda Silva Moura Machado¹, Márcia do Vale Monteiro¹, Helena Maria Reinaldo Lima¹.

¹ Centro Universitário Unifacid Wyden

INTRODUCTION: Self-harm is characterized by aggressions committed by the individual against himself, whose reasons can vary from psychological, social and family factors and usually occur during adolescence, as it is a period in which the individual undergoes biological transformations which reflect directly in your way of acting. In this context, suicide and attempted suicide represent the main examples of cases of self-harm. **OBJECTIVES:** To describe the incidence of self-inflicted interpersonal violence in the nine states of Northeast Brazil from 2019 to 2021. **METHODS:** This is a descriptive/retrospective population-based study, using secondary data from cases of self-inflicted interpersonal violence reported in the Information System of Notifiable Diseases of the states of northeastern Brazil, according to sex, age and area of residence in the years from 2019 to 2021 made available by the Department of Informatics of the Unified Health System in Brazil (DATASUS) on TabNet. **RESULTS:** The data found show a total of 166,064 people who practiced self-inflicted interpersonal violence from 2019 to 2021 in nine states in the Brazilian Northeast. Females had a higher prevalence of cases, with 69.8% (115,903) cases. The states of Pernambuco, Bahia and Ceará accounted for more than 60.0% of cases, with the highest incidence being Pernambuco, corresponding to 28.1% (46,593), followed by Bahia and Ceará, with 18.7% (31,033) and 18.4% (30,588). Alagoas, Maranhão, Rio Grande do Norte and Piauí were 7.8% (12,995), 6.7% (11,028), 6.1% (10,192), 6.0% (10,058) respectively. Sergipe was the state with the lowest incidence, as it represented 2.7% (4,481) of self-inflicted interpersonal violence in the Brazilian Northeast, followed by Paraíba with 3.7% (9,094). **CONCLUSION:** Self-inflicted interpersonal violence in the Brazilian northeast has shown a decrease in its nine states from 2019 to 2021, with a higher prevalence in females. In addition, Pernambuco had the highest incidence of cases and Sergipe had the lowest incidence.

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**ABSTRACTS OF THE IJMS
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Role of Medical Students in Disseminating Scientific Knowledge - The First IJMS WCMSR

Purva Shah,¹ Cesare Mercalli,² Adnan Mujanovic,³ Vincent Kipkorir,⁴ Ciara Egan,⁵ Arkadeep Dhali,⁶ Camila Velandia,⁷ Mihnea-Alexandru Găman,⁸ Juan C. Puyana,⁹ Francisco J. Bonilla-Escobar.¹⁰

Introduction

Scientific conferences are an essential part of continuous education, regardless of the profession or the position one occupies on the academic ladder.¹ They play a vital role in a scientific ecosystem, present grounds where scientists discuss ideas, and are a place of social gathering and camaraderie with fellow peers. Academic conferences provide a platform to initiate collaborations, create new contacts, strengthen old ones, and witness medical advancements worldwide.² Early-career scientists and recently graduated physicians, therefore, can significantly benefit from attending scientific conferences since they can be used as positive accelerators for their careers and instruction.³

In most cases, medical students and early-career researchers lack adequate exposure or incentives to participate in scientific conferences. Lack of time due to an overly demanding study and/or work schedule, lack of proper information and communication inside and outside the scientific community, and unallocated funds for continuous medical education are just some of the causes for these restrictions.^{1,4} These barriers may have short- and long-term consequences on their career development. Not having exposure to conferences and similar events might hinder one's options in choosing an optimal career pathway due to the lack of information about specific fields of specialization and the newest developments in those fields. Similarly, this may also extinguish an individual's passion for research and scientific potential, making the global scientific community miss out on potential breakthroughs in the medical field.⁵

Inadequate access to conferences can only stagnate global scientific growth, and there can be no winners in such

environments.⁹ Therefore, it is vital that medical students and young clinician-researchers have proper chances and opportunities to participate in scientific conferences. Their participation will not only impact their professional development, but will also benefit their personal growth and scientific research.⁶

Seeing the potential hurdles, the numerous advantages, and the overall impact that conferences have on scientific progress, the International Journal of Medical Students (IJMS) decided to organize the first World Conference of Medical Student Research (WCMSR) on November 12, 2022.¹¹ The entire idea of the conference was centered around accessibility to medical innovation and diversity in representation of different medical branches.⁷ WCMSR offered complete access to medical students and recently graduated researchers to all the studies presented during the conference. IJMS WCMSR was hosted completely online, ensuring access to participants regardless of their location.^{8,10} This is the first time an International Journal has organized a conference behind which both the major workforce and primary target audience are ongoing or recently graduated medical students.

In accordance with the philosophy of the Journal's founders, the Conference Team had the responsibility of being as open as possible and helping medical students and young researchers even in the pre-submission phase. The conference, in fact, was the first experience of this kind for most of our participants, and the enthusiasm was palpable.

The globality of the event can be seen in the abstracts presented, as observed in the following pages of this supplementary issue, but also from the difficulties the team had to overcome. To give

¹ MBBS. Research Associate, Medical College, Baroda, India. Student Editor, IJMS.

² Medical Student. Humanitas Research Hospital, Milan, Italy. Layout Editor & Director of the first IJMS World Conference of Medical Student Research, IJMS.

³ MD, Ph.D. student. Department of Diagnostic and Interventional Neuroradiology, University Hospital Bern Inselspital, University of Bern, Bern, Switzerland. Associate Editor, IJMS.

⁴ BSc(H). The University of Nairobi, College of Health Sciences, Department of Human Anatomy and Physiology, Nairobi, Kenya. Associate Editor, IJMS.

⁵ Medical Student. Humanitas University, Humanitas Research Hospital, Milan, Italy. Deputy Editor, IJMS.

⁶ MBBS; Department of GI Surgery, Institute of Postgraduate Medical Education and Research, Kolkata, India. Student Editor, IJMS.

⁷ Fifth year Medical Student. Grupo de investigación ACEMED-UPTC. Universidad Pedagógica y Tecnológica de Colombia - UPTC. Tunja, Colombia. Logistics WCMSR, IJMS.

Correspondence: Francisco J. Bonilla-Escobar

Address: 4200 Fifth Ave, Pittsburgh, PA 15260, United States

Email: fjbonillaesobar@gmail.com

⁸ MD, Ph.D. student. Faculty of Medicine, "Carol Davila" University of Medicine and Pharmacy, 050474 Bucharest, Romania & Department of Hematology, Center of Hematology and Bone Marrow Transplantation, Fundeni Clinical Institute, 022328 Bucharest, Romania. Scientific Editor, IJMS.

⁹ MD, FRCS, FACS, FACC. School of Medicine, Department of Surgery, Professor of Surgery, Critical Care Medicine, and Clinical Translational Science, Director for Global Health-Surgery, University of Pittsburgh, Pittsburgh, PA, United States. Editorial Board Member, IJMS

¹⁰ MD, MSc, PhD(c). Researcher, Department of Ophthalmology; Institute for Clinical Research Education (ICRE), University of Pittsburgh, Pittsburgh, PA, United States. CEO, Fundación Somos Ciencia al Servicio de la Comunidad, Fundación SCISCO/Science to Serve the Community Foundation, SCISCO Foundation, Cali, Colombia. Grupo de investigación en Visión y Salud Ocular, VISOC, Universidad del Valle, Cali, Colombia. Editor in Chief, IJMS.

the reader some examples of these difficulties - there were multiple time zones participating in the event (the largest difference being from East Standard Time to Australian Western Standard Time, equal to fifteen hours), there were multiple internet connection problems from some of our authors, and there was the need to convert some presentations in a pre-recorded video.

The organizing team of the first WCMSR consisted of a Director, Cesare Mercalli, MS, a co-Director, Purva Shah, MD, a Director of Logistics, Camila Velandia, MS, and a Conference Host, Duha Shellah, MD, in collaboration with the IJMS Executive Editorial Committee and Director of Public Relations, Preeyati Chopra, MS. The first team meeting was held in June 2022 and was followed by monthly meetings. During these sessions, the team discussed the jury, the conference ambassadors, the marketing strategy, the communication campaign, the ranking system, and the awards. To spread information about the conference and instructions on how to participate, a conference handbook and an IJMS editorial (Volume 10 Issue 2) were shared with partner organizations and conference ambassadors to reach as many interested applicants as possible. The organizing team held an information session on YouTube to solve queries of potential participants on August 27, 2022, followed by a second information session in Spanish after numerous requests. The application fee was kept at 10 US Dollars, considered affordable for most early-career researchers participating in this conference and much less than the average fee of similar events, around 50 US Dollars.¹²

More than one hundred and ten submissions were received, consisting of original studies, case reports, and meta-analyses. The IJMS student editors selected 41 abstracts based on a pre-specified point system. These abstracts have been published in IJMS Volume 3 as a supplementary issue with a digital object identifier (DOI) allotted for each abstract. The selected participants were divided into four slots depending on their time zones and the topic of their papers. Two judges were allocated per slot and were provided a conference program with the list of participants and their abstracts in advance.

On the day of the conference, participants and judges were invited to the backstage of an online streaming platform called "Streamyard." The conference started at 8:00 am EST and continued until 5:00 pm EST, with four eight-minute breaks between all slots. Judges were provided with respective judge sheets in which they entered their scores in real-time.

Each presentation was followed by a 3-minutes question and answer session, during which both the judges and the public could participate. At the same time, the audience could vote via a QR code shared on the screen; these votes determined the "Most-Liked by the Public" abstract without influencing the judges, who had no access to this separate scoring system.

The awards given out were top-scored abstracts for Original Research and Case Reports by student-editor reviewers, top-scored presentations of Original Research and Case Reports by judges, and the highest-voted presentation by the audience.

These were the winners:

Awards for Best Research Presentation at the WCMSR Original Research based on judge score

- **1st place:** [Morphometry of Placentae of Anaemia and Non-anaemic Preeclamptic Patients](#). Mohamed Onyango. BSc. Human Anat (Hons), HMX. Kenya¹³
- **2nd place:** [Efficacy of Rectal Misoprostol versus Oxytocin on Reducing Blood Loss during Cesarean Section: A Meta-Analysis of Randomized Clinical Trials](#). Ahmed Soliman, Dr, Faculty of Medicine, Mansoura University, Mansoura, Egypt¹⁴
- **3rd place:** [Determining the ability of the vision, aphasia, and neglect \(VAN\) stroke scale to identify large vessel occlusion strokes within the prehospital setting: a prospective cohort study](#). Lydia Leavitt, a 4th-year medical student at the University of Illinois, USA¹⁵

Awards for Best Case Report presentation at the WCMSR based on judge scores

- **1st place:** [Hypercoagulability and Cavernous Sinus Thrombosis due to Protein C Deficiency. A Case Report](#). Wilson Sebastian Peñafiel Pallares, a medical student from Universidad de las Américas, Quito, Ecuador.¹⁶
- **2nd place:** [A Case Report of Rare Type of Chorea with Hypoxic-Ischemic Insult](#). Roohi Kolte, 6th-year MBBS student, O.O. Bogomolets national medical university, Kyiv, Ukraine.¹⁷

Highest score during the abstract revision process for Original Research

- **1st place.** [Correlation between Placental Histomorphology and Umbilical Cord Coiling Index in Preeclampsia](#). Cyrus Kimanthi. Fourth-year medical student, BSc Anat. Department of Human Anatomy, University of Nairobi, Kenya.¹⁸
Average score: 68
- **2nd place.** The Impact of COVID-19 on People's Access to Healthcare and Health Behavior in a sample of Indian Population: A Cross-sectional Study. Dr. Manisha Kanumuri, Intern, Medici Institute of Medical Sciences, India.¹⁹
Average score: 67
- **TIE: 3rd place.** [Health-care Seeking Pathways Of Psychiatry Patients In North Karnataka Of India - A Hospital-based: Exploratory Cross-sectional Study](#). Md Alinawaz Khan, Third-year MBBS student, S. N. Medical College & HSK Hospital, Bagalkot, Karnataka, India.²⁰
Average score: 65 (out of 70 points)
- **TIE: 3rd place.** [Gender Differences in Attitude and Barriers to Research by Medical Undergraduate Students in Nigeria](#). Okwunze Kenechukwu Franklin, Mr, College Research Innovation Hub, University of Ibadan, Nigeria.²¹
Average score: 65

Highest score during the abstract revision process for Case Reports

- *1st place.* [Peroneal Nerve Injury due to Hip Surgery Located at the Knee Level: A Case Report](#). Aleksa Mičić MD, Faculty of Medicine, University of Belgrade, Belgrade, Serbia, Department of Peripheral Nerve Surgery, Functional Neurosurgery and Pain Management Surgery, Clinic for Neurosurgery, University Clinical Centre of Serbia, Belgrade, Serbia.²²

Average score: 63

- *2nd place.* [Harlequin Color Change in a Neonate Positive to Covid-19: Case Report](#). Esther Pinel Guzmán, 5th-year medical student, School of Medicine, Universidad Católica de Honduras, Tegucigalpa. Honduras.²³

Average score: 60

Most-liked by the public

- [Medical Students' Attitudes and Influential Factors Towards Conducting Medical Research](#). Bassam AlRajhi, Junior Medical Student, King Saud bin Abdulaziz University for Health Sciences, Jeddah, Saudi Arabia.²⁴

The IJMS WCMSR is the first global research conference organized by a medical journal for medical students and healthcare trainees. With over one hundred submissions from over thirty countries worldwide, this research conference had 1200+ live audience members across the duration of the day. A Syrian participant presented their work via a recorded video. Weeks later, the number of viewers has increased to 2670+, making it clear that the interest in this event continues today.

From a small evaluation survey shared after the conference, we have discovered that more than two-thirds of the participants presented their work for the first time at a conference.

This conference aimed to promote the integration of medical students and young physicians in the medical research field. It also helped create contacts, interest, and motivation amongst the participants and the audience for conducting research and participating in scientific societies and conferences. With this the organizing team of the First IJMS World Conference of Medical Student Research signs off.

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**ABSTRACTS OF THE IJMS
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OF MEDICAL STUDENT
RESEARCH (WCMSR)
2022**

IJMS

**INTERNATIONAL JOURNAL *of*
MEDICAL STUDENTS**

Abstracts of the First IJMS World Conference of Medical Student Research 2022

Oral Presentations

01. **PREVALENCE AND ASSOCIATED FACTORS OF PSYCHOLOGICAL DISTRESS OF PATIENTS WITH STROKE ATTENDING THE CLINICS OF THE NATIONAL INSTITUTE OF NEUROLOGY OF THE NATIONAL HOSPITAL OF SRI LANKA, COLOMBO**

W.M.P.C. Weerasekara¹, C.N. Warshawithana¹, W.M.N.N.P. Weerasinghe¹, Irshad Mashood².

¹ Fourth Year Medical Student. Faculty of Medicine, University of Colombo, Sri Lanka.

² Supervisor, Registrar in Community Medicine, Faculty of Medicine, University of Colombo, Sri Lanka.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=18498s>

INTRODUCTION: Stroke is the fifth leading cause of disability adjusted life years lost in Sri Lanka. A vast range of factors lead to psychological distress among stroke patients causing poor outcomes such as limitations of daily activities, poor rehabilitation outcomes, social isolation, and poor financial recovery. Nevertheless, there is a scarcity of data on this topic, in both foreign and local literature.

OBJECTIVES: To assess the prevalence of psychological distress and identify the factors associated with it among the patients with stroke attending the clinics of National Institute of Neurology (NIN), National Hospital of Sri Lanka (NHSL), Colombo. **METHODS:** : A descriptive cross-sectional study with an analytical component was conducted among 177 patients with stroke attending the clinics of National Institute of Neurology, National Hospital of Sri Lanka, Colombo who were sampled by multistage random sampling. The 10-item Kessler psychological distress scale was used to assess the psychological distress while the Barthel Index and the modified Rankin Scale were used to assess the dependence on the Activities of Daily Living (ADL) and disability status respectively. Data was collected regarding socio-demographic, behavioral, family and caregiver, stressful life events, stroke and other health related factors using a pretested interviewer administered questionnaire. Chi-square tests, simple logistic regression was used for bivariate analysis followed by multivariate analysis via binary logistic regression. Results obtained from the final regression model were expressed using odds ratios with 95% confidence intervals whilst associations with p-value < 0.05 were significant in all types of analyses. **RESULTS:** The mean age of the participants with stroke was 59.6 (SD 12.285) years. The prevalence of psychological distress among stroke patients was found to be 23.3% (95% CI: 16.1 - 31.9) using the validated K10 score of ≥ 22 .

During bivariate analysis, none of the sociodemographic, family and caregiver related, and stressful life event related factors were significantly associated while past personal history and family history of psychiatric disorders, frequency of engagement in physical and leisure time activities prior to the stroke event, time since the last stroke event, level of disability and dependence on ADL ($p < 0.05$) were found to be significant predictors of psychological distress. The results of regression identified five independent predictors with a R^2 of 0.772. There, the presence of psychological distress was significantly predicted by age ($b = -.134$, $p < 0.05$), gender ($b = 4.262$, $p = 0.05$), patient being the sole source of income ($b = 3.207$, $p < 0.05$), ii level of disability ($b = 2.568$, $p < 0.001$) and past personal history of psychiatric disorders ($b = 5.151$, $p < 0.05$). **CONCLUSION:** The prevalence of psychological distress among patients with stroke attending the clinics of the NIN, NHSL, Colombo is high and is associated with several health and non-health related factors. A standard routine screening method should be formulated for early diagnosis of patients at risk of psychological distress supplemented by a multidisciplinary approach including psychosocial support starting from the initial out-patient management of stroke patients.

Key words: Psychological distress; Stroke (Source: MeSH-NLM).

AWARD FOR THE BEST ORIGINAL RESEARCH PRESENTATION AT THE WCMSR BASED ON THE JUDGES AVERAGE SCORES, 1ST PLACE:

02. **MORPHOMETRY OF PLACENTAE OF ANAEMIC AND NON-ANAEMIC PREECLAMPTIC PATIENTS**



Mohamed Otieno¹, Bernard Ndung'u², James Kigera³, Wycliffe Kaisha⁴, Cyrus Kimanthi⁵, Moses Obimbo⁶.

¹ Fourth-year Medical Student, BSc Anatomy. Department of Human Anatomy, University of Nairobi. Nairobi, Kenya

² B.Sc. Anat. (Hons), MBChB, MMed. (Surg.), Dip. MAS, FMAS (WALS-Delhi). Department of Human Anatomy, University of Nairobi. Nairobi, Kenya.

³ MBChB, MMed (Ortho). Department of Human Anatomy, University of Nairobi. Nairobi, Kenya.

⁴ MBChB, MMed (Surg), DMAS(WALS)-Fell, HBP (CLBS, Apollo). Department of Human Anatomy, University of Nairobi. Nairobi, Kenya.

⁵ Fourth-year Medical Student, BSc Anatomy. Department of Human Anatomy, University of Nairobi. Nairobi, Kenya.

⁶ MBChB, Dip FELASA C, MSc, MMed (ObGyn), Ph.D., Postdoc. Department of Human Anatomy, University of Nairobi. Nairobi, Kenya.

 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=5937s>

INTRODUCTION: The etiology of preeclampsia (PE) still remains elusive. Nevertheless, early onset PE has been hypothesized to develop following defective implantation of the conceptus into the endometrium and subsequent placentation. Defective placentation leads to insufficient remodeling of spiral arteries thus hypoperfusion of the placenta and clinical manifestations. Anaemia is highly prevalent amongst pregnant women. It is postulated that hypoxia is one of the mechanisms by which PE develops. The severity of symptoms seen in patients with coexisting preeclampsia and anaemia has been linked to uteroplacental insufficiency. Few studies however, have defined the placental morphometry when the two conditions occur concurrently. **METHODS:** This unmatched case-control study was carried out at the Kenyatta National Hospital where 42 placentae were obtained; 21 from preeclamptic mothers who had anaemia in the first and third trimesters of pregnancy (cases) and 21 from preeclamptic mothers without a history of anaemia in pregnancy (controls). The tissues were obtained and macroscopically and microscopically examined to determine relative differences. Photographs of the placentae were taken using a 12 MP (f/1.8, 26mm wide, 1/2.55", 1.4 μm, dual pixel PDAF, OIS) camera. Photomicrographs were taken using a ZeissTM digital photomicroscope at ×400 magnification for stereological analysis. SPSS (Version 25.0) was used to input data where median values, interquartile ranges and frequency tables were obtained. Mann-Whitney U tests were run to compare differences in medians of the clinical, gross and histological features between the 2 groups. A p-value of ≤ 0.05 was considered statistically significant. **RESULTS:** Hemoglobin levels in the anemic group ranged between 7.0-10.5 g/dl in the 1st trimesters and 7.6-10.9g/dl in the 3rd trimester with patients being mild to moderately anemic. Gross placental infarction was observed in 17/21 (81.0%) of the cases and 15/21 (71.4%) of the controls. The gross morphometric parameters that were lower in cases were the placental weight and volume (p-values of <0.001, 0.001 respectively). The histopathological features observed were extensive perivillous and intervillous fibrin deposition and larger volumes of syncytial knots in the case group. The harmonic mean thickness of the interhaemal membrane was higher in the cases when compared to controls (p -value: <0.001). The estimated mean morphometric diffusing capacity was higher in cases when compared

to controls (p-value: 0.001). **CONCLUSION:** The frequency of gross and histopathological lesions seen in the PE placentae was increased when the patients had both preeclampsia and anaemia. Anaemia may thus exacerbate the pathology caused by preeclampsia. This may be the structural basis for the uteroplacental insufficiency observed when the two morbidities co-exist. It may therefore be prudent for clinicians to monitor maternal hemoglobin levels, in order to reduce the severity of preeclampsia when the two conditions co-exist.

Key words: Placenta; Pre-eclampsia; Anemia.

03. EPIDEMIOLOGICAL AND CLINICAL CHARACTERISTICS OF COVID-19 RELATED MORTALITY IN OYO STATE, NIGERIA

Uzochukwu Eustace Imo¹, Chimaobi Ikenna Nwagu¹, Innocent Chijioko Dike¹, Ayodeji Jeremiah Abimbola¹, Oluwaseun Ebenezer Fatunla².

¹ Sixth-year Medical Student. University of Ibadan, Ibadan, Nigeria.

² College of Medicine, University of Ibadan, Ibadan, Nigeria.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=11973s>

INTRODUCTION: On March 11, 2020, the World Health Organization classified COVID-19 as a pandemic. SARS-CoV-2, the virus that causes it, travels from person to person through respiratory secretions, direct contact, and aerosol. Although the COVID-19 pandemic has abated, it still infects pockets of susceptible populations around the world. Over 600 million COVID cases and 6 million deaths have been recorded globally with over 3000 deaths recorded in Nigeria. There is, however, a paucity of published research from Africa describing the epidemiological and clinical characteristics of COVID-19 decedents. The aim of this study is to recognize the epidemiological characteristics and comorbidities of COVID-19 mortality cases in Oyo state, Nigeria. Furthermore, this paper aims to understand the relationship between these epidemiological characteristics, comorbidities, and COVID-19 mortality. Understanding the relationship between these variables and COVID-19 mortality would contribute to the existing body of knowledge regarding the early detection and effective management of COVID-19 cases, thereby reducing the morbidity and mortality associated with COVID-19.

METHODS: This is a retrospective cross-sectional study of COVID-19 mortality that occurred in Oyo state, Nigeria between April 12, 2020 and March 12, 2021. A total of 121 confirmed COVID-19 related mortality cases were recorded during this period. Reverse-transcriptase polymerase chain reaction (RT-PCR) testing of nasopharyngeal and oropharyngeal samples was used to confirm SARS-CoV-2 infection. Data collected included age, sex, occupation, local government area, duration of hospitalization, comorbidities, clinical diagnosis, place of date, antemortem, and postmortem COVID-19 status. The independent t-test and Mann-Whitney U/Kruskal-Wallis H test were used to evaluate continuous variables, while a test of proportion and the Chi-square test were used to investigate categorical variables. Statistical analyses were performed with STATA/MP 14.2.

RESULTS: The majority of the deceased were male patients (57%) compared to female patients (43%). Mortality was highest among those aged 40 years and above (92.5%) compared to those less than 40 years old (7.5%). The mean age of the deceased was 64 years. Hypertension (36.4%) and diabetes (26.5%) were the most common underlying conditions reported and significant associations were found between having a comorbidity and sex ($p = 0.028$). Almost one-third (31.6%) of the included cases died within a day of hospitalization and the median duration between hospital admission and death was 1 day. There was a significant difference between the duration of hospitalization and status at death. Patients managed as suspected cases had a shorter median duration of hospitalization before death (1.0; IQR 0.5, 2) compared to the confirmed cases (4.0; IQR 1, 8). **CONCLUSION:** The results of this study showed that a high proportion of the COVID-19 mortality cases were of age greater than 40 years, male gender, and had comorbidities. Knowledge of these associated characteristics can help physicians identify and effectively manage patients with increased risk for severe outcomes of COVID and hence reduce mortality. It is

recommended that people with an increased risk of severe outcomes be vaccinated against COVID-19.

Table. Test of Association Between Age, Gender and Comorbidity.

	Age, n (%)					p-value	Gender, n (%)		p-value
	<20 n=2	20-39 n=7	40-59 n=35	60-79 n=61	≥80 n=16		Male n=68	Female n=52	
Any one	0 (0.0)	3 (42.9)	24 (68.6)	34 (56.7)	8 (50.0)	0.240	45 (66.2)	24 (46.2)	0.036*
Hypertension	0 (0.0)	0 (0.0)	15 (42.9)	24 (39.3)	5 (31.3)	0.185	26 (37.7)	18 (34.6)	0.729
Diabetics	0 (0.0)	1 (14.3)	13 (37.1)	16 (26.2)	2 (12.5)	0.297	18 (26.1)	14 (26.9)	0.918
Cancer	0 (0.0)	0 (0.0)	3 (8.6)	3 (4.9)	0 (0.0)	0.686	3 (4.4)	3 (5.8)	0.721
Renal	0 (0.0)	1 (14.3)	2 (5.7)	1 (1.6)	2 (12.5)	0.309	3 (4.4)	3 (5.8)	0.721
Others	0 (0.0)	1 (14.3)	3 (8.6)	6 (9.8)	1 (6.3)	0.959	7 (10.1)	4 (7.7)	0.642

Legend: statistically significant variables at $\alpha = 0.05$

Key words: COVID-19; SARS-COV-2; Pandemics; Nigeria (Source: MeSH-NLM).

AWARD FOR THE BEST ORIGINAL RESEARCH PRESENTATION AT THE WCMSR BASED ON THE JUDGES AVERAGE SCORES, 2nd PLACE:**04. EFFICACY OF RECTAL MISOPROSTOL VERSUS OXYTOCIN ON REDUCING BLOOD LOSS DURING CESAREAN SECTION: A META-ANALYSIS OF RANDOMIZED CLINICAL TRIALS**

Ebraheem Albazee¹, Ahmed Soliman², Khaled Albakri³, Mohamed Elbanna⁴, Nada Alaa Moussa⁵, Hazem Metwally Faragalla⁶.

¹ MD. Kuwait Institute for Medical Specialization, Kuwait City, Kuwait.

² Sixth-year Medical Student, Mansoura University, Mansoura, Egypt.

³ Fourth-year Medical Student, The Hashemite University, Zarqa, Jordan.

⁴ Fourth-year Medical Student, Al-Azhar University, Cairo, Egypt.

⁵ Fourth-year Medical Student, Mansoura University, Mansoura, Egypt.

⁶ MD. Ain Shams University, Cairo, Egypt.

 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=3987s>

INTRODUCTION: Blood loss is an inevitable complication and a major contributor to maternal morbidity and mortality at cesarean deliveries. Several trials have investigated the use of Misoprostol to prevent hemorrhage-related complications in women undergoing cesarean section. **OBJECTIVE:** We aimed to detect a potential preference regarding the efficacy and safety of rectal Misoprostol over Oxytocin as a uterotonic agent. **METHODS:** We searched PubMed, Scopus, Web of Science, Cochrane, and other databases for the relevant trials from inception to September 2022. We included randomized clinical trials (RCTs) that compared rectal Misoprostol versus Oxytocin to control bleeding in women undergoing cesarean delivery. Our primary outcomes were the intra- and postoperative blood loss, and hemoglobin drop after delivery. Secondary outcomes included need for blood transfusion, need for additional uterotonics, difference in operative time, as well as safety outcomes such as the incidence of shivering, pyrexia, nausea, and vomiting. **RESULTS:** Our search strategy revealed 1007 unique records, of them we retrieved full texts of 19 articles to check their adherence to our eligibility criteria. Nine RCTs with 1490 participants were included. We found a significant reduction in postoperative blood loss (MD: -27.9 mL; 95% CI: -53.8, -2.1, $p = 0.03$), and Hb drop after delivery (MD: 0.11 mg/dl, 95% CI: 0.04, 0.19, $p = 0.003$). There is no significant difference regarding intraoperative blood loss, operative time, need for blood transfusion, or need for additional uterotonics. We could not find a significant difference between the 2 groups regarding safety outcomes except for a higher shivering incidence in Misoprostol group (RR: 2.99; 95% CI: 1.69, 5.29, $p = 0.002$). **CONCLUSION:** We found a significant reduction in postoperative blood loss with a potential favorable safety profile in women who administered rectal Misoprostol compared to Oxytocin administration. Our findings recommend and prefer rectal Misoprostol as a cheaper and effective uterotonic agent over Oxytocin which is expensive and requires adequate cold chain for transportation and storage.

Key words: Misoprostol; Oxytocin; Cesarean Section; blood loss.

05. **A CROSS-SECTIONAL OF SYRIANS' KNOWLEDGE OF DIABETES MELLITUS AND HYPERTENSION MANAGEMENT.**

Sarya Swed¹, Hidar Alibrahim¹, Haidara Bohsas², Mohammed Amir Rais³, Sheikh Shoib⁴, Bisher Sawaf⁵, Basel Abdelazeem⁶.

¹ Sixth Year. Faculty of Medicine. Aleppo University. Aleppo, Syria.

² Fifth Year. Faculty of Medicine. Aleppo University. Aleppo, Syria.

³ MD, Hospital of Beni Messous, Algiers, Algeria.

⁴ MD, Consultant at Department of Health, Jammu and Kashmir, Kashmir, India.

⁵ MD, Internal Medicine Department, Hamad Medical Corporation, Doha, Qatar.

⁶ MD, Michigan State University, East Lansing, Michigan, USA.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=22163s>

hypertension and diabetes. However, there is still a shortage of standardized, regular screening practices. Since individuals remain involved in unhealthy lifestyle habits, it is vital to provide accurate information about hypertension and diabetes.

Key words: No communicable diseases; Hypertension; Diabetes Mellitus; Awareness; General Population; Syria.

INTRODUCTION: Diabetes and hypertension are the two most common types of non-communicable diseases (NCDs) impacting people globally. There is no prior research on the Syrian population's knowledge and treatment of hypertension and diabetes, so assessing how the Syrian population acknowledges and perceives these illnesses is crucial. This research intends to assess Syrian individuals' hypertension and diabetes-related awareness, knowledge, attitude, and practices. **METHODS:** A cross-sectional study was conducted between 1 August and 25 August 2022 to assess adult awareness, knowledge, attitude, and behavior about hypertension and diabetes. The questionnaire for the study was developed based on previous research, and the inclusion criteria for the sample were Syrian residents older than 18 who presently live in Syria. On the questionnaire, there were four sections: sociodemographics information, WHO STEPS survey instrument on knowledge of and lifestyle determinants for hypertension and diabetes, respondents' knowledge of and comprehension of hypertension and diabetes, and respondents' awareness of these disorders. **RESULTS:** Among 976 participants, (65.8%) were females. Participants reported hypertension caused by (90.1%) stress, (78.2%) old age, (69%) anxiety, and (38.6%) drug usage. High salt consumption (87%), genetics (82.1%), and obesity (78%) are all risk factors for hypertension. In addition, minimizing salt consumption (92.4%), regular exercise (87.2%), and avoiding anxiety (85%) are preventative measures for hypertension. Participant answers to hypertension consequences were (75.8%) foot ulcer and (74%) eyesight loss. Primary and middle school educational status participants had greater hypertension knowledge (92.3%) than other educational levels. Alcohol use was linked to hypertension knowledge ($P < 0.05$). Participants whose lifestyles did not include alcohol use had a higher hypertension knowledge level (90.3%). Participants with a family history of diabetes have a greater knowledge of hypertension (92%) than those without (66.9%). Almost age groups have shown good knowledge of diabetes, especially participants aged above 55 (93.8%). However, most individuals have examined blood pressure (82.3%), whereas more than half had screened for blood sugar (64.4%). 82.2% of individuals check their blood pressure frequently, whereas 6.2% monitor their blood sugar. Men have a higher hypertension knowledge than females (mean=8.39, SD=2.02), P -value < 0.05, and knowledge of hypertension among participants was shown to be higher among those in good income status than other economic levels (mean=8.34, SD=1.98), P -value < 0.05. Participants between the ages of 40 and 55 showed better knowledge of diabetes compared to other age groups (mean=11.32, SD=2.54), P -value < 0.05; as well, men demonstrated greater knowledge of diabetes than females (mean=10.76, SD=2.79), P -value < 0.05. **CONCLUSION:** Our results demonstrated that the Syrian population has a good to moderate understanding of

06. **ASSESSMENT KNOWLEDGE, ATTITUDE, AND PRACTICE TOWARD TUBERCULOSIS AMONG SYRIAN PEOPLE: AN ONLINE CROSS-SECTIONAL STUDY.**

Yazan Khair Eldien Jabban¹, Sarya Swed², Haidara Bohsas³, Hidar Alibrahim², Bisher Sawaf⁴, Wael Hafez⁵.

¹ Sixth year - Faculty of Medicine - Damascus University, Damascus, Syria.

² Sixth Year. Faculty of Medicine. Aleppo University. Aleppo, Syria.

³ Fifth Year. Faculty of Medicine. Aleppo University. Aleppo, Syria.

⁴ MD, Internal Medicine Department, Hamad Medical Corporation, Doha, Qatar.

⁵ MD, Medical Research Division, Department of Internal Medicine, The National Research Centre, Cairo, Egypt.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=15230s>

INTRODUCTION: TB was reported to have the highest mortality rate among other infectious diseases in 2018 worldwide. Syria and other low-income countries have a higher incidence rate of TB in comparison to high-income countries. Stigma toward TB is extremely high in low-income countries like Syria, and these stigma delays patients from seeking healthcare facilities. Our purpose in this study is to assess the Syrian's knowledge, attitudes, and practices toward TB and understand their Practice related to this disease. **METHODS:** An online cross-sectional questionnaire was distributed between 15 September to 7 October 2022, among Syrians to assess their knowledge, attitudes, and practices toward TB. This questionnaire was adapted from a published study, and the inclusion criteria were all male and female Syrian citizens aged 18 or above. The survey was divided into four questions: the first section assessed sociodemographics, and the other sections were about knowledge, attitude, and practices, respectively. Using IBM SPSS V. 28.0, the data were submitted to descriptive and multivariate logistic regression analyses. **RESULTS:** About (38.6%) of the 1407 participants in this research were male. The research participants' knowledge scores indicated that 78.1% have excellent knowledge. However, 54.1% of interviewees agreed that shaking someone's hand may transmit tuberculosis. Regarding attitude, more than two-thirds (85.7%) of the participants in the survey had an optimistic outlook. Accordingly, most participants (81.3%) had effective TB preventive and control practices. Participants aged 61 to 70 had more TB knowledge than other age groups (P value < 0.05; mean = 6.63, SD = 1.13). Participants with chronic illness had a more positive attitude toward tuberculosis than those without (P value < 0.05) (mean = 2.17, SD = 0.63). Participants with a university degree demonstrated more TB practice than those with lower levels of education (mean = 6.17, SD = 0.85). Participants with a university degree were expected to have 4.38 times more TB knowledge than those without formal education (P 0.05). Participants with a university degree were projected to practice tuberculosis 10.63 times more often than those without education (P 0.001). **CONCLUSION:** Our results indicate that there is poor knowledge regarding the route of transmission of TB; therefore, more efforts should be made to raise awareness about TB transmission, as understanding these facts is a crucial aspect in mitigating the incidence of TB. Consequently, individuals reported poor practices toward TB; for that reason, educating individuals about good practices toward TB should take priority in Syria as war has destroyed the understructure of the healthcare system.

Key words: Knowledge; Attitude; Practice; Tuberculosis; Cross-Sectional; Syria.

07. **AN EXTENSIVE CASE OF PRIMARY SYNOVIAL OSTEOCHONDROMATOSIS OF THE SHOULDER.**

Joshua Unger¹, Jacob King¹, Zachary Leitze².

¹ BS, Fourth-year Medical Student. Rocky Vista University College of Osteopathic Medicine, Ivins, USA

² MD. Intermountain Healthcare Orthopedics and Sports Medicine, St. George, USA

INTRODUCTION: Synovial osteochondromatosis is a rare and benign set of cartilaginous tumors that calcify in the synovial layer of joints. These masses reduce a joint's range of motion and produce chronic low-grade pain. They can destroy local tissues such as muscles, ligaments, and nerves. Diagnosis is often delayed due to the rare nature of the condition and the nonspecific symptoms of pain, reduced range of motion and swelling. **THE CASE:** A 49-year-old male presents with right shoulder pain and stiffness that has progressively decreased his range of motion since his teenage years. Radiographic imaging revealed severe glenohumeral arthritis with large calcified bodies surrounding the glenohumeral joint. Shared decision-making led to an anatomic total shoulder arthroplasty (TSA) with biceps tenodesis. Nineteen independent calcified bodies were removed from the right shoulder. Eight weeks after surgery, the patient was happy with his progression. The patient demonstrated significant improvement in the range of motion of the operative extremity. **CONCLUSION:** We present this case report to help providers form a complete differential and encourage ordering diagnostic tests that pinpoint the exact condition so referral to appropriate treatment modalities, including surgery, is not delayed.

Key words: Shoulder; Orthopedic Surgery; Arthroplasty; Passive range of motion; Synovial Osteochondromatosis.

08. **THE AWARENESS OF CLINICAL DOCTORS AND MEDICAL STUDENTS TOWARD MONKEYPOX IN JORDAN: A NATIONAL CROSS-SECTIONAL STUDY.**

Ahmed Aljabali¹, Mohammed Alawajneh¹, Yazan Alzamer¹, Mohammed Altal¹, Sarya Swed¹, Nedal Alnawaiseh¹, Mohamed Elsayed¹, Bisher Sawaf¹, Amine Rakab¹.

¹ Fourth Year. Faculty of Medicine. Jordan University of Science and Technology. Irbid. Jordan.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=13920s>

INTRODUCTION: Following the diagnosis of the first confirmed monkeypox case in Jordan in August 2022, the necessity for assessing the perceived knowledge among healthcare personnel has gained more significance. Given that the knowledge of healthcare professionals plays a great role in protection against newly emerging epidemics, we therefore in this study aim to assess the awareness of medical students and practicing physicians in Jordan toward the monkeypox virus. **METHODS:** This cross-sectional study was conducted in Jordan to assess medical students' attitudes, general practitioners, residents, and specialists regarding the monkeypox virus. Data from the WHO, CDC, and literature were used to design this questionnaire. The questionnaire comprises 53 questions divided into three sections: socio-demographic variables and work-related characteristics, general and specific knowledge about the monkeypox virus. Snowball sampling was employed since it was convenient. The data were analyzed using SPSS version 25.0. A p-value < 0.05 was considered statistical significance. **RESULTS:** Four hundred twenty-three healthcare professionals participated in this study. Only 7.3% (n = 31) of respondents have ever received information about monkeypox during studies in medicine. Respectively, the mean and median knowledge scores were 12.77 and 13, ranging from 4 to 25. More than half (51.3%, n = 3012) have heard about monkeypox before. About 45.9% (n = 194) of respondents reported that they had heard about monkeypox a few days ago for the first time, while 48.7% (n = 206) heard it a month ago. Most participants had a low level of good knowledge of monkeypox. Only 2.1% of respondents had correctly identified the natural host and the incubation period of monkeypox. More than half (52.1%) correctly answered the sign and symptoms of monkeypox. Almost 49.2% of respondents believed that monkeypox and smallpox have similar signs and symptoms. Respondents aged more than 30 years had higher level of knowledge (COR = 19.45, 95% CI = 6.7683-55.8933, p < 0.001). Respondents who are specialist doctors had higher knowledge of monkeypox (COR = 7.3125, 95% CI = 1.6793-31.8429, p = 0.008) than others. **CONCLUSION:** Monkeypox awareness among Jordanian medical students and practitioners is low; hence immediate action should be taken to address this catastrophic problem. Consequently, learning about monkeypox and spreading information about its prevention is crucial. Furthermore, increasing Doctors' ability to react to human monkeypox cases and report them to a disease surveillance system will depend on their education about the sickness.

Key words: Jordan; Monkeypox; Clinicians; Medical Students; Knowledge.

AWARD FOR THE BEST CASE REPORT PRESENTATION AT THE WCMSR BASED ON THE JUDGES AVERAGE SCORES, 1ST PLACE:**09. HYPERCOAGULABILITY AND CAVERNOUS SINUS THROMBOSIS DUE TO PROTEIN C DEFICIENCY. A CASE REPORT.**

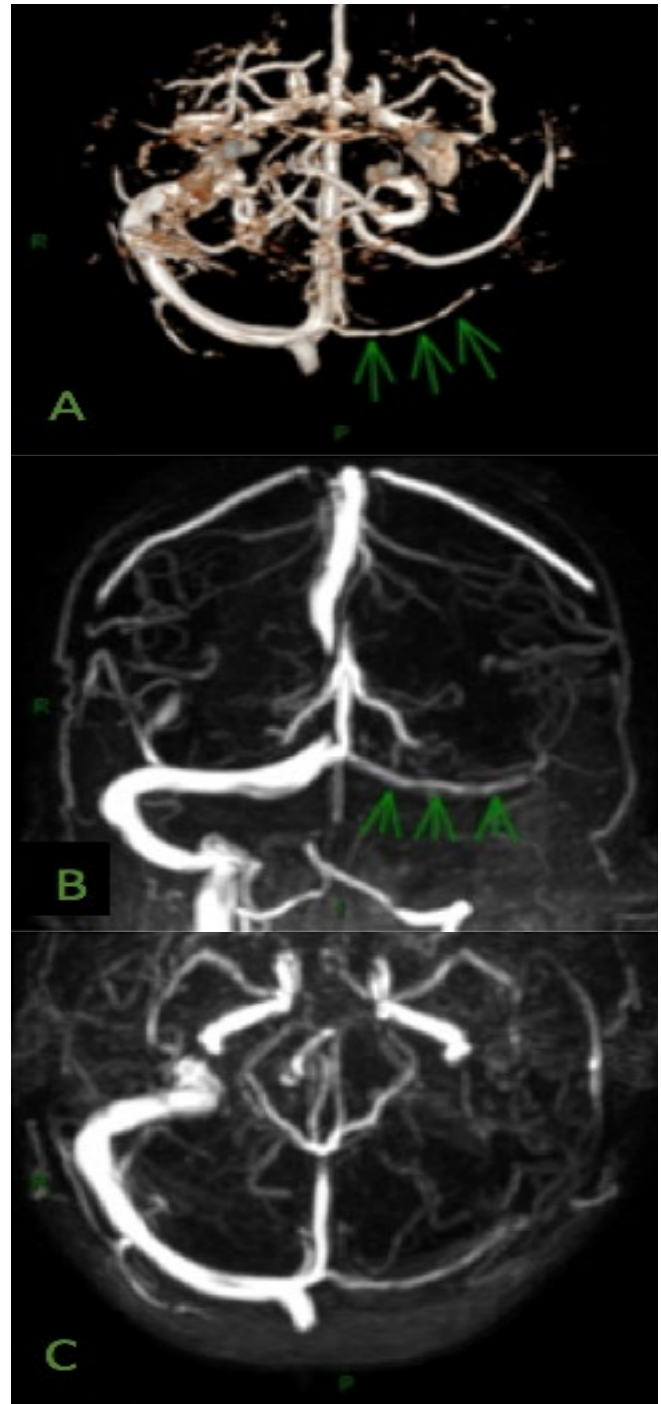
Wilson S. Peñafiel-Pallares¹, Camila Brito-Balanzátegui¹.
¹ Fifth-year Medical Student. Universidad de las Américas, Quito, Ecuador.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=21459s>

INTRODUCTION: Thrombophilia due to protein C deficiency is an unusual condition, present in 0.2% of general population. Cerebral venous thrombosis has an incidence of 3-4 cases per million in adults. A combination of both is very uncommon. Patients with these conditions are prone to acquiring life-threatening superinfections
CASE: A 51-year-old woman presented to the Emergency Department with bilateral pressing frontal headache accompanied with nausea and vomiting. Laboratory findings, medical history and physical examination were unremarkable. Computed tomography demonstrated sphenoidal rhinosinusitis. Migraine diagnosis was established and treated with analgesics. No treatment for sphenoidal rhinosinusitis was prescribed. Over the next 2 weeks, headaches worsened, and the patient returned to the Emergency Department showing left periorbital edema, fever, diplopia, and disorientation. Laboratory exams showed low protein C levels, elevated procalcitonin and neutrophilia. Magnetic Resonance Venography revealed cavernous sinus thrombosis. The patient was treated with empiric antibiotic treatment (vancomycin, ceftriaxone, and metronidazole) and long-term direct oral anticoagulants (Dabigatran). After one year of the diagnosis, the patient fully recovered and showed no recurrence of thrombotic events.
CONCLUSION: This case report emphasizes the importance of early diagnosis and appropriate management of patients with protein C deficiency complicated by septic cavernous sinus thrombosis.

Figure. Brain Magnetic Resonance Venography Confirming Cavernous Sinus Thrombosis.



Legend: **A:** 3D Reconstruction of a Magnetic resonance cerebral venography. Axial section, cranial view. **B:** Magnetic resonance cerebral venography. Coronal section. **C:** Magnetic resonance cerebral venography. Axial section, cranial view. All of them show decreased diameter, signal intensity and filling defects of the left transverse sinus and ipsilateral internal jugular vein (green arrows). Tortuosity and dilatation of the left ophthalmic veins are also present.

Key words: Thrombophilia; Protein C deficiency; Cavernous sinus thrombosis; Case report.

10. **ADVERSE EFFECTS OF THIRD-DOSE MODERNA VACCINATION FOR HEALTHCARE WORKERS OF UDAYANA UNIVERSITY HOSPITAL, BALI, INDONESIA**

Putu Kintan Wulandari¹, Richard Christian Suteja¹, I Gede Purna Weisnawa¹, Jerry¹, I Komang Hotra Adiputra¹, Giovanca Verentzia Purnama¹, Darren Junior¹, Dewa Ayu Fony Prema Shanti¹, Cokorda Agung Wahyu Purnamasidhi².

¹ Udayana University, Faculty of Medicine.

² Internal Medicine Department Udayana University/Udayana University Hospital, Indonesia.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=8959s>

INTRODUCTION: Since its first sighting in China at the end of 2019, COVID-19 had spread rapidly around the world, with no exception, to Indonesia. World Health Organization officially declared COVID-19 as a pandemic in March 2020. COVID-19 causes severe symptoms for those immunocompromised, making it an urgent matter to end the pandemic as soon as possible. In only 1 year since COVID-19 was found, the world has successfully developed COVID-19 vaccines which experts believe may bring an end to the pandemic. However, the vaccination also carries risk of adverse effect. **AIM:** The aim of this study is to report how the adverse effect of third dose mRNA-1273 vaccine in healthcare workers at Udayana University Hospital.

METHODS: The descriptive study collects data from all healthcare workers in Udayana University Hospital receiving third-dose mRNA-1273 vaccine using online questionnaires. We excluded incomplete responds to maintain quality of data. This report comprises demographic characteristics, clinical history, and the adverse effects and was approved by the ethical committee of Udayana University.

RESULTS: We received a respond rate of 86.9% (N=553) from a total of 636 healthcare workers who received the third-dose mRNA-1273 vaccine. Our respondents had a mean age of 37 (SD ± 7.81) years old. Most were female (55.8%) aging 20-29 years old (57.1%), and had an interval between their initial and third dose between 3-5 months (53.4%). Adverse effect most recorded was local pain (82.8%), followed by fever (56.4%), weakness/fatigue (39.3%), excessive sleepiness (32.5%), dizziness (30.1%), headache (27.6%), nausea/vomiting (21.5%), excessive hungeriness (18,4%), other symptoms (11.0%) and local erythema (10.4%). About 39.9% of the respondents felt the adverse effect 12-24 hours post-vaccination.

CONCLUSION: Adverse effects following third-dose mRNA-1273 vaccination in healthcare workers of Udayana University Academic Hospital includes local pain, fever, weakness/fatigue, excessive sleepiness, dizziness, headache, nausea and vomiting, excessive hungeriness, and local erythema. Most of these symptoms occurred within the first 24 hours post-vaccination.

Key words: Vaccine; Adverse Effect; mRNA-1273; COVID-19; Healthcare Worker; Booster Shot.

11. **SYRIAN HEALTH PROVIDERS' KNOWLEDGE OF PALLIATIVE CARE: AN ONLINE CROSS-SECTIONAL STUDY IN SYRIA.**

Naghham Jawish¹, Haidara Bohsas², Sarya Swed³, Hidar Alibrahim³, Bisher Sawaf⁴, Yazan Khair Eldien Jabban¹, Wael Hafez⁵.

¹ Sixth Year. Faculty of Medicine. Damascus University. Damascus. Syria.

² Fifth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

³ Sixth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

⁴ MD, Internal Medicine Department, Hamad Medical Corporation, Doha, Qatar.

⁵ MD, Medical Research Division, Department of Internal Medicine, The National Research Centre, Cairo, Egypt.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=30027s>

INTRODUCTION: Palliative care is a method to alleviate pain and enhance the quality of life for patients suffering from the consequences of a life-threatening illness. The knowledge of palliative care among healthcare professionals is poor; therefore, training programs are needed to offer patients appropriate treatment and improve their health. In Syria, as palliative care programs are rarely applied, we aim to evaluate the knowledge regarding palliative care among healthcare workers. **METHODS:** This is an online cross-sectional study conducted between July 24 and August 28, 2022 to measure palliative care knowledge and its applications among Syrian healthcare workers. The questionnaire for the study was designed in light of a previous study, and the inclusion criteria were Syrian healthcare workers, including physicians and nurses, as well as medical and nursing students. The four sections of the questionnaire included sociodemographic information in the first part, while the second, third, and fourth parts assessed experience, knowledge, and attitude toward palliative care among healthcare workers, respectively. Data were analyzed in IBM SPSS V. 28.0 using descriptive and multivariate logistic regression analysis. **RESULTS:** Among 602 participants, 66.2% of participants were females. Most respondents were medical students (72.9%), while residents and nurses or nursing students represented 18.8% and 8.3%, respectively. The majority of participants (84%) answered the question about pain treatment goals correctly, while a small percentage (5.3%) answered the question about whether or not long-term opioid use is addictive correctly. No significant difference in the overall knowledge score was shown among geographical areas, genders, and different specialties. Regarding the knowledge questions related to palliative care, only 14 participants were considered knowledgeable. The three most responses that received agreement regarding the attitudes towards palliative care were "Pain relievers should be given as needed to terminally ill patients" (89.7%), "Spiritual care must include counseling for the terminally ill patient" (84.3%), "Patients have the right to determine their own degree of psychosocial intervention" (81%). A significant difference existed between urban and rural residents in terms of the attitude score. When comparing first-year students to those in their fifth year, students in their fifth year were 8.06 times more likely to have a positive attitude. **CONCLUSION:** Our results demonstrated that healthcare professionals have inadequate knowledge about palliative care. There is an urgent need to introduce palliative care to the health system in Syria in order to improve the quality of life of these patients in their terminal stages of illness and to provide care for patients who need it.

Key words: Palliative care; Knowledge; Healthcare workers; Attitudes.

12. **MACROPHAGE ACTIVATION SYNDROME IN ADULT ONSET STILL'S DISEASE: A LIFE THREATENING COMPLICATION.**

Naresh Kumar¹, Karthikeyan R², Harshita Choudhary³.

¹ Professor of Medicine. Maulana Azad Medical College, New Delhi, India.

² MD. Maulana Azad Medical College, New Delhi, India.

³ MBBS Intern. Maulana Azad Medical College, New Delhi, India.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=411s>

INTRODUCTION: Adult onset Still's disease (AOSD), a multi-systemic inflammatory disorder, is a rare disorder but an important differential to be considered in patients of Pyrexia of Unknown Origin, especially if patient presents with polyarthritis. Macrophage activation syndrome (MAS), a subset of Secondary Hemophagocytic Lymphohistiocytosis (HLH), considered as the most life threatening complication of AOSD, mostly develops around the onset of disease. Hence, in a previously undiagnosed case of AOSD, recognizing MAS as a presenting feature complicating underlying AOSD is essential for increased patient survival, as in our case. **CASE:** A 39 year old diabetic female presented with high grade fever with chills and multiple joint pains symmetrically involving proximal shoulder, knees and distal joints (involving MCP, PIP and DIP joints of hand) associated with swelling and early morning stiffness, relieved on activity, since past 6 months. No history of oral ulcers, rash, jaundice, weight loss, loss of appetite, foreign travel or close animal contact. On examination, Pallor was present, Blood Pressure was 120/70 mm Hg, pulse rate was 102/min and temperature was 100 F. On per abdomen, mild hepatomegaly was present and other system examination was unremarkable. Routine laboratory findings on day of presentation have been summarised (Table 1.1). Ultrasound Abdomen revealed hepatomegaly and Chest X-ray showed signs of old infective foci. Peripheral smear for Malarial parasite, Ns1Ag and dengue serology, Widal test and Montoux test were negative. Blood cultures and urine cultures were sterile. X-Ray of joints were normal. USG of B/L Knee joints showed mild joint effusion bilaterally with no internal echoes (non tappable). Trans-thoracic echo and Trans-esophageal echo were normal. CT chest, neck and abdomen showed old tubercular changes in lung. Tests for atypical bacterial infections which was normal (RK 39, Chickungunya, Brucella, Leptospirosis and Scrub typhus). Fever did not respond to Broad Spectrum Antibiotics, Antimalarials or Antitubercular therapy and patient continued to have persistent fever spikes. Autoimmune profile showed ANA and RA Factor negative but markers of inflammation were raised: CRP- 521, ESR -148, IL-6 – 84.0, Procalcitonin-6.9 and S.Ferritin >2000. During the work up for Anemia, Microcytic hypochromic anemia was found with Elevated NAP SCORE-165. Incidentally, her triglycerides were found to be elevated (356) and a reduced fibrinogen. With these results, we planned for a bone marrow aspirate and biopsy which showed increased myeloid preponderance (32:1), increased histiocytes and evidence of hemophagocytosis. The 2004 diagnostic criteria of HLH was fulfilled. After ruling out almost all infectious and malignant causes of secondary HLH, we searched for a rheumatologic cause. Thus diagnosis of AOSD (after fulfilling Yamaguchi's criteria) with MAS (a subset of 2' HLH) was made. Patient had dramatic improvement after receiving steroids with her fever episodes and joint pains settling completely thereafter. **CONCLUSION:** Prompt recognition of life threatening complications like MAS which pose diagnostic difficulty due to overlapping features in a patient of AOSD, should be done at the earliest to improve patient prognosis and survival. Serum Ferritin levels can be considered a useful marker to

assess the disease activity and to predict MAS occurrence in such patients.

Table. Lab Values on Day 1 of Presentation.

Lab Parameter	Value on presentation
Hb	5.2
TLC	24260
DLC	92/7/1
Platelet count	5.9
ESR	141
KFT	22/0.6
Na/K	138/4.1
Cal/Phosphate	7.9/3.4
Total Bil/D. Bil	0.76/0.16
ALT/AST	13/30
ALP	50
TPSA	6.5/3.0
CPK MB	27

Key words: Macrophage Activation syndrome; Adult Onset Still's disease; Hemophagocytic lymphohistiocytosis.

13. **MILD TRAUMATIC BRAIN INJURY: WHAT WE CAN LEARN FROM A QUALITATIVE STUDY OF PATIENT PERCEPTIONS FOLLOWING EMERGENCY DEPARTMENT DISCHARGE.**

Kate Ziqiu Wang¹, Marcia Ward², John Macfarlane³.

¹ MB BCh BAO. University College Cork, Cork, Ireland. University of British Columbia/Coastal Family Medicine Residency, Vancouver, Canada.

² D.Clin.Psych. University College Cork, Cork, Ireland. University College Cork/Cork University Hospital, Cork, Ireland.

³ M.B.B.S., FRCP. University College Cork, Cork, Ireland. University College Cork/Mercy University Hospital, Cork, Ireland. University College Cork/Cork University Hospital, Cork, Ireland.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=26315s>

INTRODUCTION: Mild traumatic brain injuries (mTBI) are common; however, patients often fall into a grey zone of care following acute treatment. Research increasingly shows that despite the initial clearance of traumatic symptoms, patients often suffer from lack of standardised care and return with increased symptoms. Both physical and psychological symptoms are prevalent, with patients reporting symptoms years afterwards. There is little support in Ireland for patients until chronic diagnosis (>2.5 months after the incident) leaving a large gap in care after Emergency Department (ED) discharge. This study investigated the experiences of patients with mTBI to identify barriers and suggest clinically relevant areas for improvement in the current system of care. **METHODS:** 16 patients with a clinical diagnosis of mTBI were recruited from the Cork University Hospital ED for participation in this study. Semi-structured phone interviews were conducted at approximately 2.5-3 months post-discharge. Reflexive thematic analysis with an inductive and realist approach was used to code and inductively analyse the data. The most frequently occurring themes and their relationship to subthemes are reported. **RESULTS:** A total of 16 mTBI adult patients were interviewed (mean age: 50.5 (18-85)). Major themes identified in the experience of mTBI patients were: lack of clarity in diagnosis and treatment, poor access to information, and ongoing symptoms. 87.5% of participants reported being uncertain about their diagnosis of mTBI and 93.8% of participants did not seek further information regarding their head injury. 43.8% of the participants reported prolonged recovery with two participants (12.5%) reporting ongoing symptoms. Headache, photophobia, and difficulty with thinking and memory were the predominant symptoms reported. **CONCLUSION:** Several overarching themes were identified in the qualitative self-reported experiences of mTBI patients following ED discharge. Participants reported persistent symptoms, lack of clarity, and a lack of access to information regarding their mTBI diagnosis and treatment. Suggested recommendations for future practice include adding psychoeducational resources and increasing awareness and training among staff to provide timely patient education.

Table. Subthemes in the Experience of Mild Traumatic Brain Injury Identified in ≥75% of Participants.

Major theme	Subtheme	Sample data extract
Poor access to information	Lack of information seeking (93.8%)	Interviewer: That's great. And did you ever do any research yourself on the internet or any books at all? Participant 7: No, I made that case, right. If I looked up, Mr. Google, I would have everything that was ever threatened. Participant 7, 66, Male

Lack of available information (75%)

Interviewer: Before you left, did they give you any papers on returning to school, returning to driving, returning to work? That kind of stuff?

Participant 12: No, they didn't really. They just kind of told me basically what to do with my head. I couldn't get it wet for like hours and if it were to keep bleeding to go back.

Interviewer: So, for the wound?

Participant 12: Yeah, for the wound. They didn't actually give me anything about a head injury.

Participant 12, 22, Female

Participant 4: I got a sheet, the first time I went in. I did get that sheet about head injuries.

Interviewer: Ok, so they gave you a sheet. Did they walk through it with you at all?

Participant 4: No and I really think they should... I think there should be more of a song and dance made about concussions because if I had realized I was concussed earlier, I probably would've made some other decisions. I would have possibly had a better opportunity of coming out unscathed.

Participant 4, 39, Female

Lack of clarity in diagnosis and treatment

Unclear diagnosis (87.5%)

Participant 1: I didn't receive any diagnosis, no. It was an injury; I had a good bang, and I didn't. But I supposed there was no need. I came around and I'm alright.

Participant 1, 75, Male

Interviewer: when you were at the emergency, did anybody tell you about the head injury that you had?

Participant 10: No, no, nothing.

Interviewer: Alright, so what was your understanding leaving CUH of I guess what happened and what your treatment was going to be?

Participant 10: Well, my understanding was just go home and get on with it.

Participant 10, 66, Female

Key words: Mild Traumatic Brain Injury; Post-Concussion Syndrome; Perception; Qualitative Research; Health Knowledge; Attitudes; Practice.

14. **SAFETY AND IMMUNOGENICITY OF COVID-19 VACCINES IN PATIENTS WITH CANCER: A NETWORK META-ANALYSIS OF 11357 PATIENTS.**

Khaled Albakri¹, Abdulrhman Khaity², Rawan Mustafa Hamamreh¹, Balqees Mohammad Hanaqtah¹, Nora AlKhateeb³, Eman E. Alshial⁴, Mohammed Tarek⁵.

¹ Fourth Year, Faculty of medicine, The Hashemite University, Zarqa, Jordan.

² MBBS, Faculty of Medicine, Elrazi University, Khartoum, Sudan.

³ Fourth Year, Faculty of Medicine, Yarmouk University, Irbid, Jordan.

⁴ Fourth Year, Faculty of science, Damanhur University, Al Buhayrah, Egypt.

⁵ Faculty of Medicine, Al-Azhar university, Cairo, Egypt.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=13283s>

INTRODUCTION: The COVID-19 pandemic has had a devastating impact worldwide, especially among patients with cancer as they are more likely to experience severe infection and worse outcomes than the general population. Cancer patients have been excluded from the confirmatory clinical trials which create a gap in the clinical data addressing the effectiveness and safety of the vaccines in this group of immunocompromised patients. Therefore, this study aims to evaluate the findings of all relevant individual studies about the serological response to COVID-19 vaccines in cancer patients compared with healthy participants. **METHODS:** We searched for published relevant studies in the following electronic databases: PubMed, Scopus, Cochrane Library, and Web of Science from inception until 1st August 2022. Data were extracted from eligible studies and pooled as a risk ratio or mean difference (MD) in the network meta-analysis model with the corresponding 95% confidence interval. We used the random effect model in case of significant heterogeneity, otherwise, a fixed-effect model was used. We analyzed the data using R version 4 for windows. **RESULTS:** We included 42 studies (3 randomized controlled trials and 39 observational) with a total of 11357 patients in this network meta-analysis. The pooled effect estimates showed that healthy participants were better than cancer patients with solid and hematological tumors in seroconversion [(RR = 0.81; 95% CI 0.75, 0.87; P < 0.00001), (RR = 0.61; 95% CI 0.54, 0.69; P < 0.00001); respectively]. However, the pooled effect estimates showed that there was no difference between healthy participants and Cancer patients with solid tumors in terms of COVID-19 antibody titer, T-cell response, and adverse events (MD = -160.82; 95% CI -3089.28, 2768.18; P = 0.91), (RR = 1.10; 95% CI 0.69,1.75; P = 0.69), (RR = 1.06; 95% CI 0.88,1.27; P= 0.54), respectively. Additionally, there was no significant difference between the different types of vaccines in terms of COVID-19 antibody titer. **CONCLUSION:** In conclusion, the current evidence demonstrated that the seroconversion rate in healthy participants was higher than in patients with solid and hematological cancers. Nevertheless, our network meta-analysis revealed no significant difference between the two groups in terms of COVID-19 antibody titer, T-cell response, and adverse events. Accordingly, the present evidence is not sufficient to confirm the safety and efficacy of COVID-19 vaccine among cancer patients. Therefore, further studies are recommended.

Key words: COVID-19; Cancer; Vaccine; Network meta-analysis.

AWARD FOR THE BEST ORIGINAL RESEARCH PRESENTATION AT THE WCMSR BASED ON THE JUDGES AVERAGE SCORES, 3rd PLACE:**Key words:** Stroke; Acute Ischemic Stroke; Prehospital; Emergency Medical Services.15. **DETERMINING THE ABILITY OF THE VISION, APHASIA, AND NEGLECT (VAN) STROKE SCALE TO IDENTIFY LARGE VESSEL OCCLUSION STROKES WITHIN THE PREHOSPITAL SETTING: A PROSPECTIVE COHORT STUDY.**Lydia Leavitt¹.¹ University of Illinois College of Medicine, United States. <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=19685s>

INTRODUCTION: There are several stroke assessment scales designed to identify large vessel occlusions (LVOs), and a rising area of research is concerned with identifying those that outperform others in accuracy. One scale that has shown promise is the vision, aphasia, and neglect (VAN) scale. Our understanding of this scale's true performance, however, is limited as a majority of previous studies have been carried out in the hospital setting. The objective of this study is to evaluate the ability of the VAN scale to predict LVOs in the prehospital setting. **METHODS:** Prospective cohort study comparing emergency medical service personnel administered VAN results to hospital discharge diagnoses to evaluate VAN's ability to predict a large vessel occlusion stroke. Main outcome measures included VAN sensitivity, specificity, positive and negative predictive values, positive and negative likelihood ratios, and accuracy. A receiver operating characteristic curve was also produced to illustrate the diagnostic ability of VAN graphically. **RESULTS:** Emergency medical service personnel administered the VAN assessment to 185 patients suspected of having a stroke. VAN had a sensitivity of 0.81 (CI, 0.61 to 0.93), specificity 0.56 (CI, 0.48 to 0.64), positive predictive value 0.24 (CI, 0.61 to 0.34), negative predictive value 0.95 (CI, 0.87 to 0.98), positive likelihood ratio 1.87 (CI, 1.45 – 2.40), negative likelihood ratio 0.33 (CI, 0.15 – 0.73), and 60% accuracy (CI, 53% - 61%) for large vessel occlusion identification. **CONCLUSION:** When negative, VAN offers relatively high assurance that the patient is not suffering a large vessel occlusion stroke. However, VAN is non-specific for large vessel occlusions and results in many false positives. Therefore, pre-hospital decision-making regarding triage should not rely exclusively on VAN due to possible over-triage to facilities with endovascular capabilities.

Table. VAN Performance Characteristics to Predict Large Vessel Occlusions.

VAN Results	Hospital Confirmed LVO	
	Positive	Negative
Positive	22	69
Negative	5	89
Total	27	158
Value	95% Confidence Interval	
Sensitivity	0.81	0.61 – 0.93
Specificity	0.56	0.48 – 0.64
PPV	0.24	0.16 – 0.34
NPV	0.95	0.87 – 0.98
PLR	1.87	1.45 – 2.40
NLR	0.33	0.15 – 0.73
Accuracy	0.60	0.53 – 0.61

AWARD FOR THE BEST CASE REPORT PRESENTATION AT THE WCMSR BASED ON THE JUDGES AVERAGE SCORES, 2nd PLACE:**16. A CASE REPORT OF RARE TYPE OF CHOREA WITH HYPOXIC-ISCHEMIC INSULT.**Roohi Kolte¹, Dr Ganna Gnyloskurenko².¹ 6th year medical student, O. O. Bogomolets national medical university, Kyiv, Ukraine.² PhD, Associate professor, Department of pediatrics, O. O. Bogomolets National Medical University, Kyiv, Ukraine.
 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=20266s>

INTRODUCTION: Chorea is derived from the Greek word choreia meaning dance. Chorea is defined as hyperkinetic involuntary movement that is brief, irregular, nonrhythmic, non-purposeful and flows from one body part to another. Such symptoms can be the result of autoimmune, hereditary, vascular, metabolic, drug induced, psychogenic causes. It is important to determine the main disease, this will help to prescribe etiologically-specific methods of treatment or effective symptomatic treatment of the causes of chorea. According to the international experts, the following directions of chorea treatment are determined: stopping or changing the effect of the causative agent, symptomatic treatment of chorea, and treatment aimed at eliminating the main etiology. **CASE DESCRIPTION:** A 10-year-old male child came with complaints of involuntary moments of right upper and lower limb and slurred speech for about 2 days. There was no fever, lethargy, altered sensorium, convulsions, vomiting, loose motions, joint pain. The history of similar complaints, hospitalization before was absent. Bp-104/68, Pulse- 96/min, RR-22/min, SpO2-99%, temperature- 36.6 °C, BMI-13.56 kg/m². Motor examination, neurological examination was normal. Laboratory tests like CBC, CRP, ESR, solubility test, Antistreptolysin O(ASO) titer, INR, LFT, KFT, TSH, T3, T4, serum ionic calcium, serum ceruloplasmin, PTH were normal. ANA solubility test was negative (AA pattern). Fundus examination- right and left fundus normal with no KF ring found. USG abdomen were normal within limits. MRI of brain was performed. Mild atrophy of right caudate nucleus was noted. The MRI images suggested sequelae to hypoxic ischemic insult. Medication on admission: Injection phenobarbitone 440mg in 20 ml NS over 20 mins, Tablet haloperidol 0.25 mg, syrup multivitamin 5 ml, syrup calcium 5 ml, Tablet folic acid 5mg. He was admitted for 10 days and diagnosed vascular type of chorea. On the 10th day, the child was vitally stable, no complaints of involuntary movements and slurred speech. Advice on discharge: Tab Haloperidol 0.25 mg 1 tab (twice a day), syrup multivitamin 5 ml (twice a day), syrup calcium 5 ml, tab folic acid (twice a day), capsule vitamin D3 60,000 IU (once in week till 6 weeks). For follow-up the patient should visit doctor every week. **CONCLUSION:** According to the literature, patients with vascular chorea usually have an acute or subacute onset of chorea on one side of the body (hemichorea), contralateral to the lesion. In this clinical case, the patient had an acute onset with lesions of the right arm and leg. In this case, during the differential diagnosis, possible causes of chorea were excluded. Movement disorders have been associated with hypoperfusion and hypofunction in the caudate nucleus which was determined by cerebral imaging. According to experts, despite the fact that the prognosis of hemichorea can be benign, the long-term prognosis is determined not by hemichorea specifically, but by the long-term prognosis of patients who have suffered a stroke. Symptomatic treatment with antichorea drugs is recommended in the acute phase, so the patient was immediately treated when he went to

the hospital. The patient should be under the observation of a neurologist to prevent complications.

Figure. MRI of Brain Showing Multiple T2/FLAIR Hyper-Intense Foci in Bilateral Head of Caudate Nucleus, (Left > Right) Bilateral Dorsal Thalamus, Deep White Matter of Bilateral Perirhinal Cortex. They Appear Hypo Intense, on T1W1 Shows Enhancement. Mild Atrophy of Right Caudate Nucleus is Noted.



Key words: Chorea; Dyskinesias; Child; Haloperidol; Magnetic Resonance Imaging.

17. **COMPARISON OF RISK FACTORS FOR DEVELOPING LIVER FIBROSIS IN SUBJECTS WITH AND WITHOUT METABOLIC SYNDROME: A COHORT STUDY.**

Ana Karen Treviño Morales¹, Laura Elia Martínez de Villarreal², Geovana Calvo Anguiano³, Jesus Zacarías Villarreal Pérez⁴, Sandra Marlen González Peña⁵, Fernando Lavallo González⁴.

¹ Last-year Medical Student. Facultad de Medicina /Hospital Universitario "Dr. José Eleuterio González" /Universidad Autónoma de Nuevo León, Monterrey, México.

² MD, MSc. Facultad de Medicina /Hospital Universitario "Dr. José Eleuterio González" /Universidad Autónoma de Nuevo León, Monterrey, México.

³ PhD in Molecular Biology and Genetic Engineering. Hospital Universitario "Dr. José Eleuterio González" / Universidad Autónoma de Nuevo León, Monterrey, México.

⁴ MD. Facultad de Medicina /Hospital Universitario "Dr. José Eleuterio González" /Universidad Autónoma de Nuevo León, Monterrey, México.

⁵ PhD, MSc.N, Degree in Nutrition. Consulta No. 2 Nutrición/Hospital Universitario "Dr. José Eleuterio González" /Universidad Autónoma de Nuevo León, Monterrey, México.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=28198s>

INTRODUCTION: Metabolic syndrome (MS), a combination of diabetes, high blood pressure and obesity, is a well-known risk factor for developing non-alcoholic fatty liver disease, condition that can lead to serious liver damage such as liver fibrosis (LF), which is characterized by excessive deposition of connective tissue, progressing to cirrhosis and hepatocellular carcinoma. Nevertheless, subjects without MS may also develop LF. Non-invasive LF predictors based upon anthropometric and biochemical data have been reported. **AIM:** To compare anthropometric, genetic, and biochemical parameters in subjects with or without MS, and at risk for developing liver fibrosis. **METHODS:** A randomized sample of 200 individuals was taken from the 2015 Nuevo León State Health Survey. Inclusion criteria were age ≥ 18 and a previously stored blood sample. According to the parameters obtained, subjects were classified as either with or without MS and their NAFLD fibrosis score was calculated considering variables such as age, BMI, glycemia, albumin, platelets, and AST/ALT ratio, to establish a high or low risk of LF. Comparisons of weight, age, BMI, blood glucose, total cholesterol, triglycerides, platelets, albumin, AST/ALT ratio, and HDL were made between groups. DNA was extracted from stored blood samples and genotyped, using q-PCR, according to variants in four genes related to: fatty acid (FA) metabolism (PNPLA3, rs738409), adipocyte differentiation (PLIN2, rs35568725), glucose metabolism (GCKR, rs1260326 and rs780094), and BMI (UCP2, rs659366). Statistical analysis was performed with SPSS v.22. A p value < 0.05 was taken as level of significance. **RESULTS:** A total of 134 subjects were included and divided into four groups (n): With MS+ high risk (35), With MS+ low risk (34), Without MS+ high risk (32), Without MS+ low risk (33). Table 1 shows the main significant findings. Higher age, low platelet count, and increased AST/ALT ratio, were significantly different in high risk subjects, independently of the presence of MS. No association between the polymorphisms and risk for fibrosis was found. In subjects at high risk for LF, statistical significance was found for high cholesterol blood levels (OR= 20.0 (95%CI 2.87;139.38) in carriers of the T allele of GCKR rs780094 polymorphism. **CONCLUSION:** Aging, thrombocytopenia, and increased transaminases, the last two indicators of liver dysfunction, were found as important risk factors for LF in subjects without metabolic syndrome. None of the genetic variants analyzed resulted associated to risk of LF, although sample size could be a factor. GCKR rs780094

variant was found related with risk for hypercholesterolemia, even though dyslipidemia was not found associated with risk of LF in the present study.

Table. Significant Main Risk Factors for Developing Liver Fibrosis in Subjects with and without Metabolic Syndrome.

	With MS +High risk	Without MS + High risk	With MS + Low risk	Without MS +Low risk	p- value
Age	57.81 \pm 14.81	59.88 \pm 17.52	42.44 \pm 12.18	38.44 \pm 11.66	0.0001
BMI	30.75 \pm 5.41	28.30 \pm 5.04	29.61 \pm 4.80	26.75 \pm 3.91	0.0001
Glucose	144.06 \pm 65.17	108.38 \pm 50.53	110.91 \pm 53.99	99.36 \pm 28.40	0.0001
Platelets	206.83 \pm 39.72	198.72 \pm 47.90	262.15 \pm 56.53	262.12 \pm 61.20	0.0001
AST/ALT ratio	1.14 \pm 0.38	1.56 \pm 1.40	0.85 \pm 0.28	1.07 \pm 0.40	0.0001

Key words: Fibrosis; Hispanic; Genetics. (Source: MeSH-NLM).

AWARD FOR THE HIGHER SCORE DURING THE ABSTRACT REVISION PROCESS FOR ORIGINAL RESEARCH, 3rd PLACE:

18. GENDER DIFFERENCES IN ATTITUDE AND BARRIERS TO RESEARCH BY MEDICAL UNDERGRADUATE STUDENTS IN NIGERIA.



Kenechukwu Franklin Okwunze¹, Efosa Peace Iyawe¹, Ifunanya Prosper Agughalam², Aisha Yahya³, Priscilla Awoyomi¹, Emmanuel Metajuwa-kuda¹, Caroline Anulika Nwamadiagesi⁴, Mayomikun Olawale⁵, Stephen Igwe⁶.

- ¹ Final-year Medical student, University of Ibadan, Ibadan, Nigeria.
- ² Fifth-year Medical student, University of Port-Harcourt, Port-Harcourt, Nigeria.
- ³ Fifth-year Medical student, Bayero University, Kano, Nigeria.
- ⁴ Fifth-year Medical student, University of Ibadan, Ibadan Nigeria.
- ⁵ Fifth-year Medical student, Bowen University, Iwo, Nigeria.
- ⁶ Fifth-year Medical student, University of Ilorin, Kwara, Nigeria.

<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=25425s>

INTRODUCTION: Medical research, one of the pillars of medical education plays a crucial impact in advancing healthcare by improving the diagnosis, treatment, and prevention of illnesses. It is important to ensure that medical students and early career physicians are involved to research outside the curriculum at an early stage of training. This early involvement has been widely known to increase one's likelihood of building a career in research. In Nigeria, the gender composition of research personnel in universities is alarming as less than a quarter are female. There is a need to describe the factors responsible for this imbalance in order to inform stakeholders on where actionable measures can be taken. **AIM:** To examine the gender differences in the attitude towards research, willingness to undertake research, and barriers to research reported by undergraduate clinical students in Nigeria. **METHODS:** Six hundred and eighty-two (682) undergraduate medical students in their fourth to sixth years of study in seven selected medical schools across Nigeria completed an electronic survey in August 2022. The survey which was hosted on REDCap was adapted from published works which addressed a similar scope and comprised of 56 items divided into five sections. Gender differences in research experience, willingness to participate in research, attitude towards research and barriers that hinder participation in research were explored using a chi-square test. Variables were collected using a 5-point Likert scale ranging from strongly disagree to agree with a "neutral midpoint" and SPSS version 25 was used in the analysis. **RESULTS:** Although an equal proportion of male and female students reported voluntary involvement in research, 56.2% of male students and 28.8% of female students perceived research as exciting and enjoyable ($p < 0.001$) and 37.5% of male students vs 47.0% of female students perceived research as being complicated. Male students were more willing to spend more than 3 months on a research project (56.0% vs 42.5%, $p < 0.001$), devote as much time to research as to medical studies (40.1% vs 28%, $p = 0.002$), and to pursue a research-oriented career in the future (49.3% vs 32%, $p < 0.001$). Overall, male students reported a higher number of barriers than female students. However, lack of personal interest in research (19.2% vs 26.9%, male vs female students, $p = 0.011$) and insufficient training in research methodology (70.1% vs 81.7%, male vs female students, $p = 0.009$) were reported more by female students. **CONCLUSION:** Although there are no gender differences in the composition of students who report prior voluntarily involvement in research, there are gender differences in the attitude and willingness as well as barriers encountered by clinical students to carry out research. Tailored measures should be

developed around the peculiar barriers expressed by female medical students.

Table. Table Displaying Attitude, Willingness, and Barriers to Research Stratified by Gender.

	Male (n=374)		Female (n=308)		p-value
Previous voluntary research experience	135 (36.1%)		107 (34.7%)		
Number of article publication					
1-2	49		26		
>2	5		5		
Attitude	Agree	Disagree	Agree	Disagree	
I find research exciting and enjoyable	210	27	89	50	<0.001*
I find research valuable	333	3	265	2	0.623
I find research complicated	141	81	145	40	0.001*
I find research time consuming	254	29	215	18	0.745
Willingness					
To engage in any form of research related task	264	25	194	23	0.185
To spend more than 3 months on a research project	224	42	131	46	<0.001*
To devote as much time as I devote to my studies	150	87	86	80	0.002*
To pursue a research-oriented career	184	61	98	79	<0.001*
Barriers					
Not enough time	231	41	193	29	0.885
Insufficient training	261	24	251	15	0.009*
Lack of mentorship	196	35	153	31	0.747
Find it difficult to combine research with studies	199	35	163	35	0.872
Lack of personal interest	71	211	82	127	0.011*

Key words: Research; Undergraduate; Medical student; Barriers; Nigeria (Source: MeSH-NLM).

19. **PREPECTORAL VERSUS SUBPECTORAL DIRECT-TO-IMPLANT-BASED BREAST RECONSTRUCTION: A META-ANALYSIS OF 3851 PATIENTS.**

Ahmed Aljabali¹, Mohammad Khader Alta¹, Yasmeen Jamal Alabdallat², Abdulrhman Khaity³, Khaled Albakri², Jihad Feras Samhouri⁴.

¹ Fourth Year, Faculty of Medicine, Jordan University of Science and Technology, Irbid, Jordan.

² Fourth Year, Faculty of Medicine, The Hashemite University, Zarqa, Jordan.

³ MBBS, Faculty of Medicine, Elrazi University, Khartoum, Sudan.

⁴ Fifth Year, Faculty of Medicine, University of Jordan, Amman, Jordan.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=4621s>

INTRODUCTION: The subpectoral direct-to-implant (SP-DTI) surgical technique is the standard and most common for breast reconstruction which could reduce implant visibility and palpability, and it manipulates the pectoralis major muscle with some post-operative complications such as muscle spasm, animation deformities, and pain while the prepectoral direct-to-implant (PP-DTI) approach leaves the muscle intact. Therefore, we conducted this meta-analysis to assess the efficacy and safety of the PP-DTI procedure after mastectomies compared to the standard breast reconstruction. **METHODS:** We performed a comprehensive search for the following databases: PubMed, Cochrane (Medline), Web of Science, and Scopus. All studies published in English till February 2022 were included. These include randomized and non-randomized clinical trials comparing Operation Time, Duration of Hospitalization (DOH), Breast Animation Deformity (BAD), Implant loss, Wound infection and dehiscence, seroma as well as post-operative pain. The study's quality will be assessed according to the Cochrane risk-of-bias tool for randomized trials (RoB2) and the ROBINS-I risk of bias tool to assess non-randomized studies of interventions. **RESULTS:** There were 28 comparative studies including 3851 patients carried out breast reconstruction surgeries. Post-operative complications were comparable between the two groups as follows: implant loss (OR 1.17, 95% CI [0.71-1.94]), wound dehiscence (OR 0.76, 95% CI [0.43-1.32]), wound infection (OR 1.09, 95% CI [0.78-1.53]), and seroma (OR 0.78, 95% CI [0.56-1.09]). The PP-DTI group was significantly less likely to develop BAD compared to SP-DTI group (OR 0.02, 95% CI [0.00-0.12]). Patients undergoing PP-DTI reconstruction had significantly reduced postoperative pain (SMD -0.55, 95% CI [-0.78 - -0.32]). Operation time and DOH were significantly lower among PP-DTI group ((SMD -0.35, 95% CI [-0.61 - -0.08]), (SMD -0.89, 95% CI [-1.48 - -0.30], respectively)). **CONCLUSION:** Following mastectomy, PP-DTI breast reconstruction significantly reduced post-operative pain, BAD, DOH, intra-operative time compared with SP-DTI reconstruction, although there was no significant difference in complication rate. A PP-DTI is a simple and safe alternative to the subpectoral technique allowing early discharge and improving patient's quality of life. Future well-designed multicenter randomized controlled trials that compare two approaches and discuss the cost-effectiveness are needed.

Key words: PP-DTI; SP-DTI; Meta-analysis; Cosmetics.

20. **PRENATAL DIAGNOSIS OF A FETUS WITH PARTIAL DUPLICATION AND DELETION OF CHROMOSOME 18 DUE TO MATERNAL PERICENTRIC INVERSION 18.**

Manuel Alejandro Vásquez Salguero¹, Wilmar Saldarriaga Gil².

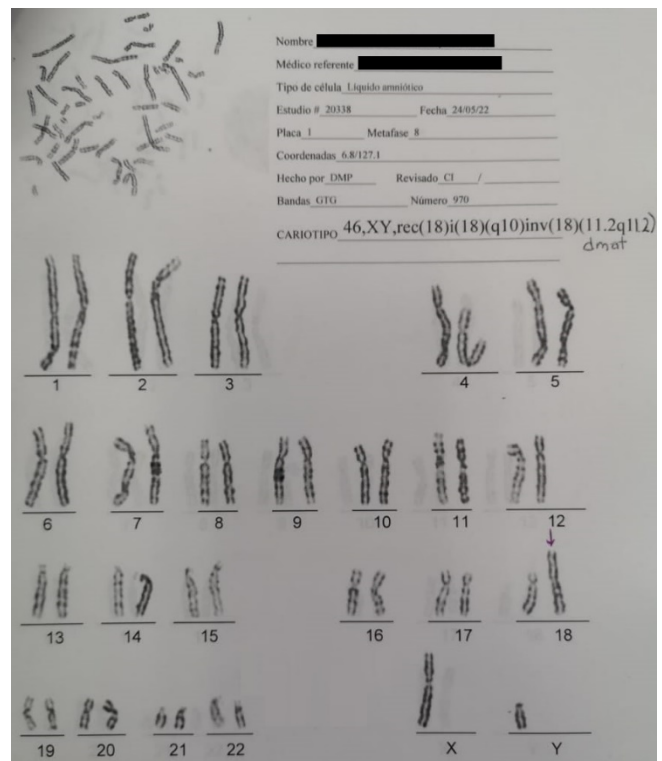
¹ Fourth-year Medical Student. Universidad del Valle, Cali, Colombia.

² Head profesor, Universidad del Valle, Cali, Colombia.

 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=6549s>

INTRODUCTION: The phenotype of structural chromosome 18 mutations is highly heterogeneous, clinical manifestations may range from mild to severe, they have been widely studied in the literature, however, there are few cases where two or more mutations are present in the same individual, reports where these alterations are caused by a maternal pericentric inversion and diagnosed prenatally are even rarer. Affected individuals are generally characterized by low birth weight, intellectual disability, heart defects, musculoskeletal abnormalities, craniofacial anomalies, among others. We describe the case of a masculine fetus from a non-consanguineous marriage obtained at week 29 of gestation. 27-year-old mother, G2C1, she started antenatal care at week 11 of pregnancy at the Hospital Universitario del Valle, in Cali, Colombia. Ultrasound at the 11th week of gestation showed a 3.9 mm nuchal translucency (>95p), subsequently at week 18th a new ultrasound found a 6mm nuchal translucency (>95p); suspecting a chromosomal aberration an amniocentesis was carried out at week 18th, a 756-band resolution karyotype reported: chromosome 18 partial trisomy (from 18p.11.2 to the centromere and from 18q11.22 to 18qter), and chromosome 18 partial monosomy (from 18pter to 18p11.2 and from the centromere to 18q11.2). The parents also underwent genetic testing, the karyotype of the mother exhibited a pericentric inversion of the 18 chromosome (46,XX,inv(18)(p11.2q11.2), no abnormalities were found in the father's genetic material. At week 24 of gestation detailed anatomy ultrasound showed left diaphragmatic hernia, multicystic dysplastic kidney, and polyhydramnios. After explaining the diagnosis and providing genetic counseling, the patient requested voluntary interruption of pregnancy as established by the c-355/06 law of the Colombian constitutional court. A 1,180 g fetus was obtained. The structural rearrangement of this case may be explained by an error in maternal meiosis, oogenesis. During meiosis 2 an anomalous disjunction in the chromosome 18 took place, where the two short arms were separated from the long arms, the latter isochromosome was the one that the fetus received, thus, leading to the described mutation. The aim of this case report is to provide to the scientific literature the first case of prenatal diagnosis of a fetus with partial trisomy and partial monosomy of specific bands of the chromosome 1, due to a maternal pericentric inversion, while also highlighting the value of early prenatal diagnosis, in order to make choices regarding voluntary interruption of pregnancy, pregnancy follow up, or planning the delivery method, allowing adequate genetic and reproductive counseling for future pregnancies.

Figure. Karyotype of the Fetus.



Legend: 756-band resolution karyotype depicting a structural mutation in the chromosome 18.

Key words: Chromosome Disorders; Chromosome 18; Trisomy 18q, Partial trisomy, Partial monosomy.

21. IMMIGRANT AND REFUGEE COVID-19 VACCINATION ATTITUDES IN SOUTH PHILADELPHIA.

Lauren Posego¹, Anshel Kenkare², Makala Wang³, Omar El Fadel¹, Morgan Hutchinson⁴.

¹ Third-year medical student. Sidney Kimmel Medical College at Thomas Jefferson University, Philadelphia, United States.

² Fourth-year medical student. Sidney Kimmel Medical College at Thomas Jefferson University, Philadelphia, United States.

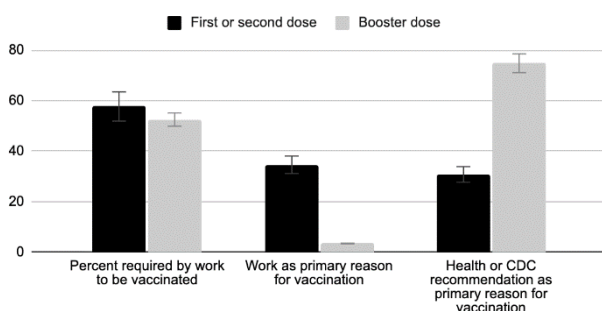
³ Second-year medical student. Sidney Kimmel Medical College at Thomas Jefferson University, Philadelphia, United States.

⁴ MD. Thomas Jefferson University Hospital, Philadelphia, United States.

 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=9696s>

ABSTRACT: Immigrants and refugees have been disproportionately affected by the COVID-19 pandemic; therefore, it is important to determine the specific factors that are promoting vaccination in the immigrant and refugee populations to develop equitable health services. This study surveys the attitudes toward COVID-19 vaccination and vaccine mandates in the Southeast Asian and Hispanic immigrant and refugee populations in South Philadelphia. A questionnaire was administered to all patients receiving the COVID-19 vaccine during six clinic days from November 15th-31st 2021. Investigators asked participants about their intention behind vaccination, barriers to access, work requirements regarding COVID-19 vaccination, and attitudes toward vaccine mandates. For people receiving their booster vaccine, the most cited reasons for getting vaccinated were protecting their health (75.4%) and travel (11.0%), whereas most people receiving their first or second vaccine were most motivated by vaccine mandates at work (34.6%) and health (30.8%). Staying healthy or "health" was the most common reason for getting vaccinated among people receiving their booster vaccine (74.8%) which was significantly higher than the proportion of people getting their first or second vaccine (30.7%) ($p < 0.05$). As people continue to get vaccinated, determining motivating factors can help promote appropriate messaging. The results of the study suggest that, in a clinical setting geared towards Southeast Asian and Hispanic immigrants and refugees, those getting their first and second dose were motivated by work mandates more than health at the time of the study, whereas those adults receiving their booster are most motivated by health and safely traveling. As we continue to aim for mass vaccination, vaccine mandates appear to be an effective method of motivating people to get their first and second dose.

Figure. Mean Knowledge Score Across Demographic Characteristics.



Key words: Refugees; Emigrants and Immigrants; COVID-19 Vaccines.

22. **ASSESSMENT OF SYRIAN OBSTETRIC CARE PROVIDERS KNOWLEDGE, ATTITUDE, AND PRACTICE TOWARDS PRECONCEPTION CARE AND ASSOCIATED FACTORS: AN ONLINE CROSS-SECTIONAL STUDY**

Haidara Bohsas¹, Sarya Swed², Hidar Alibrahim², Bisher Sawaf³, Wael Hafez⁴.

¹ Fifth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

² Sixth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

³ MD, Internal Medicine Department, Hamad Medical Corporation, Doha, Qatar.

⁴ Medical Research Division, Department of Internal Medicine, The National Research Centre, Cairo, Egypt.

preconception carers and raising awareness about the significance of preconception care.

Key words: Knowledge; Attitude; Practice; Preconception Care; Obstetric; Syria.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=30953s>

INTRODUCTION: Preconception care was instituted in 2013 by the World Health Organization (WHO) to promote more attention to pregnant women by medical staff. Preconception care attempts to optimize pregnancy outcomes and promote health by managing and treating variables that influence it. Obstetric care providers in LAMICs have been reported to have low levels of preconception care awareness. This study investigates the Knowledge, attitudes, and practice-related features of obstetric care providers in Syria's public health institutions about preconception care. **METHODS:** A cross-sectional study was performed in Syria between 6 September 2022 and 7 October 2022 to evaluate obstetric care providers' Knowledge, attitudes, and practice at public health institutions regarding preconception care and the factors associated with good Knowledge, attitudes, and practice. The questionnaire was designed using a validated scale from a prior study. The inclusion criteria for study participants were obstetricians and gynaecologists, midwives and residents, and nurses of Obstetrics and Gynecology. There were six sections in the questionnaire (sociodemographic information, Knowledge, practice attitude, additional factors associated with Preconception practice, and related actual & potential access to resources). The data were subjected to descriptive and multivariate logistic regression analysis using the IBM SPSS V. 28.0 software. **RESULTS:** The mean age of 499 participants was 31.8 (SD = 9.7). Most participants were female (81.8%) and physicians (60%). 91.4% of respondents have a good knowledge of preconception care. The most identified question (96.2%) was (Whether women intending pregnancy should be encouraged to defer pregnancy until they have reduced their drug, alcohol, and cigarette usage). (24.8%) participants regularly queried their patients about their reproductive life plan. Only 18.6% of physicians routinely informed their patients about environmental dangers and contaminants. In addition, 53.5% of responders inquired about the patient's surgical and medical histories. 29.7% of participants strongly agreed that PCC provides an opportunity to improve the health of couples, particularly women, whereas 18.2% are certain that PCC does not belong to their scope of duties. Knowledge was more likely to be poor among participants who had never seen a doctor practicing PCC than among those who had (OR=2.81, P value = 0.026). Participants who did not get training on reproductive life plan examination throughout their practice time were less knowledgeable than those who did (OR = 2.91, P value= 0.04). **CONCLUSION:** Our results have shown that obstetric care providers in Syria have good Knowledge of and low to moderate practice and attitude towards preconception care. Improving access to training platforms during the OB/GYN residency program, Internet, and library services is vital to improving PCC training. It is recommended that extra platforms be made accessible to obstetric care providers during their training to assist them in becoming

23. **ASSESSMENT AWARENESS OF BREAST CANCER SIGNS, RISK FACTORS, AND BARRIERS: AN ONLINE CROSS-SECTIONAL STUDY IN SYRIA**

Haidara Bohsas¹, Sarya Swed², Hidar Alibrahim², Bisher Sawaf³, Mohamed Elsayed⁴.

¹ Fifth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria

² Sixth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria

³ MD, Internal Medicine Department, Hamad Medical Corporation, Doha, Qatar

⁴ MD, Department of Psychiatry, School of Medicine and Health Sciences, Carl von Ossietzky University Oldenburg, Oldenburg, Germany.

 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=3185s>

screening programs be improved to solve the issue. Social media and television might be effective venues for raising awareness of breast self-examination and early identification of symptoms.

Key words: Breast Cancer; Signs; Risk Factors; Barriers; Awareness; Syria.

INTRODUCTION: According to the World Health Organization (WHO), breast cancer (BC) is females' most common type of cancer. In LAMICs, breast cancer incidence is low, but the mortality rate is high. However, a lack of information about the signs and symptoms of breast cancer potentially results in the disease's progression to life-threatening stages. This study aimed to determine the levels of breast cancer symptom awareness among Syrian women and to identify the variables associated with a high level of awareness.

METHODS: From 3 September 2022 to 27 September 2022, an online cross-sectional study was conducted in Syria to measure the awareness levels regarding breast cancer, risk factors, and symptoms. This survey was derived from previous research that included a comprehensive, authorized scale. The inclusion criteria were 18-year-old or older Syrian females from all Syrian governorates. The questionnaire was divided into two portions; the first component included sociodemographic characteristics, and the second section assessed the participant's knowledge of breast cancer symptoms, risk factors, and obstacles based on the original BCAM scale. Using the IBM SPSS V. 28.0 software, descriptive and multivariate logistic regression analyses were performed on the data. **RESULTS:** Among 1305 study participants, the mean age and standard deviation of the individuals were 30.7 and 11.2, respectively. The majority of the participants had a University educational level (75.2%), while more than half of the participants were city residents. Most of the participants were at moderate (53%) and good (39.5%) economic status, and (47.4%) of the study participants were married. Participants with a Ph.D. education level have a higher score in risk factors than other subgroups (5.85 ± 2.6 , P value < 0.05), and they have higher symptoms score than other educational groups (7.46 ± 2.9 , P value < 0.05). Countryside resident participants have scored higher in barriers than city residents (3.14 ± 2.5 , P value < 0.05). 16.6% of city residents have shown good knowledge of breast cancer risk factors (P value < 0.05), and (11.8%) of University students have good knowledge of breast cancer symptoms (P value < 0.05). Only (4.8%) of participants with good economic status have a good knowledge of breast cancer barriers (P value < 0.05). Participants with Ph.D. education levels have a higher probability of good knowledge about breast cancer risk factors and symptoms than participants with primary education levels ($OR=6.18$, P value < 0.05) and ($OR=4.63$, P value < 0.05), respectively. Participants with chronic diseases had a greater possibility of recognizing breast cancer barriers than those without the chronic disease ($OR=1.84$, P value < 0.05). **CONCLUSION:** Our findings indicate that Syrian females have a poor to moderate knowledge of breast cancer symptoms, risk factors, and barriers. It is proposed that more breast cancer awareness campaigns be conducted and that yearly

AWARD FOR THE HIGHER SCORE DURING THE ABSTRACT REVISION PROCESS FOR ORIGINAL RESEARCH, 3rd PLACE:

24. HEALTH-CARE SEEKING PATHWAYS OF PSYCHIATRY PATIENTS IN NORTH KARNATAKA OF INDIA – A HOSPITAL-BASED: EXPLORATORY CROSS-SECTIONAL STUDY.



Alinawaz Khan¹, Narayan R Mutalik², Harish Kulkarni³, Manjula R⁴.
¹ Third-year MBBS student, S. N. Medical College & HSK Hospital, Bagalkot, Karnataka, India.
² MD- Psychiatry, Professor and Head of Department of Psychiatry, S. N. Medical College & H. S. K. Hospital, Bagalkot, Karnataka, India.
³ MD- Psychiatry, Associate Professor, S. N. Medical College & HSK Hospital, Bagalkot, Karnataka, India.
⁴ MD- Community Medicine, Professor, S. N. Medical College & H. S. K. Hospital, Bagalkot, Karnataka, India.

<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=17907s>

INTRODUCTION: Neuropsychiatric disorders contribute for 13% of the total morbidities, globally. India alone reports approximately 28% of suicides across the globe despite of making 18% of the global population. With only 3,500 psychiatrists in India, the average national deficit is estimated to be 77%. In Indian society, mental disorders are thought to be due: God's punishment for their previous sins, Bad wind, more people living in joint families(37.7%) than in single families(26.5%) believed that sorrow and unhappiness lead to mental disorders. Therefore, non-availability of mental health services, stigma, and superstitions associated with mental disorders, along with the unwillingness or inability of families to care for their mentally ill relatives, appear to be major cause behind delay in approaching a psychiatrist in India. These factors act as major barriers in the pathways of care for these patients, thereby increasing the unmet need. An understanding of the way people seek care for mental disorders is important for implementing mental health services, and developing effective referral mechanisms. Hence this study was taken up with the objectives. **OBJECTIVES:** To determine health-care seeking pathways of psychiatry patients using WHO pathways of care proforma. To explore the social and cultural determinants of health-care seeking behaviour in them. **METHODS:** This exploratory cross-sectional study includes newly diagnosed psychiatry patients (ICD-10), visiting psychiatry OPD of hospital amalgamated to medical college in North Karnataka, India. Sample size for proportion was calculated to be 340 ~350, taking 33% as P (Pilot study) and at 5% absolute precision at 95% confidence level. Written Informed consent were obtained from the study participants or from the patient attenders. Predesigned and pretested proforma were used for obtaining socio-demographic details of subjects. Patients were examined and diagnosis confirmed by the Psychiatrist. World Health Organisation (WHO) pathways to care proforma were used to obtain the health-care seeking behavior of these study subjects. Statistical analysis will be done using SPSS software version19 and appropriate statistical tests will be applied. **RESULTS:** In the pilot study, we observed that about 32% of patients firstly approached medical practitioners, followed by psychiatrists and faith healers. An average delay of 24 months was found in reaching psychiatric services. **CONCLUSION:** There is a substantial delay in health-care seeking of psychiatry patients to psychiatrist, as per the pilot study. Further completion of this study is required to understand the extent of the problem, and socio-cultural factors leading to such delay. Patients with psychiatric problems in study population, seek treatment from a wide range of services, including physicians,

traditional faith healers etc. It is important to educate and sensitize all the regular medical practitioners about early identification and first aid management of psychiatric disorders, so that they are able to manage the patients appropriately and also seek timely referral to psychiatrists. In the same manner, it is essential to conduct health education programs on mental health so as to address cultural myths and stigma related to mental illnesses and thus help in reducing the delays in seeking psychiatric treatment.

Table. Time Delay in Healthcare Seeking by Psychiatric Patients.

DIAGNOSIS	Mean Time from Onset to first care seeking (Months)	Mean Time from First care seeking to Psychiatry Services (Months)	Time From onset to Psychiatry Services (Months)
Neurotic Disorders	8.1	25.0	33.1
Psychotic disorders	0.2	21.0	21.2
Schizophrenia	1.2	42.1	43.3
OCD	4.0	128.0	132.0
Mood Disorders	11.3	16.0	27.3
MR	36.0	48.0	84.0
Substance Abuse	4.8	1.2	6.0
Others	4.5	1.5	6.0

Key words: Psychiatry; Social Stigma; Health-Care Seeking (Source: MeSH-NLM).

25. **HEALTH CARE PROVIDER BURNOUT IN SYRIA DURING COVID-19 PANDEMIC'S OMICRON WAVE.**

Hidar Alibrahim¹, Sarya Swed¹, Haidara Bohsas², Hiba Haj Saleh¹, Safwan Al-Rassas³, Noor Hussain⁴, Ayush Kumar⁵, Bisher Sawaf⁶.

¹ Sixth Year, Faculty of Medicine, Aleppo University, Aleppo, Syria.

² Fifth Year, Faculty of Medicine, Aleppo University, Aleppo, Syria.

³ MD, Faculty of Medicine, Thamar University, Yemen.

⁴ MD, albaqa'a applied University, alslat, Jordan.

⁵ Third Year, Aga Khan University Hospital, National Stadium Road, Karachi, Pakistan.

⁶ MD, Internal Medicine Department, Hamad Medical Corporation, Doha, Qatar.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=11040s>

INTRODUCTION: Healthcare workers have been exposed to various psychological issues during the COVID-19 pandemic, including depression, mental discomfort, anxiety, and lack of sleep. Burnout is a state of prolonged work stress-related psychological, emotional, and physical stress brought on by emotional weariness, depersonalization, and decreased professional success. This study aimed to determine how many healthcare workers burned out during the Omicron wave of the COVID-19 pandemic and determine what factors put them at risk for this psychological effect. **METHODS:** This cross-sectional research was performed in Syria during the current Omicron wave of the COVID-19 pandemic to evaluate the Burnout experienced by Syrian physicians who treat COVID-19 patients. The inclusion criteria were all Syrian healthcare workers who treated COVID-19 patients during the current Omicron wave of COVID-19. The data was collected between April 3 and March 20, 2022. We investigated whether the questionnaire used was valid and understandable to the participants. **RESULTS:** A total of (729) healthcare providers inquired in our study. The overall age of the participants was 31±9, and the ratio of males to females was almost equal. The majority (47.5%) of the sample study's participants are residents, and 72.8% carry COVID-19 patients. The prevalence of high levels of Burnout in the sample study was 41.6%. Compared to men (22.3%), women were much more likely (27.9%) to report experiencing a high degree of emotional exhaustion; also, the participants who carried COVID-19 patients were much more likely (30.1%) to report experiencing a high degree of emotional exhaustion compared to others, which individuals who carried for COVID-19 patients were 1.76 times more likely than participants who did not carry for COVID-19 patients to experience severe Burnout (OR:1.766, 95%CI:1.2-2.4, P-value<0.001). **CONCLUSION:** Our research found severe Burnout among Syrian healthcare providers during the omicron wave of COVID-19, with clinicians carrying COVID-19 patients being considerably more likely to express high Burnout than others. For this reason, we must collaborate with international humanitarian organizations to provide a suitable psychiatric environment for Syrian physicians and provide practical recommendations to address this important concern.

Key words: Health Care Provider; Burnout; COVID-19; Omicron Wave; Syria.

MOST LIKED BY THE PUBLIC:

26. **MEDICAL STUDENTS' ATTITUDES AND INFLUENTIAL FACTORS TOWARDS CONDUCTING MEDICAL RESEARCH**



Bassam AlRajhi¹, Ibrahim Omer¹, Reema Abualnaja¹, Faisal Alqahtani², Alqassem Y. Hakami³.

¹ Fifth-year Medical Student, King Saud bin Abdulaziz University for Health Sciences, Jeddah, Saudi Arabia.

² Fifth-year Medical Student, King Saud bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia.

³ PhD, Assistant Professor, Department of Basic Medical Sciences, College of Medicine, King Saud bin Abdulaziz University for Health Sciences\King Abdullah International Medical Research Center, Jeddah, Saudi Arabia.

 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=24741s>

INTRODUCTION: Medical research is becoming an essential part of medical students' curricula in several medical colleges around Saudi Arabia. This study aimed to assess medical students' attitudes towards conducting medical research and identify their motives.

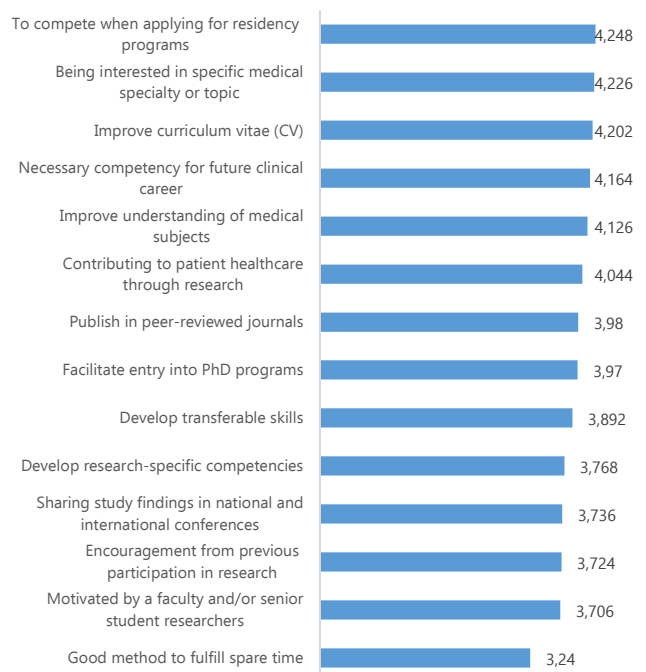
METHODS: In this cross-sectional study, the survey was distributed between December 2021 and April 2022 and we used the Student Attitude Towards Research (SAR) scale and the students' perceived influential factors toward participating in research activities questionnaires. A 5-Likert scale was used to assess the level of students' agreement from 'strongly disagree=1' to 'strongly agree=5'. Demographic information such as gender, year of study, and previously published research was collected. The survey was distributed among 3rd to 5th year medical students in the college of medicine, King Saud bin Abdulaziz University for Health Sciences (KSAU-HS) in Jeddah and Riyadh campuses, Saudi Arabia. The chi-square test was used to compare categorical values and report any differences. Any P-value less than 0.05 was considered statistically significant.

RESULTS: A total of 500 responses were collected from the students (67.2% males and 32.8% females). Most students agreed with the following 'the importance of research for identifying and investigating problems subjectively (N=399, 79.8%) and 'I have an interest in working on research projects at the undergraduate level' (N=318, 63.6%). There was a significant difference among students in responses to following statement: 'I always have the opportunity to discuss research articles in my class' (P=0.022). Female students agreed more than male students that 'faculty members are knowledgeable about research methodology' (3.93±1.01 vs. 3.7±1.06, P=0.014). Furthermore, a significant difference was found in the following statement: 'faculty members use research findings as a part of their teaching material' (P <.001). The students agreed that their university can organize research programs due to the strong infrastructure it has (N=321, 64.2%, P=0.005). The top four influential factors towards conducting medical research were 'to compete when applying for residency programs' (4.248) followed by 'being interested in specific medical specialty or topic' (4.226) and 'to improve curriculum vitae (CV)' (4.202) then 'it is a necessary competency for future clinical work' (4.164). A 5-Likert scale was used to calculate the average of the students' responses where 5 indicates 'strongly agree' and 1 indicate 'strongly disagree'. **CONCLUSION:** The students showed a positive attitude towards conducting medical research at the undergraduate level. The influential factors highlighted how students conduct research to advance their careers and explore their interest in a specific field or medical topic. This study is important for decision-makers, residency program directors, and research center directors to reconsider published research & research

activities as a prerequisite for acceptance into competitive programs. Future studies ought to investigate if medical students pursue research activities after college, their attitudes, and influential factors as well as to investigate the research skills they have and how they acquired them.

Figure. This Figure Demonstrates the Influential Factors toward Conducting Research among Medical Students To Compete when Applying for Residency Programs is the First Influential Factor then Being Interested in Specific Medical Specialty or Topic is the Second Influential Factor.

Influential Factors Towards Conducting Medical Research



Key words: Research; Medical students; Attitudes; Knowledge; Perception (Source: MeSH-NLM).

27. **UNILATERAL LOWER LIMB AMPUTATIONS FROM TRAUMATIC EVENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS**

Phyu Htet¹, Lubna Mohammed², Khushbu K. Patel².

¹ Fifth-year Medical Student. University of Medicine 1, Yangon, Myanmar.

² MBBS. California Institute of City Neurosciences and Psychology, Fairfield, United States.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=2343s>

INTRODUCTION: Limb amputations are one of the most devastating injuries for young people in traumatic settings. People with lower extremity loss face challenges in performing daily activities and managing life-long complications; thus, rehabilitation and prostheses are critical in improving the quality of life. This systematic review and meta-analysis aims to determine the outcomes of people who had unilateral transtibial and transfemoral amputations in terms of mobility, physical activity, prosthesis usage, and associated pain.

METHODS: An in-depth search was conducted on the electronic databases of PubMed and Science Direct databases in September 2022 to find studies that investigated the health outcomes of traumatic unilateral leg amputees. Observational studies, clinical studies, comparative studies, and randomized controlled trials in the English language and within the last 10 years (2012-2022) were thoroughly screened according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guideline. The quality of search results was checked by the Newcastle-Ottawa Scale (NOS). The current meta-analysis included four observational studies which comprised 563 patients, 352 transtibial, and 211 transfemoral amputations. RevMan 5.4 software was used to calculate risk ratios (RRs) with 95% confidence intervals (CI) to conduct this meta-analysis.

RESULTS: The pooled effect estimate showed no statistically significant difference between transtibial and transfemoral amputees (RR = 1.15, 95% CI [0.93, 1.43], P = 0.21) in terms of physical activity. People who had transtibial amputations used prostheses more frequently than those who had transfemoral amputations (RR = 1.21, 95% CI [1.09, 1.35], P = 0.0004). There was no statistical difference between the two groups who reported pain during prosthesis wearing (RR = 1.03, 95% CI [0.62, 1.73], P = 0.91). **CONCLUSION:** People who used leg prostheses more frequently were associated with more independent mobility and adequate physical activity. Leg prostheses with better accommodation and mobility benefit people with traumatic unilateral transtibial amputations.

Key words: Traumatic Amputation; Leg Prosthesis; Artificial Limb.

AWARD FOR THE HIGHER SCORE DURING THE ABSTRACT REVISION PROCESS FOR CASE REPORTS, 1ST PLACE:

28. PERONEAL NERVE INJURY DUE TO HIP SURGERY LOCATED AT THE KNEE LEVEL: A CASE REPORT

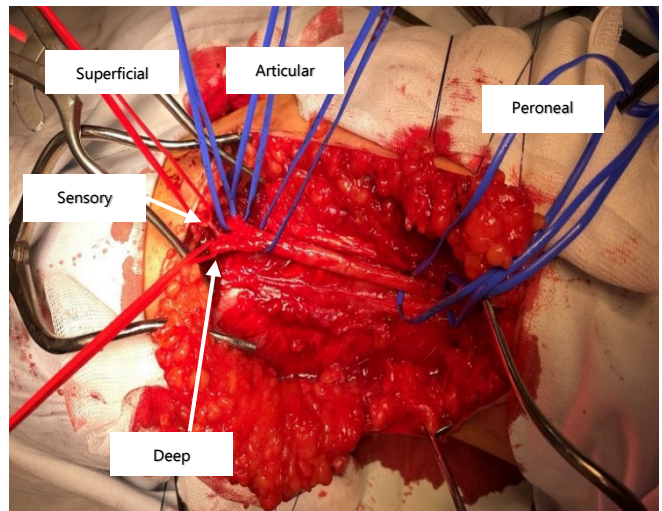


Aleksa Mičić¹, Stefan Radojević¹, Lukas Rasulić².
¹ MD up to 2 months after graduation/Clinic for Neurosurgery, University Clinical Centre of Serbia, Belgrade Serbia.
² MD, PhD, Full Professor/Faculty of Medicine, University of Belgrade, Belgrade Serbia/Clinic for Neurosurgery, University Clinical Centre of Serbia, Belgrade, Serbia.

<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=28891s>

INTRODUCTION: The hip surgery may be complicated with an iatrogenic peroneal nerve injury. The spontaneous recovery of these patients is usually poor, and majority of them require additional surgical treatment. In this paper, we presented a case of iatrogenic peroneal nerve injury following posttraumatic hip surgery, which was decompressed at the knee level, and achieved complete postoperative recovery. **THE CASE:** A 32-year-old woman was admitted to our department due to EMNG-verified peroneal nerve lesion. Eight months before, the patient was injured in a traffic accident, followed by left hip dislocation and acetabular fracture. After open reduction of the acetabular fracture performed by the orthopedic surgeons, the peroneal nerve palsy followed. At the admission, the clinical findings included left sided incomplete peroneal nerve palsy (MRC=2), pain in the lateral lower leg (VAS=3), and gait disturbances. Using EMNG, the nerve lesion was located at the knee level, while US indicated suspectable nerve compression, due to visible nerve thickening. The PNSQoL and SF-36 scores indicated a significant decline in patients' quality of life (QOL). Following GETA, the external neurolysis, decompression, and complete nerve deliberation were performed at the knee level, with preservation of all nerve branches. The patient reported immediate relief, while completely recovered 8 months following the surgery (MRC = 5, VAS = 0). In order to assess postoperative QOL, a prolonged follow-up is needed. **CONCLUSION:** The iatrogenic peroneal nerve injury following hip surgery may not always be located in the hip region. We assume that mechanism of in this case injury was nerve compression under the head of fibula due to leg crossing during urgent hip surgery. A proper anamnesis, physical examination, and diagnostic evaluation are necessary for proper treatment of these patients.

Figure. Mean Knowledge Score across Demographic Characteristics.



Key words: Peroneal Nerve Paralysis; Iatrogenic; Neurosurgery.

29. **CHOLECYSTOCOLONIC FISTULA: DEMONSTRATING THE NEED FOR FURTHER IMAGING ASSESSMENT FOLLOWING AN ABNORMAL ULTRASOUND EXAM**

Andrew J. Gauger¹, James Wilcox².

¹ Second-year Medical Student, Indiana University School of Medicine, Indianapolis, United States.

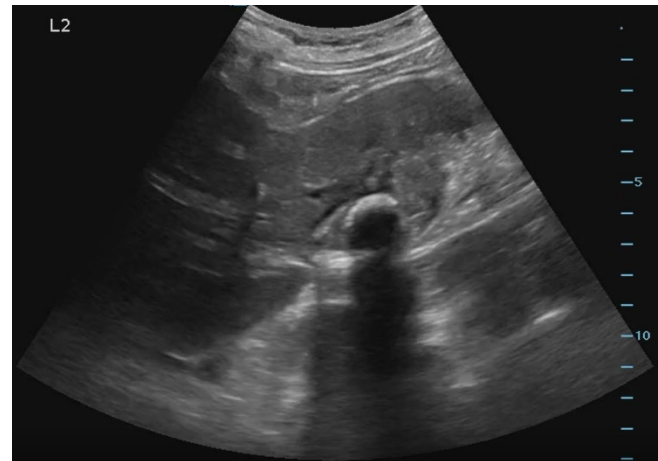
² MD, Indiana University School of Medicine, Indianapolis, United States.

 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=27569s>

INTRODUCTION: Point of care ultrasound (PoCUS) is a diagnostic tool that can efficiently answer targeted clinical questions at the bedside. Such questions include confirming or ruling out the presence of a specific complication suspected by the clinician, like an abdominal aortic aneurysm, for example. Proper identification of any such complication is reliant upon a fundamental knowledge and recognition of normal anatomy in each view, so the ultrasound provider can distinguish normal from a variety of hallmark pathologic signs. A positive finding warrants immediate changes in management, often including further imaging to guide interventions. However, indeterminate, or incidental findings unrelated to the patient's chief complaint can be found. While usually benign, sometimes these findings are indicative of an underlying pathology not initially suspected by the physician. In these settings, PoCUS has limited diagnostic value, and therefore it is important to highlight the need for further imaging following discovery of abnormal or incidental findings on an ultrasound exam. **CASE:** The patient was a 75-year-old female with COPD, coronary artery disease and hypertension. Her overall health declined after an admission for COVID pneumonia, which required treatment for oxygen. She never improved completely and was diagnosed with pulmonary fibrosis, likely secondary to COVID-19. She presented to our outpatient clinic for follow up from a recent hospitalization for respiratory decompensation and heart failure. During the visit she complained of intermittent right sided abdominal pain which had been present for a couple weeks. It was not associated with eating, and the pain did improve some after passing gas. The decision was made to perform a bedside ultrasound of her gallbladder to look for gallstones. Upon visualizing her gallbladder, hyperechoic shadowing in a smooth, circumferential nature filled the gallbladder. The differential included porcelain gallbladder, stone filled gallbladder, or emphysematous cholecystitis. She was referred for further imaging, but before she could get imaging completed, she presented to the emergency department due to worsening pain. A CT scan of the abdomen showed an ill-defined soft tissue mass with surrounding inflammation involving the inferior right hepatic lobe, gallbladder and cecal visualization. Overall, given the surrounding inflammation this was favored to represent perforated cholecystitis with inflammatory fistula. Interventional radiology attempted to place a drain which was unsuccessful but did demonstrate fistulization with the colon. She later had a cholecystectomy performed, with a pathology report which detailed results showing metastatic poorly differentiated adenocarcinoma with signet ring and mucinous features. Oncology was consulted for treatment options, but unfortunately the patient passed away from cardiopulmonary compromise before treatment could be initiated. **CONCLUSION:** This case demonstrates the importance of follow up imaging for abnormal bedside ultrasound studies which do not follow the typical PoCUS pathway. Point of care ultrasound is used to answer a binary question, "Does my patient have a gallstone?" for example. If there are abnormal findings, or findings which do not correlate with the history and physical examination,

more advanced imaging assessment is required and should be ordered by the point of care ultrasound provider.

Figure. Gallbladder Bedside Ultrasound Examination.



Key words: Ultrasound; Diagnostic; Intestinal Fistula; Colonic Neoplasms; Adenocarcinoma; Incidental Findings. (Source: MeSH-NLM).

AWARD FOR THE HIGHER SCORE DURING THE ABSTRACT REVISION PROCESS FOR CASE REPORTS, 2nd PLACE:**30. HARLEQUIN COLOR CHANGE IN A NEONATE POSITIVE TO COVID-19: CASE REPORT**

Esther Pinel-Guzmán¹, Julián Martínez-Fernandez¹, Rafael Pinel-Dubón², Olman Gradis-Santos¹, Mario Santamaría-Vasquez¹.

¹ School of Medicine, Universidad Católica de Honduras, Tegucigalpa.

² Pediatric critical care physician, PICU, Hospital General del Sur, Choluteca Honduras.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=12453s>

INTRODUCTION: A self-limiting, benign idiopathic illness known as harlequin color change causes the skin to seem to be split into two separate colored regions. Although its origin is uncertain, it is believed to be brought on by an immature hypothalamus system that controls peripheral vascular tone. COVID-19 infection in neonates is infrequent and rarely symptomatic, with only a few cases described in the literature. In isolation, both conditions have low incidence. This is the first case reported in the world literature of harlequin color change in a newborn who tested positive for COVID-19. There isn't a single publication that links harlequin color change to COVID-19, yet. **CASE:** Newborn of a 34-year old mother. Who at 3 hours of life presented progressive respiratory distress with whimpering and cyanosis. At 20 hours presented a sudden color change in the right hemibody with unilateral hyperemia and contralateral pallor, simultaneous with a demarcated line separating the left and right sides of the body, involving the trunk, extremities and face, this remained for 10 minutes and then began to fade on its own until it disappeared completely. There were no changes in vital parameters associated with this phenomenon. Only one episode was reported. The transient character and the strict unilateral distribution of the manifestations did not confirm any etiology other than Harlequin phenomenon. Subsequently the patient evolved to respiratory deterioration, multiorgan failure (SOFA: 21), died at 22 days of life due to respiratory arrest. **CONCLUSION:** This is the first ever documented case in worldwide literature of harlequin color change in a neonate positive to COVID-19. Given the low incidence of both entities in isolation and the fact that they were discovered in the same patient, we suggest a strong possibility of SARS-CoV-2 to be the source of the harlequin phenomena in this case and should be considered as an indicator of severe COVID in newborns, but further studies that expand the selection of patients with this condition are needed. There is no literature linking the harlequin phenomenon with COVID-19.

Figure. Harlequin Phenomenon in a Newborn. Regional Skin Discoloration with Sharp Edges, Affecting the Face and Right and Left Hemibody of the Newborn. Regional Skin Discoloration with Sharp Edges, Affecting the Face and Right and Left Hemibody of the Newborn. Self-limited.



Key words: COVID-19; Newborn; Case Reports; Harlequin syndrome; Pediatrics.

31. **OUTCOMES OF VASCULAR INTERVENTION IN DIABETIC PATIENTS WITH PERIPHERAL ARTERIAL DISEASE**

Mahfujul Z. Haque¹, Rummyah Rafique², Syeda Reesha³, Shahrin Khan², Arif Hussain⁴, Mashkur Husain⁵.

¹ Second-year Medical Student. Michigan State University College of Human Medicine, Grand Rapids MI, United States.

² Second-year Medical Student. Wayne State University School of Medicine, Detroit MI, United States.

³ MD. Downriver Heart and Vascular Specialists, Southgate MI, United States.

⁴ BS. Michigan State University College of Natural Science, East Lansing MI, United States.

⁵ MD. Downriver Heart and Vascular Specialists, Southgate MI, United States.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=20775s>

This abstract was published in a different venue and it is not being published in this Supplement to avoid duplicate publications.

Link to the publication:

<https://www.sciencedirect.com/science/article/abs/pii/S155383892200882X>

32. **STUDENT PERSPECTIVES ON E-LEARNING IN A MALAYSIAN MEDICAL COLLEGE ONE YEAR INTO THE COVID-19 PANDEMIC: A CROSS-SECTIONAL STUDY**

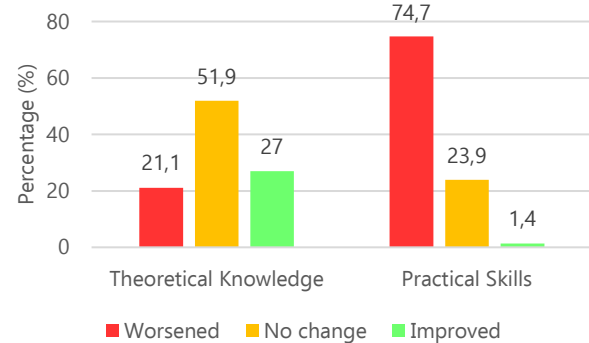
Sylvia Wei Wei Kong¹, Jade Lene Yong¹, Sabrina Pei Yee Cheong¹, Edmund Liang Chai Ong¹.

¹ Newcastle University Medicine Malaysia.

 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=8055s>

INTRODUCTION: During the coronavirus disease 2019 (COVID-19) pandemic, physical in-person classes in Newcastle University Medicine Malaysia (NUMed) were replaced with e-learning. Teaching in NUMed was being delivered online during COVID-19 pandemic for the last one and a half academic years (18 March 2020 – June 2021) due to the strict lockdowns and physical distancing measures in place, limited in-person sessions on campus, and disrupted hospital attachments. There was concern over the effectiveness and satisfaction with e-learning amongst our students, and how this affects their overall academic performance. Our study aims to explore students' e-learning experiences and its perceived benefits and challenges during the pandemic. **METHODS:** 285 students participated in this cross-sectional study using a convenience sampling method. Participants completed a self-administered online questionnaire via an email invitation between July 12th and August 12th, 2021 which comprised of sociodemographic characteristics and experiences with e-learning. The data was analysed using descriptive statistics and Spearman's correlation tests were used to identify correlation between students' e-learning experiences, the effects of e-learning, and academic performance. **RESULTS:** Most students used laptops (n=275, 96.5%) for e-learning and owned at least two electronic devices (n=245, 86%). Over half of our students (n=148, 51.9%) reported their theoretical knowledge remains unchanged, while about three-quarters (n=213, 74.7%) perceived practical skills to have worsened. Students preferred paper-based exams (n=170, 59.6%) and objectively formatted online exams (n=193, 67.7%). Since transitioning to e-learning, the majority of students (n=207, 72.6%) reported difficulties studying online and were unsatisfied with their academic performance (n=166, 58.2%). Students preferred e-learning due to the lower risk of contracting COVID-19 (n=256, 89.8%), the convenience of online classes (n=244, 85.6%) and flexible schedules (n=219, 76.8%). However, the lack of patient contact (n=236, 82.8%), lecturer and peer interactions (n=234, 82.1%), and unreliable internet (n=201, 70.5%) made e-learning challenging. Students' experiences were generally affected by multiple factors encompassing personal, lecturer, and environmental aspects. **CONCLUSION:** E-learning during the COVID-19 pandemic has negatively impacted students' academic performance, particularly practical skills and performance satisfaction. Therefore, the university should look towards addressing e-learning constraints and providing adequate support to improve students' educational experiences in the ongoing pandemic.

Figure. NUMed Students' Perceptions of Changes to Academic Performance after Transition to E-Learning during Academic Year 2020/2021.



Key words: Medical Education; Academic Performance; Clinical Skills; COVID-19; Medical Students (Source: MeSH-NLM)

33. AUTHORSHIP DIVERSITY IN GENERAL SURGERY RELATED COCHRANE SYSTEMATIC REVIEWS.

Jyotirmoy Biswas¹, Roger B Rathna², Christopher D'Souza³, Vincent Kipkorir⁴, Arkadeep Dhali⁵.

¹ Third-year Medical Student, College of Medicine and Sagore Dutta Hospital, Kolkata, India.

² Department of Critical Care, St. John's Medical College, Bangalore, India.

³ Internal Medicine Trainee, Swansea University Health Board, Wales, United Kingdom.

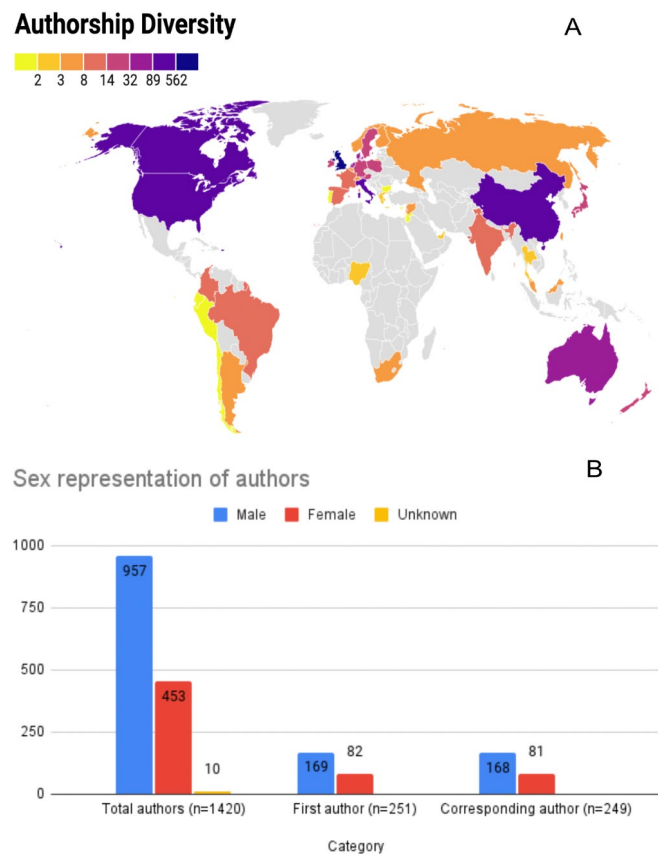
⁴ Department of Human Anatomy and Physiology, College of Health Sciences, University of Nairobi, Nairobi, Kenya.

⁵ Internal Medicine Trainee, Nottingham University Hospitals NHS Trust, United Kingdom.

<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=24178s>

INTRODUCTION: This study sought to determine the gender and country diversity in authorship representation in the authorship of Cochrane systematic reviews related to General Surgery. **METHODS:** We searched and extracted data from the Cochrane Library on 3 September 2022 using 'keyword:General surgery', and included published reviews, protocols, and withdrawn publications. We extracted authors' details and searched online to determine their gender, attempting to capture at least one webpage demonstrating it. Authors whose gender could not be ascertained were excluded from gender-based analyses. For graphical representation, we used a choropleth-style map. We treated a collaborative author group belonging to a single country, e.g., MRC Clinical Trials Unit (UK), as a single author. A second author independently cross-verified the extracted data. **RESULTS:** Two hundred and fifty publications with a total of 1420 authors were included in the current study. Four authors had affiliation to two countries. The leading five represented nations (Figure 1A) in authorship were United Kingdom (n=562, 39.4%), China (n=163, 11.5%), Italy (n=144, 10.1%), Canada (n=91, 6.4%), and United States of America (n=89, 6.2%). Syria is the only country among all the low-income countries which had authorship representation and constituted 0.34% (n=5) of all the authors. India (n=8, 0.6%) and Nigeria (n=2, 0.1%) were the only countries from lower-middle income groups who had representation. Male (n=957) to female (n=453) ratio in this study was 2.11:1 (Figure 1B). Sex data for ten authors couldn't be retrieved and were categorized as 'unknown' group. There were 169 (67.3%) male and 82 (32.6%) female first authors (sex ratio 2.06:1). One study had designated two authors as co-first authors. Women (n= 81) constituted 32.4% of all the corresponding authors (sex ratio 2.06:1). One article didn't have any designated corresponding author. One hundred and fifty (60%) studies didn't have any female representation in any lead author (corresponding or first author) position. Fifty-eight (23.2%) studies didn't have any female authors at all, whereas in contrast there were only eight studies (3.2%) which did not have any male authors. **CONCLUSION:** Authors from high-income countries continue to be the largest contributors to Cochrane systematic reviews in General Surgery, source of one of the highest quality evidence. There is extremely poor representation of female authors and authors from low and low-middle-income countries. Active capacity-building efforts are needed in several countries for advancing authorship diversity.

Figure. (A) Choropleth-style Map Demonstrating the Authorship Diversity Across Countries; (B) Gender Distribution in Authorship.



Key words: Diversity; Authorship; Gender Bias; Academia; General Surgery.

34. **THE ROLE AND IMPACT OF DYSLEXIA AWARENESS WORKSHOPS IN THE MEDICAL CURRICULUM.**

Mitchell Osei-Junior¹, Mayya Vorona².

¹ Recent Graduate (class of 2021). King's College London, London, United Kingdom.

² MBBS, BSc (Hons). King's College London, London, United Kingdom.

 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=19150s>

INTRODUCTION: To increase recognition of the number of students who study medicine with dyslexia and the support available, it is important to cultivate a culture in which peers can support fellow peers with dyslexia academically and pastorally. This study aims to understand medical students' perceptions of dyslexia and confidence with supporting fellow peers with dyslexia before and after a workshop on Dyslexia. **METHODS:** Pre-Post Intervention Evaluation form of 36 1st year medical students before the start of a small group dyslexia awareness session and one month after using the standardized 36 item True/False/Don't know questionnaire "A scale of knowledge and beliefs about developmental dyslexia" to elicit any significant change in knowledge about dyslexia. A standardized 6-item Likert Scale questionnaire was also administered in the same time frame to measure confidence in supporting peers with dyslexia in terms of academically, emotionally and signposting to reasonable adjustments and further support. **RESULTS:** Pre-dyslexia awareness workshop, the mean score on the knowledge and beliefs about dyslexia questionnaire was 15.22, post-intervention this improved to 24.03 ($p < 0.001$). Additionally, pre-intervention greater than 70% of participants reported feeling not confident in items in the confidence questionnaire associated with supporting dyslexic peers academically or signposting to reasonable adjustments and further support. This changed post-intervention with greater than 88% agreeing or strongly agreeing with these items. **CONCLUSION:** At a baseline level, medical students have less precise accuracy in knowledge and beliefs about dyslexia and are not confident in supporting dyslexic peers academically. The findings suggest that dyslexia awareness workshops in the medical curriculum have benefits in increasing knowledge about dyslexia and providing students with confidence in supporting their fellow dyslexic peers.

Key words: Medical Education; Undergraduate; Dyslexia; Awareness (Source: MeSH-NLM).

**AWARD FOR THE HIGHER SCORE DURING THE ABSTRACT
REVISION PROCESS FOR ORIGINAL RESEARCH, 1ST PLACE:****35. CORRELATION BETWEEN PLACENTAL
HISTOMORPHOLOGY AND UMBILICAL CORD COILING
INDEX IN PREECLAMPSIA**

Cyrus Kimanthi¹, Moses Obimbo², Kirsteen Awori³, Mohamed Otieno¹, Talha Chaudhry¹.

¹ Fourth-year Medical Student, BSc Anatomy. Department of Human Anatomy, University of Nairobi. Nairobi, Kenya.

² MBChB, Dip FELASA C, MSc, MMed (ObGyn), Ph.D., Postdoc. Department of Human Anatomy, University of Nairobi. Nairobi, Kenya.

³ MBChB, MMed (Surgery), Dip. (SICOT), FCS (Orth.) ECSA. Department of Human Anatomy, University of Nairobi. Nairobi, Kenya.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=5329s>

This abstract was published in a different venue and it is not being published in this Supplement to avoid duplicate publications.

Link to the publication:

<https://jogeca.or.ke/folder/journal/articles/2021%20Vol33%20Issue1%20-%20Abstracts2.pdf>

36. **PMA-TREATMENT OF HUMAN MONOCYTES INDUCES A M1 PHENOTYPE IN ADHERENT MACROPHAGES.**

Radu-Marian Marinescu¹, Elena Codrici², Daniela Ionela Popescu², Ana-Maria Enciu³.

¹ Fifth-year Medical Student, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania. MD.

² PhD, Victor Babes National Institute of Pathology, Biochemistry Laboratory, Bucharest, Romania.

³ M.D., PhD Associated prof. Carol Davila University of Medicine and Pharmacy, Bucharest, Romania, Victor Babes National Institute of Pathology, Biochemistry Laboratory, Bucharest, Romania.

 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=1025s>

INTRODUCTION: Human monocyte lines are widely used in basic research as model of inflammation, mostly following adherence with phorbol 12-myristate 13-acetate (PMA). However, the SC line, of normal human monocytes is not well documented, unlike tumour-derived cell lines, such as THP-1. **AIM:** The purpose of this study was to determine the phenotype of adherent macrophages, induced after the treatment with PMA in three different concentrations, starting from the most widely reported concentration in the literature.

METHODS: Normal human monocytes SC (ATCC CRL-9855) were routinely maintained according to manufacturer's instructions. Cells were treated with Phorbol 12-myristate 13-acetate (PMA Sigma Aldrich P1585), in concentrations of 200 ng/mL, 100 ng/mL, 25 ng/mL and adhesion was documented using an Evos phase-contrast inverted microscope. Cell behaviour was validated by real-time impedance readings. The adhered cells were treated with bacterial lipopolysaccharide (LPS) in concentrations of 50 ng/mL (mimicking chronic inflammation) and 1 μ g/mL (mimicking acute inflammation). The supernatant was collected twice, after 4 hours, respectively after 18 hours of treatment with LPS. A screening of pro- and anti-inflammatory cytokines was performed using the multiplexing platform Luminex 200. ELISA tests were performed to validate the cytokines secretion: IL-6, IL-8, IL-10, IL-23 and TNF- α , using a LEGEND MAX Human ELISA kit specific to each cytokine. **RESULTS:** Cell adhesion was studied by time-lapse microscopy for 48 hrs. The lowest concentration of PMA which induced cell adherence was 25 ng/mL. Multiplex screening of cytokines showed a pro-inflammatory phenotype of macrophages stimulated with LPS. This finding was validated by ELISA tests for IL-6, IL-8, IL-23 and TNF- α (as pro-inflammatory cytokine) and IL-10 (an anti-inflammatory molecule). For the first category, we noticed a time-dependent response, present in adherent macrophages, but not in circulating monocytes. Regarding the second category of cytokines, the secretion is present only for the adhered and LPS treated cells. It is also present in a time-dependent manner (a higher concentration can be noticed in the collected supernatant after 18 hours of treatment compared with the one collected after 4 hours of treatment). **CONCLUSION:** The macrophages obtained from normal human monocytes with PMA are M1 type, regardless of the concentration used for differentiation.

Key words: SC Monocytes; Macrophages; Lipopolysaccharide; Phorbol 12-myristate 13-acetate; Inflammation.

AWARD FOR THE HIGHER SCORE DURING THE ABSTRACT REVISION PROCESS FOR ORIGINAL RESEARCH, 2nd PLACE:**37. THE IMPACT OF COVID-19 ON PEOPLE'S ACCESS TO HEALTHCARE AND HEALTH BEHAVIOR IN A SAMPLE OF INDIAN POPULATION: A CROSS-SECTIONAL STUDY.**Shailendra Dandge¹, Manisha Kanumuri², Akhil Kumar Eppalapally².¹ Professor, MD, Department of Pharmacology. SHARE India/Mediciti Institute of Medical Sciences, Ghanpur, Medchal, Hyderabad, India.² Intern, MBBS. Mediciti Institute of Medical Sciences, Ghanpur, Medchal, Hyderabad, India.<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=10225s>

INTRODUCTION: The threat of COVID-19 is likely to have contributed to changes in people's behavior related to accessing healthcare, modifying lifestyles, and exploring alternative methods of securing health. The objectives, therefore, were to characterize the challenges in accessing healthcare, and the countermeasures that people adopted to mitigate such challenges. **METHODS:** A cross-sectional survey was conducted using a 26-item questionnaire on google forms. It was administered to individuals 18 years and older. The participants were family members of medical students at MediCiti Institute of Medical Sciences, Hyderabad, India. Continuous data are summarized as mean and standard deviation, while categorical data are represented in proportions and percentages. Data analysis was done using STATA Version 14.2. **RESULTS:** Of the expected 600 participants, 247 responded (41.7% response rate), and nearly 63% reported difficulties in accessing healthcare during the lockdown. About 40% of the participants reported that they visited a hospital for non-COVID-19 health concerns. However, none of them felt comfortable with the hospital visit for the risk of acquiring COVID-19 infection. Similarly, nearly 62% of those with chronic illnesses defaulted on their regular follow-up visits. Further, nearly 50% reported taking unprescribed medications or supplements, and about 65% reported adopting preventive measures such as steam inhalation or diet modification. Nearly 50% expressed that given an option, they would not prefer online consultations. **CONCLUSION:** The majority of participants reported difficulties in accessing healthcare during the lockdown and subsequent unlock phases. Self-medication with multivitamins, use of home remedies, and traditional and alternative forms of medicine were high. However, the preference for online consultations was low.

Table. Mean Knowledge Score across Demographic Characteristics.

Reason	Self-Medication n (%)	Non-Medical Preventive Measures n (%)	Alternative Systems of Medicine n (%)
Based on their knowledge	62 (50.4%)	84 (47.2%)	18 (32.7%)
Suggestion from family and friends	49 (39.8%)	85 (47.8%)	34 (61.8%)
Advice seen on social media	24 (19.5%)	44 (24.7%)	13 (23.6%)
Advice from their pharmacist	15 (12.2%)	NA*	NA*
Advice from other medical professionals	NA*	50 (28.1%)	13 (23.6%)
Total Number of Respondents	125	176	55

Key words: COVID-19; Access to Healthcare; Self-medication; Alternative Medicine; Teleconsultations.

38. **EFFECTS OF ANEMIA ON COGNITIVE ABILITY IN SCHOOL-GOING ADOLESCENTS IN AN URBAN AREA IN INDIA.**

Devyani V. Pattebahadur¹, Dipak Patil².

¹ MBBS, K.J. Somaiya Medical College & Research Centre, Mumbai, India.

² MBBS, MD (Preventive and Social Medicine), PGDHA (Hospital Administration). K.J. Somaiya Medical College & Research Centre, Mumbai, India.

 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=17229s>

INTRODUCTION: Anemia is a major nutritional health problem in India. It poses a significant threat to health due to a decrease in oxygen availability to the body. This predisposes the anemic individual to an increased risk of heart problems, stroke, motor or cognitive developmental delays, infections, and other disturbances. Some studies found a correlation between anemia and low IQ scores while others found no such correlation. The authors decided to perform this study to determine whether such a correlation exists in adolescents, a group that is susceptible to anemia. **METHODS:** This was a cross-sectional study involving 28 school-going adolescents of an urban area in the age group of 12-15 years, selected by simple random sampling. Individuals with a prior diagnosis of a medical or psychiatric condition were excluded. After obtaining permission from school authorities, ethics committee approval, parental consent, and assent, participants were interviewed using pro forma. Hemoglobin estimation was done by using hemoglobin strips. Cognitive status examination was performed by using Malin's Intelligence Scale for Indian Children, Addenbrooke's Cognitive Examination – Revised, and Mini-Mental State Examination. The data was analyzed using Microsoft Excel version 2010. **RESULTS:** 89% of the study population was anemic and 11% was non-anemic. The mean IQ score was 92.4; the mean ACE-R score was 84.2; the mean MMSE score was 26.6. Unpaired t-test was used to analyze the data; tests were done at a 5% significance level. The IQ score +/- standard deviation (SD) in the anemic group was 83.96 +/- 7.74. This score did not reveal any statistically significant difference from the non-anemic group's IQ score (p = 0.76). The ACE-R score +/- standard deviation (SD) in the anemic group was 84.04 +/- 7.84. This score did not reveal any statistically significant difference from the non-anemic group's ACE-R score (p = 0.70). The MMSE score +/- standard deviation (SD) in the anemic group was 26.48 +/- 1.66. This score did not reveal any statistically significant difference from the non-anemic group's MMSE score (p = 0.125). **CONCLUSION:** The findings suggest that the average IQ, MMSE, and ACE-R scores are lower in the anemic group than in the non-anemic group. However, no statistically significant correlation between hemoglobin level and cognitive function was found in this study.

Table. Comparison of cognitive status examination scores in anemic and normal groups.

Parameter	Group	Mean	SD	Standard Error of Mean	p-value by unpaired t-test
MMSE Score	Anemic	26.48	1.66	0.332	0.125
	Normal	27.67	1.53	0.883	
Intelligence Quotient	Anemic	87.22	5.97	1.19	0.76
	Normal	93.02	4.93	2.85	
ACE-R Score	Anemic	84.04	7.84	1.57	0.7
	Normal	85.33	4.93	2.85	
<i>Components of ACE-R:</i>					
Attention & Orientation	Anemic	16.08	1.29	0.26	0.23
	Normal	17	0	0	
Memory	Anemic	20.32	4.18	0.84	0.26
	Normal	17.67	4.62	2.67	
Fluency	Anemic	9.4	2.38	0.48	0.16
	Normal	11	0	0	
Language	Anemic	23	1.96	0.39	0.16
	Normal	24.67	0.58	0.33	
Visuospatial	Anemic	15.16	1.25	0.25	0.82
	Normal	15	0	0	

Legend: SD: Standard deviation.

Key words: Anemia; Intelligence; Cognition; Adolescent (Source: MeSH-NLM).

39. **THE PREVALENCE OF FRANK'S SIGN AND THE DIAGNOSTIC ACCURACY IN CORONARY ARTERY DISEASE AMONG CHEST PAIN PATIENTS AT LAMPANG HOSPITAL, THAILAND.**

Kanjanaporn Thammasaranggoon¹, Narawish Khanthamoon¹, Pitsinee Sangphet¹, Aookrit Pattamapornpong¹, Yotsawee Chotechuang², Maytinee Srisubin³, Somluck Ninwaranon⁴, Jakkrawal Huntrakul⁵.

¹ Fourth year Medical student, Chiang Mai University, Lampang Medical Educational Center, Lampang, Thailand.

² MD, PhD, Division of Cardiology, Department of Internal Medicine, Lampang Hospital, Lampang, Thailand.

³ MD, Department of Internal Medicine, Lampang Hospital, Lampang, Thailand.

⁴ MD, Division of Cardiology, Department of Internal Medicine, Lampang Hospital, Lampang, Thailand.

⁵ MD, Division of Cardiology, Department of Internal Medicine, Lampang Hospital, Lampang, Thailand.



<https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=16569s>

INTRODUCTION: One of the leading cause of death in Thailand is coronary artery disease (CAD). There are several studies that demonstrated a significant correlation between diagonal earlobe creases (DELC) or Frank's sign and CAD, but data in Thai populations still remains unclear. Because of Frank's sign is easily to observe by health-care professional including medical students, so it was very interesting to use to identify risk of atherosclerosis of the patients in hospital which has limitation of resources. The purpose of the study was to assess the prevalence of Frank's sign and evaluate the diagnostic accuracy in CAD among the angina chest pain patients at Lampang Hospital. **METHODS:** This study was a cross-sectional, observational, study. Three hundred and nine patients with angina chest pain who underwent coronary angiography (CAG) and followed up at the coronary clinic at Lampang Hospital were enrolled in the study. Both ears of the patients were inspected for Frank's sign. The accuracy of Frank's sign was confirmed by three cardiologists and clinical data was collected in medical record form. We excluded the patients whose earlobe could not be clearly observed, including those with keloid/ulcer on the earlobe or those with no earlobe. The correlation of Frank's sign and CAD were analyzed by using logistic regression and receiving operative curve (ROC) curve. **RESULTS:** 64.4% of the angina chest pain patients (N=199) have demonstrated for Frank's sign, unilateral Frank's sign in 12.3% (N=38) and bilateral Frank's sign in 52.1% (N=161). Twenty-one patients (6.8%) were normal CAG and 288 patients (93.2%) were significant CAD, single vessel disease CAD (N=86), double vessel disease CAD (N=83) and triple vessel disease CAD (N=119). The diagnostic accuracy of the Frank's sign revealed that 64.6% for the sensitivity and 38.1% for the specificity. Besides, the positive predictive value (PPV) was 0.935 and for negative predictive value (NPV) showed 0.073. Nevertheless, the positive likelihood ratio (LR+) was 1.032 and 0.947 for the negative likelihood ratio (LR-). Moreover, the area under the curve (AuROC) of Frank's sign with respect to detection of CAD was 0.513 (95% Confidence Interval was 0.385-0.642, P= 0.838). **CONCLUSION:** Frank's sign was observed in two-third of angina chest pain patients at Lampang Hospital and mostly of the patients with Frank's sign were significant CAD. The results of this study showed that Frank's sign was a simple, non-expensive and non-invasive method for medical student and health-care professional to identify risk of CAD.

Key words: Diagonal Earlobe Creases (DELC); Frank's Sign; Coronary Artery Disease; Angina Chest Pain.

40. **A PRELIMINARY STUDY OF MENSTRUAL CHANGES AMONG JORDANIAN WOMEN FOLLOWING COVID-19 VACCINATION.**

Rana Qawaqzeh¹, Hussam Al-Din Shehadeh¹, Balqeas Al-Hanaqtah¹, Khaled Albakri¹.

¹ Fourth Year, Faculty of medicine, The Hashemite University, Zarqa, Jordan.

INTRODUCTION: During the last two years, the world witnessed an urgent need for vaccines to tackle the coronavirus disease 2019 (COVID-19) pandemic. Several side effects, mainly non-life-threatening, were reported following COVID-19 vaccination. There are increasing concerns about the potential effects of COVID-19 vaccines on menstrual cycle (MC) changes amid a paucity of scientific studies on this crucial issue. The present study aimed to assess the changes in menstrual cycle (MC) among Jordanian women after receiving a COVID-19 vaccine. **METHODS:** An online-based cross-sectional study was conducted from 10 to 24 August 2021. The main menstruation-related complaints were identified and included in the survey tool that targeted Jordanian women who received at least one dose of a COVID-19 vaccine. **RESULTS:** A total of 633 married and unmarried women were recruited, 222 (35.1%) and 411 (64.9%), respectively. Unmarried women showed a significantly higher occurrence of menstruation dysfunctions after getting a COVID-19 vaccine compared to married women ($p = 0.001$). During MC, around 34.3% of participants were suffered from increasing back and abdominal pains. The most common dysfunction was a prolonged MC (24.8%), while only 16.1% experienced pre-menstruation bleeding. Additionally, 19.4% of participants stated that the MC dysfunctions last for one month, 8.7 % for two months, and 35.4% for more than two months. **CONCLUSION:** This study showed that COVID-19 vaccines negatively affected the MC in terms of the occurrence of dysfunctions and accompanying symptoms. However, further studies are required to investigate the characteristics of women who are more likely to be affected and the potential mechanisms underlying these effects.

Key words: COVID-19; SARS-CoV-2; Vaccine; Menstrual cycle; Side effect; Adverse reaction.

41. **ASSESSMENT OF WORK PRACTICES AND HEALTH PROBLEMS AMONG FILLING STATION ATTENDANTS IN ILE IFE**

Sodiq O. Lawal¹, Abdulafeez I. Muhammad¹, Opeyemi A. Muili¹, Temitope O. Ojo².

¹ MBCHB, Obafemi Awolowo University, Ile-Ife, Nigeria.

² MBCHB, MPH, FMCPH, Obafemi Awolowo University, Ile-Ife, Nigeria.

 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=26950s>

INTRODUCTION: Filling Station Attendants are exposed to hazards in their workplaces, which could be physical, chemical, ergonomic, biological, mechanical, or psychosocial. The study aimed to assess the work practices and health problems among filling station attendants in Ile-Ife. **METHODS:** This study was conducted in Ile Ife, Osun State, Nigeria using a descriptive cross-sectional study design. There are 218 filling stations in Ile Ife. The total sampling method was used for selection and a sample size of 200 was obtained. Data was collected via Interviewer administered questionnaires with sections assessing sociodemographic characteristics, work practices, occupational hazards, and health problems using close-ended questions. An observational Checklist assessing the safety measures put in place by the management was also obtained. Data were analyzed using Statistical Package for Social Sciences (SPSS) and a p-value of 0.05 was found to be statistically significant. **RESULTS:** Majority of the filling station attendants (74%) were not aware of workplace safety practices. Of those that were aware, 78% were aware of PPE while the commonest available PPE was working clothes (36%). One hundred and twelve attendants (56%) indicated that the PPEs available for them were not adequate. Concerning training, about 62.5% had prior safety training of which only 66% and 56% of them could use fire extinguishers and spill kits respectively. Regarding occupational hazards, 74.5% of the attendants were aware of the various hazards, the commonest being fire outbreak (69.5). The commonest work-related problem was musculoskeletal disorders (60.5%) while the least common was gastro-intestinal tract problems (8%). There was a significant association between age, working durations of the respondents, and skin problems with p-values of 0.021 and 0.035 respectively. There was also a significant association between BMI and respiratory problems with a p-value of 0.029. **CONCLUSION:** This study assessed work practices and health problems among filling station attendants. There was poor availability of PPE, inadequate use of PPE as well as poor work Safety practices among filling station attendants. Regarding health problems, neurological and eye problems were found to be the commonest among filling station attendants in Ile Ife. There were also significant associations between some sociodemographic characteristics and some health problems such as age and skin problems, working duration and skin problems, BMI, and respiratory problems.

Key words: Work Practices; Health Problems; Filling Station Attendants.

42. **TOXOPLASMOSIS-ASSOCIATED LYMPHADENOPATHY: DESCRIPTION OF A SERIES OF CASES IN A REFERENCE CENTER.**

Danna Sofía Salazar Bermúdez¹, María Fernanda Bocanegra Valencia², Humberto Alejandro Nati Castillo³, Jorge Enrique Gómez Marín².

¹ Second-year Medical Student. University of Quindío, Armenia, Quindío, Colombia. GEPAMOL research group, Biomedical Science Research Center, Faculty of Health Science, University of Quindío, Colombia.

² MD. GEPAMOL research group, Biomedical Science Research Center, Faculty of Health Science, University of Quindío, Colombia.

³ MD PHD. GEPAMOL research group, Biomedical Science Research Center, Faculty of Health Science, University of Quindío, Colombia.

 <https://www.youtube.com/watch?v=0JIMP5Fyl7s&t=14564s>

INTRODUCTION: Toxoplasmosis has a more severe manifestation in pregnant women and immunocompromised individuals. Up to 15% of immunocompetent individuals who have acquired the infection may be asymptomatic, however in others the symptoms may be confused with another infection and cause more severe manifestations such as ocular toxoplasmosis which is the most common cause of chorioretinitis and can lead to retinal necrosis. Considering that the clinical characteristics of lymphadenopathy-related toxoplasmosis in Colombia have not been reported despite its high frequency, it is essential to define its clinical presentation.

OBJECTIVE: The objective was to describe a series of cases, their evolution, clinical characteristics and response to treatment of lymphadenopathy due to toxoplasmosis in a first level health care institution in Armenia, Colombia. **METHODS:** 106 medical records with a diagnosis of toxoplasmosis-associated lymphadenopathy were reviewed from 2006 to 2022 at the Universidad del Quindío health center. Cases that met the following criteria were included: Presence of lymphadenopathies accompanied or not by fever and positive IgM or IgG anti-Toxoplasma test. Clinical presentation, accompanying symptoms and laboratory tests were analyzed. In the patients who had follow-up, the response to treatment was analyzed. **RESULTS:** Of 106 cases, 100 met the selection criteria, 59% male, 30% adolescent. Coinfections occurred in 3% with Epstein-Barr virus (EBV) and 2% Cytomegalovirus. The location was predominately of cervical adenopathies (83%). The main associated symptom was fever with 37%. The main treatment received was Pyrimethamine/Sulfadoxine with 37% having an adequate response. **CONCLUSION:** The clinical manifestations of the infection should guide us to consider the possible presence of lymph node toxoplasmosis. Timely diagnosis and treatment prevent severity and complications in our environment such as ocular involvement which greatly impacts the quality of life of the population.

Key words: Toxoplasmosis; Lymphadenopathy; Fever; T. Gondii; Colombia.

PARTICIPATING RESEARCH**43. FACTORS AFFECTING DEPRESSION AND ANXIETY IN DIABETIC PATIENTS: A PROSPECTIVE COHORT STUDY FROM A TERTIARY CARE HOSPITAL IN EASTERN INDIA.**

Kankana Karpha¹, Jyotirmoy Biswas¹, Siddhartha Nath¹, Arkadeep Dhali².

¹ Third year Medical student, College of Medicine and Sagore Dutta Hospital, Kolkata, India.

² Internal Medicine Trainee, Nottingham University Hospitals, NHS Trust, United Kingdom.

This abstract was published in a different venue and it is not being published in this Supplement to avoid duplicate publications.

Link to the publication:

<https://www.sciencedirect.com/science/article/pii/S2049080122017058?via%3DiHub>

44. **MEDICAL & DENTAL STUDENTS' PERCEPTIONS OF HEALTH AND WELL-BEING.**

Hassan Mumtaz¹, Manahil Rahat², Nadia Zohair³, Mehwish Javed⁴, Shazia Qayyum⁵

¹ Clinical Research Associate: Maroof International Hospital Islamabad Pakistan, Public Health Scholar: Health Services Academy, Islamabad Pakistan.

² Lecturer Pathology, IMDC, Islamabad Pakistan.

³ Assistant Professor Community Medicine, Riphah International University, Rawalpindi Pakistan.

⁴ Lecturer Pharmacology, IMDC, Islamabad Pakistan.

⁵ Professor of Pathology, Riphah International University, Rawalpindi Pakistan.

OBJECTIVE: As a way to examine how medical & dental students adhere to different dimensions of well-being within the framework of physical, emotional and spiritual well-being. **METHODS:** A cross-sectional questionnaire study of Riphah International University's 300 medical & dental students from each gender was done from January to December 2010. Predictive Analysis Software (PASW) version 18 assessed the replies ranging from "no," "sometimes," "usually," and "yes/always" (numbered 0-4). **RESULTS:** The study population consisted of 287 out of the 300 questionnaires, or 95.7% of the total. A total of 103 men (35.89 percent) and 184 women (64.11 percent) participated in the poll. P values of 0.0159 and 0.0240 show that illness and athletic participation have an effect on physical well-being based on gender. Mood swings and family friends had p values of 0.0059 and 0.00, respectively, in relation to emotional well-being. P values of 0.0024 and 0.0116 show that prayer and spiritual fasting have an effect on spiritual well-being. It is clear that spiritual wellbeing is distinct from emotional and bodily wellness, as shown by Tukey's simultaneous comparison t-values (d.f. = 858). **CONCLUSION:** As part of their basic curriculum, medical students should be taught stress and time management methods in order to better handle the stress and demands of practicing medicine. Colleges and institutions need to increase and enhance their research on gender bias in health and wellness.

Table. Factors Associated with Different Kinds of Wellness.

Physical Wellness (n=287)				
	Minimum	Maximum	Mean	SD
Sickness	1	4	2.43	1.06
Sports	1	4	2.1	1.03
Check-ups	1	4	1.79	1.01
Control Diet	1	4	2.43	1.07
Fruit Vegetables	1	4	2.69	0.96
Fast Food	1	4	2.13	1.07
Water Glass	1	4	2.53	1.04
Soft Drinks	1	4	2.70	1.23
Addiction	1	4	3.41	1.00
Sleep	1	4	3.09	1.46
Proactive Steps	1	4	2.25	1.08
Emotional Wellness				
Cheerful	1	4	2.74	0.75
Self Exploration	1	4	3.20	0.83
Family Friends	1	4	3.10	0.85
Cope with Stress	1	4	2.78	0.86
Mood Swings	1	4	2.37	1.03
Anxiety Attacks	1	4	2.46	1.00
Overcome Anxiety	1	4	2.69	0.97
Help from friends	1	4	2.29	0.93
Mentor advice	1	4	2.23	1.04
Consult help	1	4	2.59	1.10
Psychiatrist	1	4	1.49	0.88
Emotional Outbursts	1	4	2.84	0.97
Spiritual Wellness				
Meaning Purpose	1	4	3.33	0.90
Honest	1	4	3.39	0.70
Value belief	1	4	3.44	0.72
Learn Values	1	4	3.27	0.83
Prayer Fasting	1	4	3.19	0.84
Spiritual Fasting	1	4	3.37	0.81
Economics	1	4	2.91	0.80
Belief and Values	1	4	3.14	0.76

Legend: SD: Standard deviation.

Key words: Wellness wheel; Physical wellness; Emotional wellness; Spiritual wellness; Medical Education.

45. **ASSESSMENT OF UNDERGRADUATE RESEARCH EXPERIENCE IN TERM OF BENEFITS, BARRIERS AND MENTORSHIP FROM STUDENT'S PERSPECTIVES: A MIXED QUANTITATIVE-QUALITATIVE METHOD**

Hayat Abdoallah Ahmed¹.

¹ Six-year Medical Student. University of Khartoum, Khartoum, Sudan.

INTRODUCTION: Undergraduate research has many demonstrated benefits like enhancement of student's critical thinking, understanding of research process, and soft skills development, yet so many challenges are facing medical students with availability of time being the most cited among many undergraduates. The aim of this study was to assess the undergraduates research experience in terms of benefits, barriers and mentorship from students perspectives. **METHODS:** This study used a mixed quantitative-qualitative approach. The quantitative part was observational, analytical cross-sectional study design with census sampling and 900 participants from 3 batches. The qualitative part constructed in 6 focus group discussions with thematic analysis. The data were collected using standardized pre-validated questionnaire for the quantitative data, and structured questions for the qualitative data. Statistical analysis for the quantitative data was performed using Statistical Package for Social Science (SPSS) ® version No. 26, while qualitative data were analyzed using ATLAS.ti 9 software. **RESULTS:** From 950 census of the three batches, 900 student filled the questionnaire with 94.7% response rate. The mean age of the participants was 24.7, with 69 % females. After finishing their research only 7.7% published their work (65.3% journal, 16.7% conferences presentations). The highest gains reported from this experience were understanding the research process in the medical field, learning to work independently, and ability to read and understand primary literature, while the lowest were learning laboratory techniques, clarification of career path, and confidence in their potential to be science teachers. Themes generated from the qualitative data regarding undergraduate research benefits were: 1. Research knowledge, 2. Soft skills and 3. Scientific/Academic paradigm. The three most reported barriers were research knowledge and skills (44.4%), mentorship (24.4%), and time management (21.7%). When assessing mentorship, 28.9% indicated that their supervisor was about average "He was very good, He wasn't always available, but when available he tries to give us everything he can, generally he was so nice" group3, participant4, 15.8% said he/she is outstanding as a teacher and mentor "she was so supportive (supportive as a supervisor, teacher and even as a mom), she was trying to get the best out of us " group1, participant1. We investigated the association between students evaluation of their supervisors and their evaluation of the overall research experience, these two variables were moderately correlated ($r=.31$, $P = .000$). Also there is a significant positive correlation between supervisor's evaluation and students tendency to choose another research experience as undergraduates ($r= .2$, $P= .000$). Nevertheless, Supervisor's evaluation also correlate with the overall benefits from the research experience ($r= .2$, $P = .000$). **CONCLUSION:** Undergraduate research experiences had many well-established benefits yet so many challenges were encountered by students when conducting medical researches. These challenges need to be addressed properly in order to maximize the outcomes. Nevertheless, Mentorship is a defining feature and can determine the outcome of the whole research experience among undergraduates, and this necessitate paying further attention to this factor.

Table. The Mean of Rating for Twenty-one Potential Gains of Undergraduate Research Experience.

Item	Mean	SD
Clarification of a career path	2.22	1.31
Skill in the interpretation of results	3.14	1.25
Tolerance for obstacles faced in the research process	3.17	1.27
Readiness for more demanding research	3.08	1.35
Understanding how knowledge is constructed	3.28	1.29
Understanding of the research process in your field	3.42	1.27
Ability to integrate theory and practice	3.08	1.27
Understanding of how scientists work on real problems	3.14	1.29
Understanding that scientific assertions require supporting evidence	3.22	1.33
Ability to analyze data and other information	3.14	1.31
Understanding science	3.03	1.29
Learning ethical conduct in your field	3.23	1.32
Learning laboratory techniques	1.87	1.24
Ability to read and understand primary literature	3.31	1.28
Skill in how to give an effective oral presentation	3.01	1.34
Skill in science writing	3.07	1.30
Self-confidence	3.17	1.35
Understanding of how scientists think	2.93	1.35
Learning to work independently	3.35	1.37
Becoming part of a learning community	2.94	1.41
Confidence in my potential to be a teacher of science	2.70	1.48

Legend: SD: Standard deviation.

Key words: Undergraduates; Research Experience; Benefits; Barriers; Mentorship; Sudan.

46. **ASSOCIATION OF REPRODUCTIVE PARAMETERS WITH DERMATOGLYPHICS IN BREAST CANCER PATIENTS, HEALTHY AND HIGH-RISK INDIVIDUALS.**

Rahul Rangan¹, Swapna A. Shedje², Satish V. Kakade³.

¹ MBBS. Krishna Institute of Medical Sciences, Karad, Maharashtra, India.

² MD. PhD. Krishna Institute of Medical Sciences, Karad, Maharashtra, India.

³ PhD. Krishna Institute of Medical Sciences, Karad, Maharashtra, India.

INTRODUCTION: Breast cancer has a wide array of risk factors, and its confounding reproductive aetiologies have been paramount in defining the predictive ability of the disease. Similarly, a strong link between qualitative dermatoglyphic patterns and predisposition to breast cancer has been well documented through genetic linkage. Therefore, this study aimed to discern the affiliation between the aforementioned risk factors of breast cancer. **METHODS:** The study was carried out in 3 groups of 90 age-matched individuals of - breast cancer patients, high-risk individuals and healthy individuals. A detailed reproductive history was taken including factors such as age at menarche, menstrual regularity, age at menopause (if attained), breastfeeding, obstetric parameters and age at first live birth. Qualitative dermatoglyphics were procured through the standardised ink and paper method to get a remarkable rolled fingerprint. The variations in gynaecological and obstetric parameters and qualitative dermatoglyphic patterns were studied and their significance was computed using the chi-square test on InStat software where p values < 0.05 were considered significant with a 95% confidence interval. **RESULTS:** Highly significant values (p<0.0001) were found in all gynaecological and obstetric parameters where a higher frequency of whorls in breast cancer patients, arches in high-risk individuals and an equivalent frequency of arches and whorls were predisposed to healthy individuals. **LIMITATIONS:** Although this study might have identified certain predominating patterns with higher frequency, the consistency might vary from place to place due to differing dermatoglyphics according to ethnicity. A small number of patients receiving chemotherapy experienced - chemotherapy-induced dermatoglyphia - where the loss of fingerprints or very faint fingerprints was difficult to perceive. These patients were not included in the study to ensure maximum efficacy in interpreting the dermatoglyphics. **CONCLUSION:** Previous attempts failed to link dermatoglyphic indices and reproductive parameters, this study found a significant correlation between the variables in the three distinct groups. Most breast cancer patients are diagnosed late with a majority presenting to doctors in advanced stages where survival rates are marginal, so by this method, we can get a simple, practical, non-invasive and easily affordable screening technique for the above risk factors. This technique could also be employed for non-symptomatic women who might have a positive family history of breast cancer as a part of risk assessment for early diagnosis and treatment. Therefore, paving way for further research into the prognostic abilities of gynaecological parameters through qualitative dermatoglyphic indices.

Key words: Breast Neoplasm; Dermatoglyphics; Menarche; Menopause; Parity.

47. **THE EFFECT OF EARLY MOVEMENTS OF SWOLLEN LYMPH NODES CAUSED BY COVID-19/VACCINE OF COVID-19 ON RECOVERY.**

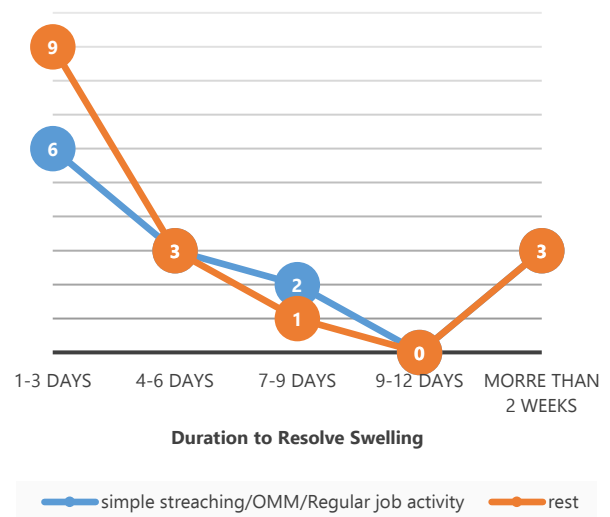
Usama A. Aljameey¹, Stephen R. Bergman².

¹ OMS III, Lincoln Memorial University, DeBusk College of Osteopathic Medicine in Tennessee, United States.

² DO, Assistant Professor, Osteopathic Manipulative Medicine, Lincoln Memorial University, DeBusk College of Osteopathic Medicine in Tennessee, United States.

INTRODUCTION: The swelling of the lymph nodes may raise some concerns and anxiety for people after getting the vaccination, especially for COVID-19. Many women seek medical attention for the enlarged lymph node due to the known relationship between lymph nodes and breast cancer. This research is intended to enrich the data of the most recent COVID-19 pandemic and the vaccines that were developed shortly after. The aim is to see if there is an effect of early movement of the swollen axillary lymph nodes caused by the COVID-19 vaccination and to enrich the data of the most recent COVID-19 pandemic and its developed vaccines shortly after. **METHODS:** A voluntary survey was used to collect data from recently vaccinated individuals. Data were analyzed for associations between early movement and resolution of lymphadenopathy. **RESULTS:** 32 (20.38%) of 157 participants reported swelling of axillary lymph nodes that resulted from COVID-19 vaccination. Duration of swelling ranged from 1 to more than two weeks. The early movement did not show a statistically significant reduction in the course of swelling. **CONCLUSION:** Early movement of areas affected with lymph node enlargement, whether active or passive, does not seem to cause additional side effects. The effect of early action seems comparable to rest (see Fig.), although it may lessen erythema due to improved circulation, just like the newer concept of early movement after a skeletal injury has a better outcome than merely resting, which was the older method of recovery. However, the current data is limited to support the benefit of such a concept.

Figure. Simple Stretching/Osteopathic Manipulative Medicine (OMM)/Regular Job Activity and Rest Appear Highly Correlated in Relation to Number of Days to Resolve the Swelling of the Lymph Nodes.



Key words: COVID-19; Vaccination; Exercise. (Source: MeSH-NLM)

48. **MYCOSIS FUNGOIDES: A DIAGNOSTIC CHALLENGE**Siddhartha Nath¹, Arunima Dhabal², Indrashis Podder³.¹ Third year medical student. College of Medicine and Sagore Datta Hospital, Kolkata, India.² MBBS, MD (Dermatology). Senior Resident, College of Medicine and Sagore Datta Hospital, Kolkata, India.³ MBBS, MD, DNB (Dermatology). Assistant professor, College of Medicine and Sagore Datta Hospital, Kolkata, India.

INTRODUCTION: Mycosis fungoides (MF) is the most frequent type of cutaneous T-cell lymphomas (CTCL), a heterogeneous group of non-Hodgkin lymphoma of T-cell origin. CTCLs accounts for about 4% of all non-Hodgkin lymphoma. MF mainly involves the skin but in advanced cases it may involve the lymph, blood and other organs. It mimics other skin disorders like erythema necroticans, leprosy, psoriasis etc which leads to delayed diagnosis and subsequent treatment. **METHODS:** A 61 year old male patient visited the OPD of a tertiary care hospital in Eastern India with multiple reddish elevated lesions for last 6 months which later became dome shaped and then ulcerated. He did not have any fever or itching. He informed that he had been taking Homeopathic medicine previously, but the identity of the said medicine could not be confirmed. Physical examination ruled out the presence of pallor, jaundice, oedema and cyanosis. Pulse and BP were within normal range. Systemic examination was unremarkable except mild hepatomegaly. Cutaneous examination revealed multiple erythematous indurated plaques, papules and nodules over chest, abdomen, back, limbs and face. Few of the plaques present on the trunk and left arm had developed ulcers having a necrotic floors. Cervical, axillary and inguinal lymph nodes were palpable, being firm in consistency and mobile in nature. Hair, nail and mucosal examination revealed normal results. Complete blood count (CBC), peripheral blood smear (PBS), serum urea and creatinine level did not deviate from normal findings. Ultrasonography of whole abdomen showed a mildly enlarged liver. A prominent lymph node in the aortocaval groove could be appreciated on the computed tomography (CT) scan of whole abdomen. CT scan of chest revealed bilateral axillary lymphadenopathy. Erythema necroticans, sarcoidosis and CTCL were considered as the differential diagnoses. Lesional biopsy revealed irregular epidermal hyperplasia, parakeratosis and epidermotropism in the absence of spongiosis. There was infiltration of atypical lymphocytes in the epidermis, forming well developed Pautrier's micro abscesses. The lymphocytes were tagging the dermo-epidermal junction and within the epidermis showing surrounding halo, convoluted nuclei and variable nuclear pleomorphism. Band like papillary dermal lymphoid infiltrate, dermal lymphoid fibroplasia and nodular lymphoid aggregates could be appreciated in the deep dermis. Immunohistochemical tests were performed and the immunophenotypic profile revealed positivity for CD2, CD3, CD5, CD7, CD 8 and TIA1 and negative for CD4, CD20, CD30, CD56 and granzyme B. Based on clinical presentation, histopathology and Immunohistochemical tests, a final diagnosis of MF was made. The patient was then started on systemic antibiotic therapy, due to increased risk of bacterial super infection of lesions due to skin barrier disruption. He was then referred to Oncology department for further treatment. **CONCLUSION:** In this case, the male patient was suffering from mycosis fungoides. In the background of its clinical features being similar to other skin disorders like erythema necroticans, clinicians may face a diagnostic dilemma to correctly diagnose it. Timely diagnosis and treatment improves the prognosis in most

cases. Histopathological evaluation still remains the investigation of choice.

Figure. Erythematous Plaques, Papules and Nodules Seen on the Trunk and Both Limbs of the Patient. Few of the Plaques on the Trunk and Left Hand had Developed Ulcers with a Necrotic Base.



Key words: Lymphoma; T cell; Cutaneous.

49. **KNOWLEDGE, ATTITUDE, AND PERCEPTION OF TOBACCO HARM REDUCTION STRATEGIES AMONG MEDICAL STUDENTS IN SOUTHWEST, NIGERIA.**

Innocent Chijioke Dike¹, Uzochukwu Eustace Imo¹, Jeremiah Adepoju Moyondafoluwa².

¹ Sixth-year Medical Student. University of Ibadan, Ibadan, Nigeria.

² Fifth-year Medical Student. Obafemi Awolowo University, Ile-Ife, Nigeria.

INTRODUCTION: The rate of tobacco use is on a steady increase worldwide and is associated with over 7 million deaths per year, three-quarters of which occur in low-and middle-income countries. Inadequate cessation programs/interventions, difficulties quitting tobacco, and a lack of information about tobacco health risks and tobacco harm reduction methods, have all contributed to the rapid rise of tobacco use in Nigeria, with the country's smoking rate increasing at a rate of approximately 4% each year. Tobacco harm reduction (THR) methods are alternatives to cigarette smoking that have been shown to assist in smoking cessation and reduce the mortality and morbidity associated with tobacco and nicotine use, however, these methods are still controversial and have drawn some criticism in recent times. Due to the prevalence of THR methods among young people and the growing health debate around them, medical students are likely to have a direct or indirect encounter with THR methods. A greater grasp of their viewpoint is beneficial while training them. Therefore, this study aims to determine the knowledge, attitude, and perception of THR strategies among medical students in southwest, Nigeria. **METHODS:** A cross-sectional study was carried out among clinical medical students in 6 medical schools in southwest, Nigeria, and data was collected via an online semi-structured based questionnaire. Descriptive analysis was done and a chi-square test was used to test the association between the level of knowledge of tobacco health risks and the socio-demographic variables. **RESULTS:** 199 participants' data were fully collected, 105(53%) were male while 94(47%) were female. Most (79%) of the respondents were of the age group 21-25. The majority (99.5%) of them never smoked. The majority of the participants 190(95%) have good knowledge about the health risks of tobacco and a Chi-square test showed only age as a significant socio-demographic variable, with participants between the 16-20 age group having a higher frequency of poor knowledge. Only 83(42%) understood what THR means. Also, 185(93%) do not know about THR methods regulation in Nigeria. 179(90%) have an interest in knowing about THR and 147(74%) said they will recommend it to smokers as a future doctor. 60.3% of participants perceived THR products to be less harmful than conventional cigarettes and 23% perceived THR products to be harmful to people in the vicinity of the users. 50.8% of participants see THR products to be a "gateway" to conventional cigarette use in the future. **CONCLUSION:** From this result, most medical students have good knowledge about tobacco harm risks, therefore, they will be able to confidently discuss this topic with patients and the public. However, there is poor knowledge of THR methods among medical students. This highlights the critical need to further educate medical students as well as give evidence-based recommendations at all levels to assist in advising patients who enquire or are interested in THR products and regulating their usage in the general community, as our study found out that most medical students are interested in knowing about THR method.

Table. The Table below Shows the Distribution of Good Knowledge and Poor Knowledge across the Sociodemographic Characteristics of the Respondents. as Can be Seen from the Table, Respondents' Knowledge about the Health Risks of Tobacco Smoking is Only Statically Significant with Age.

Characteristics	Frequency of Poor Knowledge	Frequency of Good Knowledge	*p-value
Age			
16-20	8	6	<0.0001
21-25	1	150	
26-30	0	32	
31-35	0	2	
Gender			
Male	4	101	1.0000*
Female	5	89	
Marital Status			
Single	9	185	1.0000*
Married	0	5	
Year of Study			
400 level	4	64	0.8005
500 level	2	52	
600 level	3	74	
Religion			
Christianity	9	161	0.4475
Islam	0	24	
Others	0	5	
Ethnicity			
Yoruba	9	143	0.4050
Ibo	0	22	
Hausa	0	1	
Others	0	24	
School of Study			
ABU(Ekiti)	0	17	0.4653
OAU(Osun)	4	51	
OOU(Ogun)	1	48	
UI(Ibadan)	3	46	
UNILAG(Lagos)	1	8	
UMS(Ondo)	0	20	

Legend: *Fisher's exact test

Key words: Smoking cessation; Tobacco; Harm reduction; Nigeria (Source: MeSH-NLM).

50. **SYRIANS' AWARENESS OF CARDIOVASCULAR DISEASE RISK FACTORS AND WARNING SIGNS: A CROSS SECTIONAL STUDY**

Sarya Swed¹, Hidar Alibrahim¹, Haidara Bohsas², Mohammed Amir Rais³, Sheikh Shoib⁴, Anas Alali⁵, Mohamed Abdelnasser⁶, Hadeel Fuad Alwan Alsharjabi⁷, Bisher Sawaf⁸.

¹ Sixth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

² Fifth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

³ MD, Hospital of Beni Messous, Algiers, Algeria.

⁴ MD, Consultant at Department of Health, Jammu and Kashmir, Kashmir. India.

⁵ Sixth year. Faculty of medicine. Alfurat university. Deir Ez-zor. Syria.

⁶ Fifth Year. Faculty of Medicine, Kafrelsheikh University, Egypt.

⁷ Sixth Year. Faculty of Medicine. Sana'a university. Yemen.

⁸ MD, Internal Medicine Department, Hamad Medical Corporation, Doha, Qatar.

disease's risk factors and symptoms. It may be able to reduce the number of advanced instances of this illness by educating individuals about the hazards of smoking and alcohol intake and by considering the family history of these CVDs.

Key words: Cardiovascular Diseases; Risk Factors; Warning Signs; Awareness; General Population; Syria.

INTRODUCTION: An estimated 17.8 million lives were lost in 2017 due to cardiovascular disease (CVD), resulting in a total of 330 million years of life lost and an additional 35.6 million years of disability. Numerous studies have shown the importance of education and awareness in promoting positive and long-lasting behavioral changes. This study aims to assess Syrians' awareness of cardiovascular disease (CVD) warning symptoms and risk factors, and investigate further into the variables that contribute to this awareness.

METHODS: A cross-sectional survey was undertaken online between August 1 and 25, 2022, to examine Syrian individuals' awareness of cardiovascular disease risk factors and early warning signs. The study's questionnaire was constructed based on prior research, and the inclusion criteria for the sample were citizens of Syria over the age of 18 who currently reside in Syria. There were three categories of questions on the questionnaire: sociodemographics, an evaluation of CVD knowledge using both open- and closed-ended inquiries, and medical history and behavioral risk factors. **RESULTS:** There were 1201 inquired participants; 728 (60.6%) were males, and 473 (39.5%) were females. Concerns about developing diabetes were reported by 45.8% (n=550), hypertension was feared by 54.0% (n=540), and 43.9% (n=572) of individuals, and heart disease was feared by 45.9% (n=572). The internet and social media platforms were the most common ways they learned about it. Closed-ended questions indicated that the majority of participants (n=1164, 94.9%) had recognized CVD risk factors, with smoking (95.2%), obesity (93.6%), cholesterol (91%), and hypertension (90.3%) being the most often reported risk factors. Close-ended questions regarding CVD warning indicators revealed that most participants (n=897, 74.7%) correctly identified the warning symptoms. However, in response to open-ended questions, most participants (n=478, 39.8%) did not identify CVD risk factors, as well only (n=291, 24.2%) did. In addition, open-ended questions concerning CVD warning signs indicated that more than half of the participants (n=680, 56.6%) had poor identification of the warning symptoms. The age group between 55 and 64 years had the greatest CVD risk factors, and education was related to greater knowledge of CVD risk factors (P-value<0.001). Males have a greater understanding of CVD risk factors than females, and married individuals have a greater understanding of CVD warning signals than those with other marital statuses. Country-dwelling individuals are less knowledgeable about CVD risk factors and warning symptoms than city-dwelling participants. **CONCLUSION:** According to our results, there is inadequate knowledge of the risk factors and warning signs of CVDs, which contribute to the development of this illness and result in life-threatening circumstances. Consequently, there is a larger need to raise CVD awareness and learning initiatives on the

51. **MONKEYPOX AWARENESS AMONG THE SYRIAN DOCTORS AND MEDICAL STUDENTS: A CROSS SECTIONAL STUDY**

Sarya Swed¹, Hidar Alibrahim¹, Haidara Bohsas², Mohammed Amir Rais³, Sheikh Shoib⁴, Yazan Khair Eldien Jabban⁵, Lazaward Kazan⁶, Noor Hussain⁷, Bisher Sawaf⁸.

¹ Sixth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

² Fifth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

³ MD, Hospital of Beni Messous, Algiers, Algeria.

⁴ MD, Consultant at Department of Health, Jammu and Kashmir, Kashmir. India.

⁵ Sixth year - Faculty of Medicine - Damascus University. Damascus. Syria

⁶ General practitioner. Faculty of Medicine, Altınbaş university, İstanbul/Turkey.

⁷ MD, albaqa'a applied University, alslat, Jordan.

⁸ MD, Internal Medicine Department, Hamad Medical Corporation, Doha, Qatar.

Key words: Monkeypox; Awareness; Doctors; Medical Students; Syria.

INTRODUCTION: World Health Organization (WHO) verified 780 cases of monkeypox across 27 countries between 13 May 2022 and 2 June 2022. The World Health Organization (WHO) classified the growing worldwide monkeypox epidemic a PHEIC on July 23; the bulk of confirmed cases have been found in European locations. The purpose of this research is to assess the level of awareness toward human monkeypox virus among the Syrian medical students, general practitioners (GPs), medical residents, and specialists. **METHODS:** We performed a cross-sectional online survey in Syria between 2 May and 8 September, 2022 to assess medical students', general practitioners', residents', and specialists' knowledge about the monkeypox virus. The utilized tool was developed with input from the World Health Organization, the Centers for Disease Control and Prevention, and cross-sectional studies conducted in Indonesia. The survey has 53 questions divided into three groups: demographic information, work-related details, and monkeypox knowledge. The time-efficient and simple snowball method of sampling was used. Version 28.0 of SPSS was used to analyze the data. **RESULTS:** A total of 1257 healthcare workers and medical students throughout all of Syria's governorates took part in the research. The percentage of responders who learned anything about monkeypox in medical school was just 6.2% (n = 78). As a whole, students scored 10.23 out of a possible 15, with 11 being the adequate level for knowledge. About half of the participants (n = 700) are familiar with the term "monkeypox." As well, half of the respondents (n = 663) just learned about monkeypox during the last few days, while almost half (n = 530) only learned about it within the past month. Almost participants didn't know adequately about monkeypox. The natural host and incubation time for monkeypox were correctly identified by just 2.7% of responders and 33.3% of the whole population, respectively. 1.8% of participants gave the right response when asked about the symptoms of monkeypox. Sixty percent of the study sample think the symptoms of monkeypox and smallpox are identical. The females had higher knowledge toward monkeypox (aOR = 1.5, 95% CI = 1.26-1.80, p<0.001) than males. Respondents who are specialist doctors had higher knowledge toward monkeypox (aOR = 2.96, 95% CI = 2.24-3.92, p<0.001) than others. **CONCLUSION:** Due to the critical lack of knowledge about monkeypox among Syrian clinicians and undergraduate medical students, urgent action to solve this local issue is required. Therefore, education and awareness regarding monkeypox vaccinations are of paramount importance. In order to improve the medical community's capacity to respond to human monkeypox cases and report them into a disease surveillance system, it is crucial that doctors have a better understanding of the illness.

52. **AWARENESS, KNOWLEDGE, ATTITUDE, AND SKILLS REGARDING TELEMEDICINE AMONG SYRIAN HEALTHCARE PROVIDERS DURING THE COVID-19 PANDEMIC: A CROSS-SECTIONAL STUDY.**

Hidar Alibrahim¹, Sarya Swed¹, Haidara Bohsas², Sheikh Shoib³, Shahm Alsakka⁴, Nagham Jawish⁵, Zain Alabdeen Othman⁶, Bisher Sawaf⁷.

¹ Sixth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

² Fifth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

³ MD, Consultant at Department of Health, Jammu and Kashmir, Kashmir. India

⁴ Sixth Year. Faculty of Medicine, Hama University, Hama, Syria.

⁵ Sixth Year. Faculty of Medicine. Damascus University. Damascus. Syria.

⁶ Fourth Year. Faculty of Dentistry. Albaath University. Homs. Syria.

⁷ MD, Internal Medicine Department, Hamad Medical Corporation, Doha, Qatar.

INTRODUCTION: After the widespread of COVID-19 around the globe, it was imperative to establish preventative measures to restrict the virus's transmission and enable clinicians to remotely monitor patients' status and avoid direct contact with them. The purpose of this research was to present an overview of the awareness, knowledge, attitude, and abilities of Syrian physicians about telemedicine technology. **METHODS:** An online cross-sectional study was conducted from 1 April to 15 May, 2022 to assess Syrian doctors' awareness, knowledge, attitude, and skills towards telemedicine. The questionnaire was taken from published study, and the inclusion criteria consist the Syrian doctors who worked in hospitals during the COVID19 pandemic, mainly those who had direct contact with patients. Data were analyzed using descriptive and multivariate logistic regression analysis in IBM, SPSS V. 28.0. **RESULTS:** Among 385 responses, 52.72% of them were females, 83.9% of them were aged less than 30 years old, and 66% were working in the governmental sector. 66% of participants have moderate knowledge about using computers and the internet, 80% have heard about telemedicine. Despite that, 95.1% of participants have not attended any training workshop on telemedicine, and most of them have reported no availability of a telemedicine unit in their department. Only 31.7% participants have shown high awareness of telemedicine. Furthermore, no significant correlation was identified between the academic level with the age and telemedicine awareness, knowledge, attitude, or computer skills. Despite that, there was an obvious correlation between age and computer skills (P Value<0.05). There was a significant correlation between the medical specialty and awareness, and computer abilities, especially the anesthesiology (88.5±5.2), (84±8.7) respectively. **CONCLUSION:** The study results demonstrate that most of the participating clinical doctors have a neutral view of telemedicine, even though they don't know much about it and don't have considerable experience with it. It is practical to educate and train academic staff, practicing physicians, residents and medical students within the clinical stages about telemedicine.

Key words: Telemedicine; Health intelligence; Healthcare Providers; COVID19; Syria.

53. **PREVALENCE OF ANEMIA AMONG PREGNANT WOMEN IN RURAL VILLAGE OF SINDHUPALCHOWK DISTRICT OF NEPAL – A CROSS-SECTIONAL STUDY**

Biyas Thapa¹, Smriti Bohara², Sistu KC³, Madan Sapkota⁴, Bibek Dhakal⁵, Binod Gaire⁵.

¹ MBBS, Dhulikhel Hospital, Kavre, Nepal.

² First-year PhD student in Biomedical Engineering, Cleveland State University, Cleveland, USA.

³ Final-year MBBS student, Patan Academy of Health and Science, Patan, Nepal.

⁴ MBBS, Manmohan Cardiovascular and Transplant Center, Kathmandu, Nepal.

⁵ MBBS, Rajshahi University, Rajshahi, Bangladesh.

INTRODUCTION: Anemia is a global public health problem all around the world, principally the developing countries like Nepal. Anemia results in maternal mortality alongside low birth weight which contributes to an increased infant mortality rate. The prevalence of anemia ranges from 27% to 42% among pregnant women depending on geographical regions. Iron and folic acid tablets are supplied free of charge to pregnant women as part of the Nepal government's National Anemia Control Strategy and Iron Intensification Program.

METHODS: A cross-sectional study was carried out among pregnant women attending Manekharka health center for an antenatal checkup. Hemoglobin levels of pregnant women from April 2018-2020 were obtained and analyzed. Hemoglobin level was determined using the indirect cyanmethemoglobin method. **RESULTS:** We used the World Health Organization (WHO) standard classification of hemoglobin levels below 11 gm/dl to determine the prevalence of anemia in pregnant women. The result suggested that a total of 30.7%, (n=63) of the pregnant women were anemic. Among which 4.76% had moderate anemia (hemoglobin 7-9.9gm/dl) and 96.58% had mild anemia (hemoglobin ≥ 9.9 mg/dl to < 11 gm/dl).

CONCLUSION: The study and its results suggest that the women in the age group 16-19 had a higher prevalence of anemia whereas the age group 25-29 had the lowest prevalence of anemia. Moreover, the study revealed that the prevalence of anemia in hills is substantial.

Key words: Anemia; Hemoglobin; Mortality; Pregnancy, Prevalence.

54. **KNOWLEDGE, ATTITUDES, AND PRACTICE AROUND HIV/AIDS AND OTHER STIs AMONG SYRIANS: A CROSS-SECTIONAL STUDY.**

Hidar Alibrahim¹, Sarya Swed¹, Haidara Bohsas², Khaled Albakri³, Bisher Sawaf⁴, Mohamed Elsayed⁵.

¹ Sixth Year, Faculty of Medicine, Aleppo University, Aleppo, Syria.

² Fifth Year, Faculty of Medicine, Aleppo University, Aleppo, Syria.

³ Fourth Year, Faculty of medicine, The Hashemite University, Zarqa, Jordan.

⁴ MD, Internal Medicine Department, Hamad Medical Corporation, Doha, Qatar.

⁵ MD, Department of Psychiatry, School of Medicine and Health Sciences, Carl von Ossietzky University Oldenburg, Oldenburg, Germany.

INTRODUCTION: Over 1 million new Sexual transmitted disease (STIs) are acquired daily throughout the globe, according to WHO data, with the majority of cases being asymptomatic. In Syria, statistics on STI awareness, attitude, and practice are few, and there is little information on Syrians' sexual and reproductive health concerns. The present research aims to determine which individuals factors best predict knowledge, attitudes, and behaviours about HIV/AIDS and other STIs in a Syrian population. **METHODS:** In the Syrian governorates between August 15 and September 16, 2022, a descriptive community-based cross-sectional survey was carried out. Syrian nationality, male or female, aged at least 18 years, citizen of any Syrian governorate, and willingness to engage in the survey were the study's inclusion criteria. Based on a previous study, a modified online semi-structured questionnaire was made on Google Form and used to collect the data. The questionnaire was divided into five main section that socio-demographic information, knowledge and practice relating STIs, knowledge and practice relating HIV/AIDS, attitude toward HIV/AIDS and attitude toward STIs. **RESULTS:** The research involved 1076 individuals in total. More over half (55%) of them were women, with the majority (86%) of them being between the ages of 18 and 30. Only 739 respondents (67%) were aware of voluntary counselling and testing (VCT), and only 35% were aware of the means by which HIV infection may be prevented. The most often mentioned AIDS/HIV-related statistic was that those who have several sex partners have a greater chance of contracting HIV (92%). Furthermore, just 66% and 44%, respectively, of respondents knew how STDs are transmitted. In general, individuals' understanding of STDs was rated at 56%. Furthermore, 50% of the individuals had a positive attitude about the STD information. We used a logistic model to tease out the role of demographics and found that men were 1.43 times more likely to be aware of AIDS/HIV than women were. Additionally, residents of cities were 1.42 times more likely than residents of rural areas to be knowledgeable about STDs. **CONCLUSION:** According to this research, Syrians' knowledge, attitudes, and behaviors about STIs, HIV, and other diseases were generally insufficient. This provides definitive evidence that HIV programmes need to verify that Syrian people have access to basic information about HIV/AIDS and other STIs. As a result, the health organizations should conduct both international and local helpful interventions in order to address this medical problem and enhance the awareness of the Syrian community about HIV/AIDS and other STIs illnesses as soon as possible.

Key words: HIV/AIDS; STIs; Awareness; Syria.

55. **PSYCHOLOGICAL DISTRESS AND SUICIDAL BEHAVIOR AMONG MEDICAL STUDENTS AT KHARTOUM STATE UNIVERSITIES, 2021-2022.**

Shima Algam Mohamed Musa¹, Abeer Mamoun Mohamed², Sozan Mudather Osman³.

¹ Medical Student in AlNeelain University, Sudan.

² Medical Student at Sudan University of Science and Technology.

³ Postgraduate Medical Student at Sudan international University.

INTRODUCTION: Psychological distress and suicidal behavior are mental health problems among students and necessitate research to inform strategies for prevention in this population. Although depressive symptoms and suicidal ideation are common in medical students, few programs address this problem, which is needed to determine the prevalence of psychological distress and suicidal behavior among medical students. **METHODS:** This is a cross sectional faculty-based study. We used Snowballing sampling technique and Kessler 10-item Questionnaire to assess psychological distress. We used SBQ-R (suicidal behavioral questionnaire _Revised) to assess suicidal behavior. The participants were students from 12 medical colleges in Khartoum state, from all academic levels. **RESULTS:** Among 525 undergraduate medical students 136 (25.9%) were males and 389 (74.1%) were females, 23.3% were well, 18.7% had mild mental disorder, 19.2% had moderate mental disorder and 38.8% had severe mental disorder at the last 30 days. The higher of psychological distress was slightly significant among student in preclinical years than clinical years ($P=0.08$), 72% have poor risk for suicidal ideation and 28% have higher risk of suicidal behavior more significant among students in preclinical years ($p= 0.02$). **CONCLUSION:** Psychological distress and suicidal behavior were more evident in pre-clinical years along with other many factors including, marital status, bad habits, chronic disease, and university type either public or private. We recommend implementing psychological and academic support programs across different undergraduate levels to enhance mental wellbeing, academic performance and prevent suicidal behavior.

56. **MULTI-TECHNIQUE MANAGEMENT OF CHRONIC SUBDURAL HEMATOMA IN A SINGLE PATIENT: A CASE REPORT**

Tunde Olobatoke¹, Chibueze Nwanmah¹, Somtochukwu Ekwegbara¹, Temitayo Ayantayo², Oluwafemi Owagbemi², Serge Rasskazoff², Olawale Sulaiman².

¹ Fifth-year Medical student. College of Medicine University of Lagos, Lagos, Nigeria.

² MD. RNZ Neurosciences, Lagos, Nigeria.

INTRODUCTION: Chronic Subdural Hematoma (cSDH) is one of the most everyday neurosurgical conditions. Unfortunately, there is no defined gold standard technique in managing cSDH, as studies show mixed results with no consensus on the superiority of a particular method. This lack of uniformity in the treatment of cSDH makes the management choice dependent on the clinical symptomatology, surgeon's preference, and recurrence after a prior intervention. Different management approaches are available, ranging from novel medical therapy, e.g., steroids, etizolam, tranexamic acid, angiotensin-converting enzymes inhibitors (ACEIs), to minimally invasive techniques, e.g., endovascular middle meningeal artery (MMA) embolization and endoscopic treatment, to more invasive surgical approaches, e.g., twist drill craniostomy, burr hole craniostomy, and craniotomy. A component network meta-analysis by Jack et al. showed a 10.8% recurrence rate (95% CI 10.2-11.5) across 418 studies involving different management techniques. The use of a post-operative drain and MMA embolization reduced recurrence, while the risk of morbidity was equivalent across surgical treatments. We aim to present the multi-technique management approaches required to achieve clinical and radiological resolution in a cSDH patient. **THE CASE:** We report the clinical course and management of a 47-year-old male with no history of trauma who presented with sudden onset of severe headaches and brain computed tomography scan finding of bilateral cSDH. He required multiple treatment techniques, starting with bilateral twist drill craniostomies and Jackson-Pratt drain insertion with the resolution of the right collection and recurrence of the left collection. He further required the placement of two left burr hole craniostomies for drainage. However, the collection recurred. He then proceeded to have a left middle meningeal artery embolization and a left craniotomy before a clinical and radiological resolution was achieved. **CONCLUSION:** The management of cSDH is still an art and not a cookbook. Familiarity of clinicians with multiple techniques and selection based on clinical judgment is essential for improved outcomes. Appropriate patient selection for the right technique will depend on accumulating data from clinical practice and its analysis.

Key words: Chronic Subdural Hematoma; Management; Craniotomy; Recurrence. (Source: MeSH-NLM).

57. **KNOWLEDGE, ATTITUDE AND PRACTICE OF SYRIAN MOTHERS' TOWARDS DIARRHEA MANAGEMENT AND PREVENTION AMONG UNDER-FIVE CHILDREN: A CROSS SECTIONAL STUDY FROM SYRIA.**

Haidara Bohsas¹, Sarya Swed², Hidar Alibrahim¹, Bisher Sawaf³, Mohamed Elsayed⁴.

¹ Fifth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

² Sixth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

³ MD, Internal Medicine Department, Hamad Medical Corporation, Doha, Qatar.

⁴ MD, Department of Psychiatry, School of Medicine and Health Sciences, Carl von Ossietzky University Oldenburg, Oldenburg, Germany.

education, information distribution, and community discourse to improve the prevention and treatment of diarrhoea in children under five.

Key words: Knowledge; Attitude; Practice Diarrhea Management; Parents; Syria.

INTRODUCTION: Diarrhea kills more than 2,000 children worldwide and over 1.3 million annually. There is still a gap in home management knowledge, attitude, and excellent practice of diarrheal illness. This research aims to understand mothers' knowledge, attitudes, and behaviours about diarrhoea in children under the age of five in Syria to minimize the number of fatalities and enhance the efficacy and efficiency of treatment. **METHODS:** From the 8th to the 18th of September 2022, a cross-sectional online survey was done in Syria. The questionnaire was modified based on prior research that used a thorough, validated scale. Mothers having at least one child under the age of five and Syrian nationalities from all Syrian governorates were eligible to participate in the study. Four components make up the questionnaire. In the first section, information regarding the participants' demographics was provided. In the second section, mothers were tested on their knowledge of diarrhoea. Mothers' actual attitudes regarding preventing and treating diarrhoea were also analyzed. **RESULTS:** 49.9% of the 996 participants were between the ages of 25 and 34, while 62.6% of the children were between the ages of 26 and 59 months. 46.2 percent of participants had a Bachelor's degree. 82.4 % of moms classified diarrhoea as the frequent passage of watery stools (3 or more times). 53.7 percent of respondents had used ORS; however, only 33.7% said they knew how to prepare it. Mothers with children aged 25–59 months were more informed about the prevention and home-based treatment of diarrhoea in their children (mean=6.07, SD= 2.36) than those aged 35–44 (mean=6.16, SD= 2.36). Mothers' excellent economic status was associated with greater diarrhoea management knowledge (mean=6.5, standard deviation = 2.50). (Mean = 7.28, Standard Deviation = 2.50) Mothers with a high school diploma or above had more understanding of diarrhoea management than those with a lower level of education. 28.7% of mothers with children between 25 and 59 months exhibited excellent knowledge of prevention and home-based treatment of diarrhoea. 43.4% of mothers with a bachelor's degree or more showed a positive attitude toward diarrhoea management. Only 6.3% of moms with a low socioeconomic position have shown appropriate diarrhoea control practices. Three out of six predictor factors were substantially connected with mothers' attitudes about diarrhoea management, including the age of the child, the mother's employment, and her level of education (P<0.05). Two of the six predictor factors were substantially connected with mothers' practice of diarrhoea control, including the mother's employment and socioeconomic position (P<0.05). Women with higher socioeconomic status are expected to perform diarrhoea treatment 1.69 times more often than those with a lower socioeconomic status. **CONCLUSION:** We indicated that mothers' beliefs and actions about the prevention and home management of diarrheal illnesses in children younger than five were inadequate. Therefore, it is important to plan and execute health

58. **COMPARISON OF MULTINATIONAL MEDICAL SCHOOL STUDENTS EXPERIENCES IN THE FACE OF THE COVID-19 PANDEMIC: A QUALITATIVE ANALYSIS.**

Alexandra C. Skoczek¹, Patrick W. Ruane², Cassidy Onley³, Torhiana Haydel⁴, Maria Valeria Ortega⁵, H. Dean Sutphin⁶, Alexis M. Stoner⁷.

¹ MPH, OMS-III. Edward Via College of Osteopathic Medicine – Auburn, Auburn, AL, United States¹ Six-year Medical Student. University of Khartoum, Khartoum, Sudan.

² OMS-III. Edward Via College of Osteopathic Medicine – Carolinas, Spartanburg, SC, United States.

³ OMS-III. Edward Via College of Osteopathic Medicine – Virginias, Blacksburg, VA, United States.

⁴ MHA, OMS-III. Edward Via College of Osteopathic Medicine – Louisiana, Monroe, LA, United States.

⁵ OMS-III. Edward Via College of Osteopathic Medicine – Louisiana, Monroe, LA, United States.

⁶ PhD. Edward Via College of Osteopathic Medicine – Virginias, Blacksburg, VA, United States.

⁷ PhD, MPH. Edward Via College of Osteopathic Medicine – Carolinas, Spartanburg, SC, United States.

INTRODUCTION: In the midst of the COVID-19 pandemic, countries, and governments around the world have implemented different measures and guidelines for the containment and mitigation of the COVID-19 virus. In addition to implemented policies and initiatives, social media and personal beliefs have affected medical students' social, emotional, financial, and academic stability and success both domestically and internationally. The objective of this study was to assess medical student's perspectives, attitudes, and insight in the face of the COVID-19 pandemic and determine if differences exist between countries. **METHODS:** This qualitative study, recruited students enrolled in the Global Seminar for Health and environment elective course in their respective medical schools to complete a weekly, non-graded journaling assignment for 6 weeks. To measure outcomes, open-ended questions within the assignment asked students across four different countries questions regarding the COVID-19 pandemic including personal beliefs and knowledge, policies and initiatives within their country, global policies and initiatives, and social media presentations. Thematic analysis was then completed using the QCoder package in R Studio. **RESULTS:** Both internationally and in the US, COVID-19 has had a large impact on medical students; however, their perspectives are distinct in personal beliefs, policies, and social media. International medical students believed that their country's COVID-19 response contained more restrictions than the global response, with the theme being expressed in 11 of 67 responses (16.4%) compared to 1 of 75 responses (1.3%) of US responses. This was enforced by the US medical students' views that the US had fewer COVID-19 restrictions. US medical students had a higher number of responses with the theme "more restrictions internationally" which was present in 21 of 75 responses (28%). US medical students were more likely to express a decrease in the number of academic opportunities and academic performance. The theme "decrease in academic opportunities and performance" was present in 15 of 75 US responses (20%) compared to 9 of 67 international responses (13.4%). A US response containing this theme was as follows: "I have had to adjust to a new way of doing school, mainly online, as well as coming to terms with the fact that I am not getting to experience many of the social aspects of medical school that I was looking forward to."The US responses showed less of a mental health impact and expressed stronger negative views on how

COVID-19 was handled with 40 of 75 US responses (53.3%) reporting the theme "need better initiatives and policies. **CONCLUSION:** The COVID-19 pandemic continues to affect medical students globally. The current study was limited by responses and student participation each week. Future studies aimed at analyzing specific COVID-19 policies around the world and the extent of the pandemic's impact on mental health may provide greater insight into medical students' beliefs, attitudes, and well-being which have been challenged over the last year. Regardless, it must be acknowledged that the medical school experience has changed for both international and United States medical students and affected them not only academically but mentally, socially, and financially.

Table. United States and International Medical Students Themes and Responses.

Question	Theme	Country (Theme response rate)	Examples
Personal Beliefs and Knowledge	Decrease in Academic Opportunities and Performance	International (.145)	"In a personal level it affected me since I was finishing my internship at the beginning of the pandemic when precautions were taken to prevent COVID 19 infections, I could observe a remarkable decrease of patients in the hospital, decreasing the opportunity to learn and provide medical care."
		United States (.20)	"It has effected my medical school experience significantly as we had online classes for months and months."
Personal Beliefs and Knowledge	Mental Health Impact	International (.273)	"My anxiety and panic have risen to such levels that it is hard for me to tolerate casual touch and proximity. I dont remeber the last time I hugged a friend."
		United States (.017)	"The COVID pandemic has increased my already heightened stressed induced by medical school studies."
Policies and Initiatives	Individuals show a lack of regard	International (.444)	"People have stopped the fear of COVID and do not respect the measures"
		United States (.175)	"My frustration that the COVID pandemic has gotten so bad is with the people who refused to be smart and take simple steps for the good of others even if it was a minor inconvenience to them."
Policies and Initiatives Internationally	More Restrictions Internationally	International (.075)	"With what respects other countries is that most have taken more biosecurity measures on their own to protect their citizens, from what I can say about their information is that they have been able to obtain better results in the case of European countries as Americans, among others who enjoy a good economic as well as social situation, etc., compared to other third world countries"
		United States (.288)	"I know some countries in Europe took stricter precautions at the beginning of the pandemic, as well as some countries in Asia (like China). For example, I have a ton of family in Italy and the precautions that they took were significantly more regulated than here in the US."
Policies and Initiatives Internationally	Less Restrictions Internationally	International (.170)	"There's is many variations of the preventions countries might have, but I think there is many things such as mask obligation that should be applied, as well to put an obligated quarantine to people that has been expose in the past days."
		United States (.017)	"I have friends in different countries where there are nearly no restrictions at all."
Social Media Presentations	Mental Health Impact	International (.222)	"I think national news outlets have remained true to the facts, so it does get very overwhelming at times. I've had to consciously limit my exposure to the informations shared through these platforms in order to preserve my mental health. Nowadays, I feel like I'm used to it. It's everything and I see and everything I hear."
		United States (.085)	"I personally became very overwhelmed by the death tolls being released everyday on social media, for a period of time I had to step back from social media because it was very sad."

Key words: COVID-19; Medical Student; Mental Health; Academic Performance.

59. **THE COVID-19 PANDEMIC. A PSYCHOSOCIAL APPROACH IN MEXICAN MEDICAL STUDENTS.**

Diego Ortega-Moreno¹, Edgar Botello-Hernández², Rebeca Aguayo-Samaniego², Patricio García-Espinosa³.

¹ Fifth-year Medical Student. School of Medicine and University Hospital "Dr. José E. González" Universidad Autónoma de Nuevo León, Mexico.

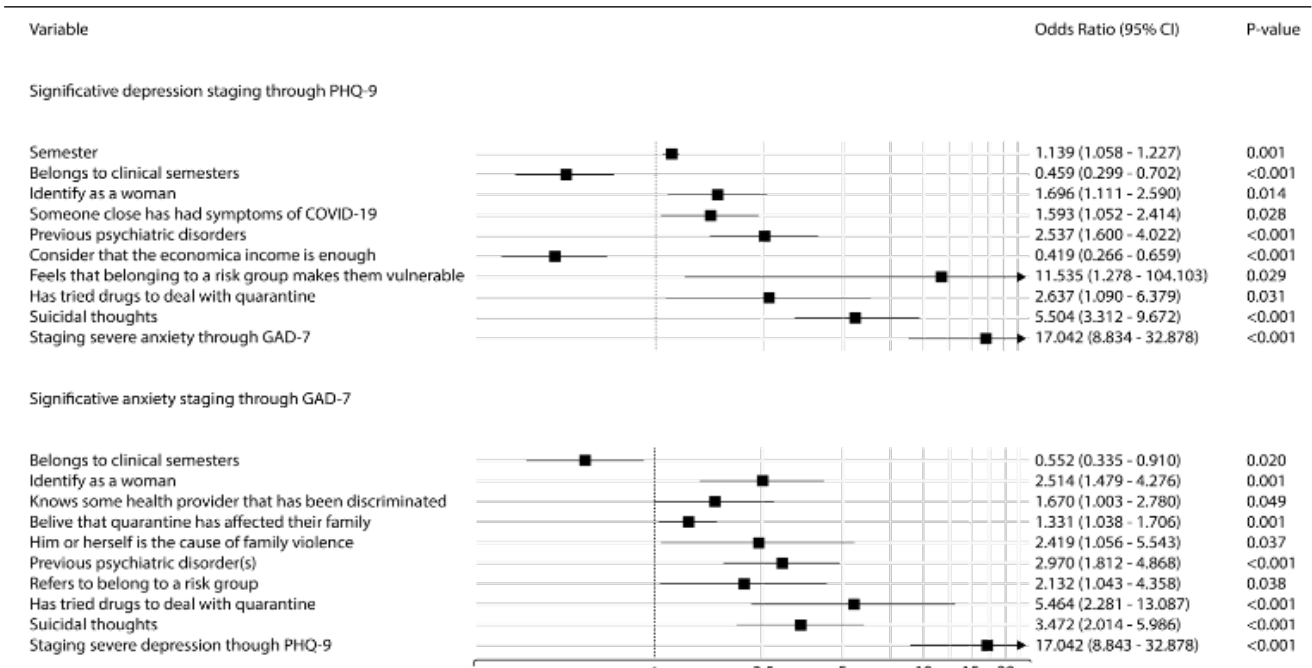
² Sixth-year Medical Student. School of Medicine and University Hospital "Dr. José E. González" Universidad Autónoma de Nuevo León, Mexico.

³ MD. Palliative Care Clinic, Mexican Social Security Institute, High Medical Specialty Unit Number 25, Monterrey, Nuevo León, Mexico.

INTRODUCTION: Nowadays the impact that the COVID-19 pandemic has had on students around the world is not a secret; the loss of the status quo as a consequence of the SARS-CoV-2 infection, changed the concept of everyday life. Medical students represent an important affected population in terms of loss of theoretical, laboratory practices, as well as the much-needed exposure to patients, are factors that add to the baseline stress of being a college student and alienation from social groups. The present study sought to establish the impact on the emotional and social spheres of medical students, in addition to establishing risk factors, predictors or predisposing factors to present alterations in the psychosocial elements of health. **METHODS:** Cross-sectional study performed in Mexican Medical Students; the sample size was found to be 366. An 82-item questionnaire was applied to assess 4 main axes; Generalized Anxiety Disorder (GAD-7) and the Patient Health Questionnaire (PHQ-9) were used to evaluate prevalence of anxiety and depression, COVID-19 knowledge, perception, and social determinants were also evaluated. The study sample was divided into 2 groups to address a group with depression/anxiety and a group with no anxiety/depression. The

possible presence of anxiety/depression was defined as a score ≥ 10 on both scales. 500 students were randomly chosen, were invited to participate, and voluntarily signing the informed consent. Students who did not complete all answers were excluded. Non-parametric quantitative variables were evaluated with Mann-Whitney U, qualitative variables with χ^2 or Fisher's exact test. Spearman's correlation was also used, and a binary logistic regression was done to identify association. **RESULTS:** A total of 384 students were included with a mean age of 21 years. The majority, 236 students, were women (61.45%) and 154 (40.1%) belonged to the clinical semesters of the career (7th to 12th semester). 89.34% (343 students) stated that their main concern was that a family member became ill, the economy (71.51%), and massive reinfection (68.44%). A moderate to exaggerated increase in anxiety symptomatology before the start of the pandemic was reported in 61.19% (235 students), 75% (287 students) reported depressed mood symptoms. 320 students (83.33%) reported having been correctly informed; they were aware of COVID-19 symptomatology, use of protective personal equipment, and myths. We found that 43% (PHQ-) had depression and 24.5% anxiety (GAD-7); having depression increased the risk of presenting anxiety and vice-versa along with identifying themselves as a woman and having a diagnosis of a prior psychiatric disorder for both groups. Belonging to clinical semesters was found to be as a protective factor for both anxiety and depression. **CONCLUSION:** The results indicate an increase in the depressive and anxiety symptomatology of the students, as well as concerns for their families and the economic situation. Academic institutions must design effective strategies for early detection, treatment and increase resilience of students using innovative resources adapted to the contingency.

Table. Forest Plot. Variables Associated with Belonging to Anxiety and/or Depression Groups.



Legend: Logistic binary regression has been performed to assess variables that correlate with a p-value lower than 0.1. An odds ratio that does not cross 1 and a value of p lower than .05 has been interpreted as significant (both clinically and statistically). Note. GAD-7 General Anxiety Disorder-7, PHQ-9 Patient Health Questionnaire-9.

Key words: Anxiety; COVID-19; Depression; Sars-CoV-2; Students

60. **PREVALENCE OF INTESTINAL COCCIDIA: FIRST DESCRIPTION OF CYCLOSPORIDIOSIS ASSOCIATED WITH DIARRHEA IN CHILDREN IN COLOMBIA.**

Maria Camila Cortes Montoya¹, Humberto Alejandro Nati Castillo², Jessica Triviño², Ana Sofia Orozco Cano¹, Simon Gonzales Naranjo¹, Juan Felipe Caicedo Olaya¹, Juan Francisco Amaya Amezquita¹, Karen Sofía Ayala Girón¹, Laura Losada¹, Davidshon Steven Montes¹, Yimmi Pinto Valencia¹, Marcela Fama Pereira¹, Nancy Yhomara Cabeza¹, Fabiana Lora Suarez¹, Jorge Enrique Góme Marín¹.

¹ Third-year Medical Student. University of Quindío, Armenia, Quindío, Colombia. GEPAMOL research group, Biomedical Science Research Center, Faculty of Health Science, University of Quindío.

² MD. GEPAMOL research group, Biomedical Science Research Center, Faculty of Health Science, University of Quindío.

INTRODUCTION: In Colombia, the studies about the etiology of acute diarrhea disease (ADD) in children by using standard stool culture techniques methods and DNA detection tools for intestinal virus show that viral origin was the most frequent, however still between 16 to 45% of the cases of unknown etiology. Specific staining techniques or high sensitivity molecular methods for the intestinal coccidia *Cryptosporidium* sp and *Cyclospora* sp have been not applied in the Colombian studies, for this reason, the current situation of these intestinal coccidia in Colombia as cause of diarrhea is unknown. **OBJETIVE:** To estimate the frequency of *Cryptosporidium* sp. and *Cyclospora* sp. and to analyze the association between infection and clinical manifestations on children with acute diarrhea consulting the pediatrics emergency service of a third level Hospital.

METHODS: An observational descriptive study was performed in 150 children that consulted the emergency service at the Hospital San Juan de Dios in Armenia, Colombia, in the period between April 1st and May 31st of 2022. We applied questionnaires and collected primary data from clinical records of children, as well as stool samples of each child after receiving informed consent from the parents and/or legal guardian of the minors. To identify the pathogenic intestinal coccidia (*Cryptosporidium* sp. and *Cyclospora* sp.), we used stool fresh preparations with 1% iodine and stained by a modified Ziehl Nielsen coloration protocol (Kinyoun stain). Samples were examined by expert microbiologists on a light microscope with a 40x objective. Prevalence and odds ratios were estimated. For statistical analysis differences in proportions among groups were compared via the X2 test and Fisher exact test. For non-parametric data, differences of means between two groups were analyzed through a Kruskal-Wallis test. Differences of medians were analyzed via Kruskal-Wallis test for non-parametric variables and analysis of variance (ANOVA) for parametric variables; statistical significance was considered when $p \leq 0.05$. Statistical calculations were made by using software factors in Epi Info 7.2 Epi-Info version 3.5.1 (CDC, Atlanta). **RESULTS:** The prevalence of infection in the children that went to the urgency service was of 19,7% by *Cryptosporidium* sp. and 10,9% by *Cyclospora* sp. The 59,2% of children with cryptosporidiosis and 66,6% of children with cyclosporidiosis were hospitalized. There was a statistically significant association between the presence of parasite in stools and fever in cyclosporidiosis (93,3% of children with cyclosporidiosis vs. 56% by other causes, OR 10,7 IC95% 1,3-84; $p = 0,004$). **CONCLUSION:** The study results indicate the need to use specific diagnostic techniques to identify *Cryptosporidium* sp and *Cyclospora* sp in children with diarrhea, because they are frequent and are treatable with specific antiparasitic medication. We recommend that its search should be done systematically.

Table. Sociodemographic, Clinical and Qualitative Laboratory Characteristics and the Analysis of Their Association with the Presence of *Cryptosporidium* sp. and *Cyclospora* sp. Detected by Kinyoun Staining in Stool Samples from Children Compared to Children with Negative Tests who Consulted the Emergency Department of the San Juan de Dios Hospital in Armenia (Quindío, Colombia) in the Period from April to May 2022.

Characteristics	n/N (%) in children with (+) tests vs. children with (-) tests for <i>Cryptosporidium</i> in stools	OR (95% CI)	p	n/N (%) in children with (+) tests vs. children with (-) tests for <i>Cyclospora</i> sp in stools	OR (95% CI)	p
Contributory vs. subsidized	16/31 (51.6%) vs. 62/119 (52.1%)	1.0 (0.4-2.2)	1.0	7/15 (46.6%) vs. 65/135 (48.1%)	0.9 (0.3-2.7)	1.0
Male vs. Female	15/31 (48.3%) vs. 81/119 (68%)	0.43 (0.1-0.9)	0.057	15/31 (48.3%) vs. 81/119 (68%)	0.43 (0.1-0.9)	0.057
Urban vs. Rural	31/31 (100%) vs. 114/119 (95.8%)	Indefinido	0.58	15/15 (100%) vs. 130/135 (96.3%)	Indefinido	1.0
Dehydration grade II or III at the time of consultation vs. No dehydration or grade I	14/31 (45.1%) vs. 40/119 (33.6%)	1.6 (0.7-3.6)	0.29	5/15 (33.3%) vs. 49/135 (36.3%)	0.8 (0.2-2.7)	1.0
Abdominal pain	11/31 (35.4%) vs. 44/119 (36.9%)	0.9 (0.4-2.1)	1.0	6/15 (40%) vs. 49/135 (36.3%)	1.1 (0.3-3.4)	0.7
Fever	21/31 (67.7%) vs. 72/119 (60.5%)	1.3 (0.5-3.1)	0.53	14/15 (93.3%) vs. 79/135 (58.5%)	9.9 (1.2-77.6)	0.0096
Vomit	13/31 (41.9%) vs. 66/119 (55.4%)	0.5 (0.2-1.2)	0.22	5/15 (33.3%) vs. 74/135 (54.8%)	0.4 (0.1-1.2)	0.17
Hospitalized	20/31 (64.5%) vs. 66/119 (55.4%)	1.4 (0.6-3.3)	0.41	7/15 (46.6%) vs. 79/135 (58.5%)	0.6 (0.2-1.8)	0.41
<i>Cryptosporidium</i> (+) vs. <i>Cyclospora</i> (+)	2/31 (6.4%) vs. 13/119 (10.9%)	0.5 (0.1-2.6)	0.73			
Increased bacterial flora	16/30 (53.3%) vs. 61/116 (52.5%)	1.0 (0.4-2.3)	1.0	10/15 (66.6%) vs. 67/131 (51.1%)	1.9 (0.6-5.8)	0.28
Yeasts	12/23 (52%) vs. 27/96 (28.1%)	2.7 (1-7)	0.045	5/14 (35.7%) vs. 34/105 (32.3%)	1.1 (0.3-3.7)	0.77
Mucus in stool	10/31 (32.2%) vs. 35/119 (29.4%)	1.1 (0.4-2.6)	0.37	6/15 (40%) vs. 54/133 (40.6%)	0.9 (0.3-2.8)	1.0
Blood in stool	8/31 (25.8%) vs. 23/119 (19.3%)	1.4 (0.5-3.6)	0.45	4/15 (26.6%) vs. 27/135 (20%)	1.4 (0.4-4.9)	0.51
Leucocytes in stool	11/30 (36.6%) vs. 56/118 (47.4%)	0.6 (0.2-1.4)	0.31	11/30 (36.6%) vs. 56/118 (47.4%)	0.6 (0.2-1.4)	0.31

Key words: Diarrhea; Colombia; Cryptosporidiosis; Cyclosporidiosis; Pediatrics.

61. **SIMULATION BASED PEER-ASSISTED LEARNING: PERIPHERAL VENOUS CATHETERIZATION AND BLOOD SAMPLING.**

Didina Cătălina Barbălată¹, Cristian Toma².

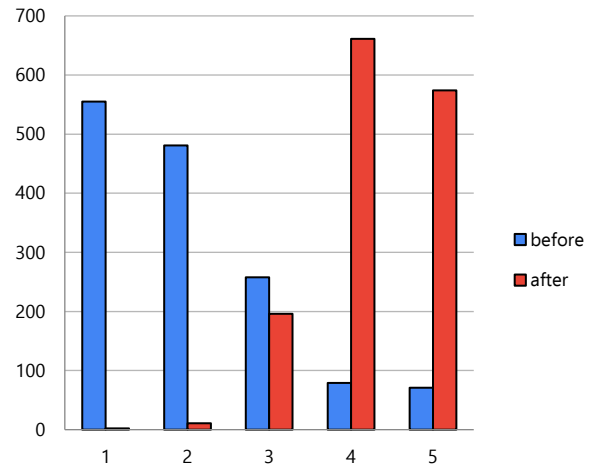
¹ Fourth-year Medical Student. Carol Davila University of Medicine and Pharmacy, Bucharest, Romania.

² MD PhD Assistant Professor. Carol Davila University of Medicine and Pharmacy, Bucharest, Romania, Professor Doctor Theodor Burghel Clinical Hospital, Bucharest, Romania.

INTRODUCTION: Peripheral venous catheterization (PVC) and blood sampling (BS) represent some of the first basic techniques that a medical student learns when starting clinical practice. As they are invasive maneuvers, there is a level of self-doubt that can be overcome through practice in a simulated setting. Peer-assisted medical simulation learning is an innovative educational technique that allows students to gain confidence in conducting clinical maneuvers in a safe environment. Simulation based learning focuses on trial and error, participants being able to approach the technique multiple times, without the risk of hurting a real patient. Additionally, the fact that the workshop is conducted by fellow students, creates a more comfortable learning setting. **AIM:** Our aim is to determine the effectiveness of medical simulation in learning to perform PVC and BS and in increasing the level of confidence of the participants.

METHODS: Our study was conducted at the Department of Medical Simulation of the Center for Innovation and e-Health (CieH), part of the University of Medicine and Pharmacy "Carol Davila" Bucharest, Romania, between March and December 2021. During this period, 2186 first year students took part in a peer-conducted simulation workshop, conducted by undergraduate medical students in all years of studies, who had previously undergone extensive training and evaluation. The aim of the workshop was to learn the basics in PVC and BS in a controlled environment. Through a questionnaire, we collected data regarding knowledge acquisition and auto-evaluation of the students' skill and knowledge prior and after the training on a five-point scale. At the beginning of the questionnaire we obtained informed consent from the study participants **RESULTS:** The response rate to the questionnaire was 66,10%. The participants obtained an average score of 60%. There were few participants that did not acquire enough information in order to answer correctly to the questionnaire. 80% of the respondents answered accurately on 2 out of 3 questions. We observed a 48,35% increase in the confidence level of participants regarding clinical knowledge and skill acquisition after the workshop. Prior to the workshop, only 10% of participants self-evaluated with a score of 4 or 5, compared to 85% of respondents after the workshop. **CONCLUSION:** The medical simulation training led to a significant rise in students' confidence and a high impact on the development of skill and knowledge. Through our basic workshops we want to familiarize the participants with the clinical environment, additional knowledge and skills being acquired once throughout their studies. The workshop's objective of increasing participants' comfort regarding basic clinical techniques, such as blood sampling and peripheral venous catheterization, was accomplished. The outcome of the study enables us to adapt the curriculum and testing procedures to better meet the needs of the participants.

Figure. Auto evaluation scores – before and after workshop



Key words: Medical simulation; Peer-assisted learning; Peripheral venous catheterization.

62. **THE PREVALENCE OF HYPOMAGNESEMIA IN CRITICALLY III PATIENTS ADMITTED IN MEDICALLY INTENSIVE CARE UNIT.**

Maryam Baloch¹, Azeem Khalid², Kiran Naimat³, Muhammad Usman Khalid⁴, Muhammad Abdul Khaliq Khan⁵, Shahzaib Maqbool⁶.

¹ Allama Iqbal Medical College/Jinnah Hospital, Lahore, Pakistan

² Allama Iqbal Medical College, Lahore, Pakistan.

³ Curewell Medical Center, Illinois, USA.

⁴ King Edward Medical University, Lahore, Pakistan.

⁵ Baqai Medical University, Karachi, Pakistan.

⁶ Holy Family Hospital, Rawalpindi, Pakistan.

INTRODUCTION: Magnesium is the fourth most abundant cation in the human body. Hypomagnesemia can result from decreased intake, redistribution of magnesium from the extracellular to the intracellular space, or increased renal or gastrointestinal loss. Hypomagnesemia can cause severe outcomes in ill patients. So, we conducted this study to determine the frequency of hypomagnesemia in critically ill medical patients. **METHODS:** This is a Descriptive cross-sectional study involving 120 patients admitted in the medical intensive care unit (MICU) of the Holy Family Hospital, Rawalpindi, Pakistan. The study was conducted from July 2020 to September 2021. About 1 ml sample of blood was taken from each patient included and sent to the hospital laboratory for evaluation of serum magnesium levels. All the collected data was entered and analyzed on SPSS v. 23. A p-value of ≤ 0.05 was taken significant. **RESULTS:** In our study, the mean age of the patients was 42.76 ± 12.77 years, and the male-to-female ratio of the patients was 1:1. The mean value of the APACHE II score of the patients was 29.68 ± 2.571 . Hypomagnesemia was found in 28 (23.33%) patients. **CONCLUSION:** According to our study, the frequency of hypomagnesemia in critically ill medical patients was 23.33% (28 patients).

Table. Descriptive statistics of age, APACHE II score and Magnesium Levels at Day 1 & 14 (n=120).

Variables	Mean	SD	Minimum	Maximum
Age in years	42.76	12.77	17	67
APACHE II score	29.68	2.571	25	34
Serum Magnesium Level At Day 1	2.10	0.51	1.2	3.0
Serum Magnesium Level At Day 14	2.05	0.43	1.3	2.9

Key words: Critical Illness; Hypomagnesemia; Intensive Care Unit; Patients.

63. **NEUTROPHIL-LYMPHOCYTE RATIO AND ITS ASSOCIATION WITH HYPERGLYCAEMIA: A CROSS SECTIONAL STUDY.**Shailendra Dandge¹, B. PoojaShivani².¹ MD, Professor, Department of Pharmacology, SHARE INDIA-MediCiti Institute of Medical Sciences, India.² MBBS, Final year MBBS student, MediCiti Institute of Medical Sciences, India.

INTRODUCTION: Chronic subclinical inflammation indicated by an elevated neutrophil-lymphocyte ratio (NLR) calculated from a complete blood count (CBC) test is reported to be associated with hyperglycaemia, including prediabetes and type 2 diabetes mellitus(T2DM). Current evidence on the association between NLR and glycaemic status is limited and conflicting. **AIM:** To determine if NLR was higher in those with prediabetes compared to those with normoglycemia, and To compare the NLR among individuals on treatment for T2DM stratified by glycaemic control. **METHODS:** we analysed hospital data of individuals attending a tertiary care hospital in south India between January, 2021 and December, 2021. Individuals had CBC and glycosylated haemoglobin (HbA1c) tests done at the same visit. Hospital records of only those individuals without any clinical features of inflammation at the time of hospital visit were included in this analysis. Normoglycemia and prediabetes were defined as HbA1c < 5.7% and HbA1c ≥5.7 but ≤6.4% respectively, in those without a history of T2DM. Good glycaemic control and poor glycaemic control were defined as HbA1c<7% and HbA1c ≥7 respectively in those on treatment for T2DM. CBC and HbA1c data of 109 individuals each with normoglycemia and prediabetes; and 373 individuals on treatment for T2DM were analysed. After confirming the normality of distribution of NLR, unpaired Student's 't' test was used: 1. to compare the NLR between those with normoglycemia and prediabetes and 2. to compare NLR among those on treatment for T2DM stratified by glycaemic control. **RESULTS:** Demographic characteristics including mean age and sex ratio among individuals with and without prediabetes were similar. The Mean (SD) NLR was higher in those with prediabetes compared to those with normoglycemia 1.7(1.0) versus 1.4(0.3); p=0.002. Of the 373 individuals on treatment for T2DM, 121(32.4%) had good glycaemic control. There were no differences in demographic characteristics of those with and without good glycaemic control. The mean (SD) NLR between those with and without good glycaemic control, respectively was not different; 1.6(0.1) versus 1.7(0.1); p=0.46. **CONCLUSION:** In individuals without any clinical features of inflammation, a higher neutrophil-lymphocyte ratio was associated with prediabetes. However, there was no association between neutrophil-lymphocyte ratio and glycaemic control among those on treatment for T2DM.

Table. General Characteristics of the Study Participants.

Characteristic (n=247)	
Age In Years, Mean (SD)	30.6 (15.8)
Male (%)	111 (44.9)
Female(%)	136 (55.1)
Urban (%)	183 (73.9)
Semi-urban (%)	42 (17.1)
Rural (%)	22 (9.0)
Necessity of visiting a hospital on a scale from 1 to 5 n(%)	N = 93
1	11 (11.8%)
2	11 (11.8%)
3	36 (38.7%)
4	22 (23.7%)
5	13 (14.0%)

Key words: Neutrophil-lymphocyte Ratio; Prediabetes; Type 2 diabetes mellitus, Glycaemic control.

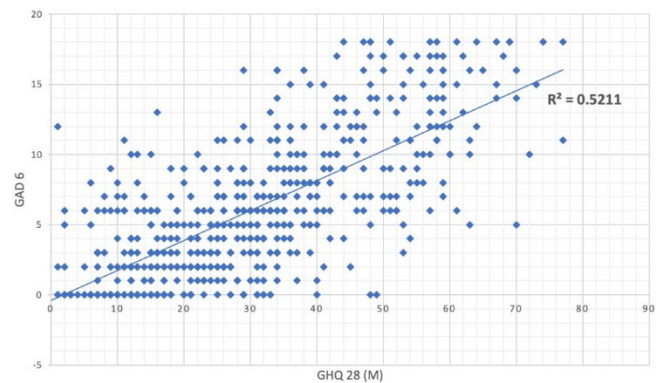
64. **A STUDENTS' PERSPECTIVE ON UNIVERSITY EDUCATION AND WELL-BEING ONE-YEAR INTO THE COVID-19 PANDEMIC**

Akira Gareeb¹, Isabella Gavazzi², Natasha Woodman³, Chulananda Goonasekera³, Antoinette Lombard⁴, Mohammad Omar Faruq⁵, Joanna Ray⁶, Rasika Dhanapala⁷, Sadhani Sandarenu⁸, Mosarrat Mahjabeen⁹, Seema Hashmi¹⁰, Darshana Kottahachchi¹¹, Elmien Claassens¹², Mirza Naqi Zafar¹³.

- ¹ B Sc Student, GKT School of Medical Education, Kings College, London, UK.
- ² Senior Lecturer, Institute of Psychiatry, Psychology and Neuroscience, Kings College, London, UK.
- ³ Consultant Anesthetist, Department of Anesthetics, Kings College Hospital, London. SE5 9RS UK
- ⁴ Professor, Department of Social Work and Criminology, University of Pretoria, South Africa.
- ⁵ Professor, United Hospital Ltd, Dhaka, Bangladesh.
- ⁶ Psychotherapist, UKCP and HCPC. Registered member MBACP, Dulwich College, London, UK.
- ⁷ Computer Analyst, Berkshire Health Care NHS Foundation Trust, Reading, England RG12 1BQ, UK.
- ⁸ Senior Lecturer, Faculty of Allied Health Sciences, Kotelawala Defense University, Colombo, Sri Lanka.
- ⁹ Medical Student, Shaheed Suhrawardy Medical College, University of Dhaka, Dhaka, Bangladesh.
- ¹⁰ Consultant Pediatric Nephrologist, Singh Institute of Urology and Transplantation, Karachi, Pakistan.
- ¹¹ Dean, Faculty of Allied Health Sciences, Kotelawala Defense University, Colombo, Sri Lanka
- ¹² Social Worker, Department of Social Work and Criminology, University of Pretoria, South Africa
- ¹³ Research Lead, Singh Institute of Urology and Transplantation, Karachi, Pakistan.

INTRODUCTION: We report university student perspectives on COVID-19 impact on education, general health and well-being, one year into the pandemic. **METHODS:** A 'low risk' questionnaire with modified General Health (GHQ-28) and Anxiety Disorder (GAD-7) instruments was shared with students via an email link over a 4-week period. **RESULTS:** 725 students responded from five countries. Half of the students reported significant general health difficulties and more than ten per cent experienced a severe state of generalised anxiety disorder. The virtual learning techniques adopted during the pandemic were welcomed by students but many were frustrated by the poor quality teaching material, poor scheduling of virtual sessions with inadequate spacing and assessments not being truly representative of what was taught. Digital poverty due to inadequacies in hardware, software compatibility and connectivity were major hindrances to virtual learning. **CONCLUSION:** Universities should urgently modify the virtual training methods and enhance mental health and wellbeing support before disaster strikes.

Figure. The Correlation between GHQ-28(M) and GAD-6 Scores.



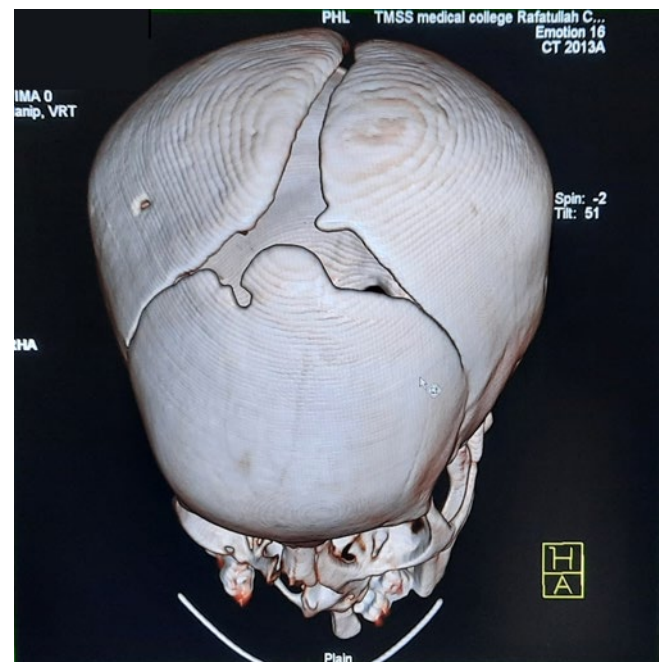
Key words: COVID-19 pandemic; General Health Questionnaire GHQ 28; General Anxiety Disorder Questionnaire GAD7; Virtual learning; University student well-being

65. **PYCNODYSTOSIS- A RARE DIAGNOSIS NOT TO MISS**
Montasir Ahmed A¹, Swapna R Mondal², Mustaque Ahmed A.³, Bipin K Shah⁴, Prakash Oli⁵, P. Kuwar Chhetri⁶.
¹ MBBS, Diploma in Family Medicine, Physician in Department of Medicine for last 12 years, TMSS Medical College, Bangladesh.
² MBBS, MD, Associate Professor of Radiology and Imaging for last 10 years, TMSS Medical College, Bangladesh.
³ MBBS, Diploma in Orthopaedic Surgery, Consultant of Ortho Surgery for last 13 years, Sofia Ismail memorial Medical Centre, Bangladesh.
⁴ MBBS, Fresh Graduate, just completed internship in TMSS Medical College, Bangladesh.
⁵ MBBS, Fresh graduate, doing internship training in TMSS Medical College, Bangladesh.
⁶ MBBS, Fresh graduate, USMLE Step 2 examinee, TMSS Medical College, Bangladesh.

INTRODUCTION: Pycnodysostosis derived from the Greek words pycnos-density, dys-defect, ostosis-bone is a rare inherited disorder of the bone with an incidence of 1.7 per million births 1. It is one of the lysosomal storage disorders with a deficiency of enzyme cathepsin K. Along with a history of repeated fractures of the bones, patients with Pycnodysostosis have a short stature, dolichocephalic skull, obtuse mandibular angle, short terminal phalanx. They also have dental abnormalities such as the delayed eruption of permanent teeth, and double rows of teeth. Mild psychomotor problems were noted in a few individuals 1, 2. Pycnodysostosis is diagnosed by clinical and radiological features as there is no diagnostic criterion. Skulls show open fontanels, generalized osteosclerosis, loss of the normal angle of the jaw, and hypoplasia of facial bones 3. Social and occupational support needed to prevent recurrent fractures. Orthopaedic and orthodontic cares are needed 4-7. **CASE:** A non-diabetic normotensive male of 63 years presented to the medicine outpatients department (OPD) with complaints of burning type, non-radiating moderate intensity pain in the epigastric region for three months following taking of NSAIDs. He gave a history of fractures of different bones following minimal trauma since his childhood and used to take NSAIDs every now and then. He did take orthopaedic consultation for those fractures but the underlying pathophysiology was not explored. Malunion of long bones resulted in a deformed limb. The rest of his past medical history and family history was unremarkable. On clinical examination, we found the patient had short stature with proportionately short limbs. He had dysmorphic features with a large head, small facial structures, frontal and bilateral parietal bossing. Examination of the oral cavity revealed a narrow high arched palate and hypoplastic, overcrowded teeth. His digits were short and stubby. The lower limbs of the patient have angular deformities that resulted from malunion of bones from previous fracture. Haematological and biochemical investigations were normal. Chest X-ray showed multiple ribs fracture on the right side. The patient's clavicle was normal in X-ray. Both tibia and fibula showed a malunited fracture in diaphysis. Computed tomography (CT) of the skull, as well as 3D reconstruction of CT, found open fontanelles and widening of sutures (Figure 1). Frontal and parietal bossing was noted. There was hypoplasia of the air sinuses. CT scans showed dysplasia of the bones of the face and hands. Hypoplasia was noted in the terminal phalanx of fingers. An endoscopy of the upper gastrointestinal tract found multiple erosion around the antrum of the stomach. Considering the clinical and radiological feature diagnosis of Pycnodysostosis with NSAIDs-induced antral erosion was made. Patient and his caregivers were briefed about the diagnosis. Consultation from a multidisciplinary team was done concerning his treatment. **CONCLUSION:** It is important to diagnose

Pycnodysostosis early as it allows proper planning to prevent future fractures. While assessing a patient with short stature with a history of repeated bone fracture Pycnodysostosis should be considered along with other differentials.

Figure. 3D Reconstruction of Skull (Anterior Fontanelle and Sutures are open and wide).



Key words: Pycnodysostosis; Fracture; Autosomal Recessive.

66. **A CASE OF HAEMORRHAGIC HERPES ZOSTER.**

P. Kuwar Chhetri¹, Ahmed Al Montasir², Renu Gupta³, Shamsul Alam⁴, Shafwanur Rahman⁵, Fahim Rahman⁶.

¹ MBBS, Fresh graduate, USMLE Step 2 examinee, TMSS Medical College, Bangladesh.

² MBBS, Diploma in Family Medicine, Physician in Department of Medicine for last 12 years, TMSS Medical College, Bangladesh.

³ MBBS, Diploma in Dermatology and Venerology, Assistant Professor of Dermatology for the last 5 years, TMSS Medical College, Bangladesh.

⁴ MBBS, Medical Officer at the Emergency Department, Health Complex, Puthia, Rajshahi, Bangladesh.

⁵ MBBS, Certificate Course on Dermatology, Assistant Registrar for the last two years in the Department of Dermatology, TMSS Medical College, Bogura, Bangladesh.

⁶ Third year medical student, TMSS Medical College, Bangladesh.

INTRODUCTION: Varicella-zoster virus (HHV3) is one of the virus in herpes family. Herpes zoster results from the reactivation of varicella-zoster virus in the dorsal root ganglion. This reactivation occurs in immunocompromised conditions such as people with cancer, organ transplant recipients or those receiving chemotherapy, and people with HIV. Old age is also an important risk for the development of herpes zoster. Immunocompromised patients are at increased risk of VZV reactivation because of reduced T cell-mediated immunity. Emotional stress has also been mentioned as an associated factor in people with herpes zoster. The Classic clinical presentation consists of clear vesicular eruptions in dermatomal distribution which are painful. An immunocompromised individual may have frequent attacks of herpes zoster, cutaneous dissemination, organ involvement, and hemorrhagic herpes zoster. Haemorrhagic herpes zoster is an atypical form of herpes zoster develops in patients who are immunosuppressed and people of advanced age who are taking antiplatelets, and anticoagulants, and also in patients with thrombocytopenia due to any cause. The most common Association of herpes zoster is observed with lymphocytic leukemia and less frequently with myeloid leukemia. Management includes antiviral therapy along with management of haemorrhagic conditions. **CASE:** A nondiabetic male of 60 years attended the medicine outpatients department with complaints of epistaxis for two days. No history of bleeding from other sites was evident. There was no history of trauma or taking of anticoagulants or antiplatelets. No history of fever. The patient was anaemic and an erythematous rash was evident along the right T6 dermatome. He was admitted to the general medicine ward. On the second day of his admission, our patient developed painful haemorrhagic bullous lesions over the right T6 dermatome resembling a bunch of grapes and erythematous popular lesions all over his body (Figure 1). The bullous lesions became larger in size in the subsequent two days of admission. On query, he mentioned that he had suffered from Varicella Zoster in his early childhood. Patients haemoglobin was 10.70 gm/dl, total count of white blood cell (WBC) was 13.20 K/ mm³ (normal value 4.00 – 11.00 K/ mm³), neutrophil and lymphocyte counts were 2.38 K/ mm³ (normal value 2.16 – 6.04 K/ mm³) and 10.38 K/ mm³ (normal value 0.6 – 3.06 K/ mm³) respectively. His platelet count was 5.00 K/ mm³ (normal value 150.00 – 400.00 K/ mm³). The patient denied skin biopsy. A diagnosis of haemorrhagic herpes zoster was made after a dermatology consultation and oral valacyclovir was started along with oral and topical antibiotics and regular dressings. After six units of platelet transfusion patients, the platelet count was raised to 30 K/ mm³. Peripheral blood film was suggestive of acute leukaemia. A bone marrow examination was suggestive of acute myeloid leukaemia. The patient was transferred to the haemato-oncology ward for further

planning and management. **CONCLUSION:** Haemorrhagic herpes zoster may occur in different clinical conditions and one of them although rare, is acute myeloid leukaemia. Clinical scenario along with bone marrow and blood picture helps to reach a diagnosis in such cases.

Figure. Haemorrhagic Vesicular and Bullous Lesions.



Key words: Herpes Zoster; Leukaemia; Haemorrhagic.

67. **EVALUATION OF WATER QUALITY, URINARY MERCURY & ARSENIC INVESTIGATION AND SURVEY OF DISEASES ASSOCIATED WITH DRINKING WATER SOURCES.**

Sayan Sarkar¹, Govind Mawari², Naresh Kumar³, Mradul Kumar Daga⁴, Mongjam Meghachandra Singh⁵.

¹ Third-year Medical Student, Maulana Azad Medical College, New Delhi, India.

² MSc. Center for Occupational and Environmental Health, Maulana Azad Medical College, New Delhi, India.

³ MD. Center for Occupational and Environmental Health, Maulana Azad Medical College, New Delhi, India.

⁴ MD. Department of Internal Medicine and Infectious Diseases, Institute of Liver and Biliary Sciences, New Delhi, India.

⁵ MD. Department of Community Medicine, Maulana Azad Medical College, New Delhi, India.

INTRODUCTION: Contamination of freshwater sources can be caused by both anthropogenic and natural processes. WHO reported that 1.1 billion people worldwide consume contaminated water, and the majority of diarrheal diseases (88%) are caused by it. According to Central Pollution Control Board (CPCB), Maharashtra along with two other states contribute 80% of hazardous waste, including heavy metal pollution in India. Certain dissolved heavy metals are easily absorbed by aquatic organisms and can enter the body through drinking water, skin absorption, and biological chains, posing a health risk. Hence, the main objectives of the study were, (1) surface and groundwater quality assessment, (2) to determine the association of diseases/symptoms with different sources of drinking water used, and (3) urinary Mercury (Hg) and Arsenic (As) levels investigation in the study population. **METHODS:** The cross-sectional study was conducted in the industrialized city of Solapur, Maharashtra, India. The study area was limited to 25 km around the industrial hub. A total of 557 people were randomly selected for the survey, with consumers from all four types of water sources i.e., surface, handpump, wells, and municipal water. Spot urine samples were collected for estimating Hg and As levels after considering inclusion and exclusion criteria. People under treatment for tuberculosis, cancer, and chronic heart, lung, or kidney ailments were excluded. Also, pregnant and lactating women were not included. One surface water, one municipal water, and five handpump water samples were collected for evaluating water quality. Samples were analyzed for pH, Total Dissolved Solids (TDS), Dissolved Oxygen (DO), Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Fluoride, Ammonia, Mercury, Arsenic, Cadmium, Lead, Nickel, Copper, Zinc, Chromium, and Manganese. **RESULTS:** The water samples were observed to be neutral to slightly basic. TDS was between 410 to 1898 mg/L for groundwater whereas for surface water was 378 & 450 mg/L. F concentration ranged between 0.4 to 0.9 mg/L, Zn from 0.32 to 0.57 mg/L, and NH₃ was found to be <0.1 mg/L. Out of 557 people, 43 (7.7%) used surface water, 194 (34.8%) used handpump, 64 (11.5%) used well, and 256 (46%) used municipal water. Among surface water users, 14 (32.5%) people reported frequent loose stools (p-value <0.05), and 11 (25.5%) people reported frequent abdominal pain. Handpump and well water users majorly reported frequent abdominal pain and gastric discomfort (p-value <0.05) respectively. 47 people were selected for estimating urinary Hg and As levels after considering exclusion and inclusion criteria. The mean value of urinary Hg & As are 4.91 ± 0.280 & 42.04 ± 2.635 µg/L respectively. **CONCLUSION:** In our study frequent loose stools, abdominal pain, and gastric discomfort were associated with the various sources of drinking water. Urine Hg levels were above the permissible reference value set by NHANES (USA) Survey. Additionally, it is advised that frequent drinking water monitoring be

implemented in the vicinity of the industrial hub since metal accumulation may be dangerous to consumers when it is present in excess, and if found higher, necessary action should be taken to reduce exposure.

Table. Water Quality Parameters.

Parameters	Groundwater		Municipal water		Surface water	
	Winter	Summer	Winter	Summer	Winter	Summer
pH	7.15 ± 0.08	7.35 ± 0.09	8.01	7.8	8.23	8.0
TDS (mg/L)	1366 ± 516	1137 ± 564	821	864	378	450
DO (mg/L)	3.8 ± 0.63	2.5 ± 0.9	4.5	3.7	6	4.4
COD (mg/L)	42.4 ± 39.6	30 ± 33	20	12	16	14
BOD (mg/L)	10.5 ± 7.9	4 ± 4	4	2.0	4	2.0
NH ₃ (mg/L)	0.1	<0.1	0.1	<0.1	Nil	Nil
F (mg/L)	0.78 ± 0.15	0.86 ± 0.05	0.8	0.8	0.4	0.9
Hg (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
As (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cd (mg/L)	<0.003	<0.003	<0.003	<0.003	<0.01	<0.01
Pb (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05
Ni (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cu (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Zn (mg/L)	<0.01	0.46 ± 0.09	<0.01	0.32	<0.01	<0.01
Mn (mg/L)	<0.01	<0.1	<0.01	<0.1	<0.01	<0.01
Cr (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Key words: Water quality; Public Health; Drinking Water; Heavy Metals; Cross-sectional Survey (Source: MeSH-NLM).

68. **KNOWLEDGE, ATTITUDES AND PRACTICES REGARDING DIABETIC NEUROPATHY AMONG TYPE-II DIABETICS IN JABRA LOCALITY, KHARTOUM, SUDAN, IN 2022.**

Saeed Eltahir Saeed Elsiraj¹.

¹ Six-year Medical Student. University of Khartoum, Khartoum, Sudan

INTRODUCTION: Diabetic peripheral neuropathy is a characteristic neurodegenerative disorder of the peripheral nervous system that targets sensory & autonomic axons and later, to a lesser extent, motor axons. Among the complications of diabetes, diabetic peripheral neuropathy is by far the most prevalent. This study aimed to assess the level of knowledge, attitude and practices regarding diabetic neuropathy among Type-II diabetics attending Zenam Specialist Hospital in 2022. **METHODS:** This study was conducted as a cross-sectional study in Zenam Specialist Hospital. A previously published validated questionnaire about knowledge, attitudes, and practices (KAP) toward diabetic neuropathy was used in this study with very minor modification to be suitable for Sudanese population. Convenient random sampling was used to collect data. **RESULTS:** Out of 162 participant, 82 (50.6%) were males and 80 (49.4%) of them were females. The age of respondents ranged from 18 to 80 years with mean age of 50.89 ± 12.74 SD. The study indicated that patients with older age had better knowledge (P ≤ 0.017) with Pearson’s correlation coefficient (r) of 0.187. No significant gender difference was noted regarding knowledge score. Patients educated above secondary level (P ≤ 0.046) and employed in the government and private sector (P = 0.024) had better knowledge compared to their respective groups. Married participants (P = 0.016) had better knowledge scores compared to others. The maximum knowledge score was 39 / 41. The mean score was 26.71 (95% CI 25.54 – 27.88) and standard deviation (SD) was ± 7.52, with a range of 8 to 39. Maximum attitude score was 8.0. The median score was 7.0 and standard deviation (SD) was ± 0.83. The maximum practice score was 15/15 The mean score was 10.79 (95% CI for mean 10.32 to 11.26) and standard deviation (SD) was ± 3. **CONCLUSION:** The study indicated good knowledge about diabetic neuropathy among diabetic patients, moreover, the attitude of participants were also positive. Yet, these two did not necessarily solely affect their practices. This could be attributed to other factors that need further studies.

Table. Mean knowledge score across demographic characteristics.

Characteristics		Knowledge Score Mean
Education	Illiterate	31.50
	Primary	21.95
	Secondary	28.29
	University & Above	26.62
Marital Status	Single	21.22
	Married	27.40
	Divorced	28.50
	Widower	27.25
Job	Worker	20.63
	Employed	28.35
	Unemployed	25.71
	Retired	26.54

Key words: Diabetes; Diabetic neuropathy; Knowledge; Attitude; Practice.

69. **MYASTHENIA GRAVIS EXACERBATION FOLLOWING COVID-19 VACCINE: A CASE REPORT.**

Thoybah Yousif Ibrahim Gabralla¹, Hayat Abdoallah Ahmed Bashir², Omaima Abdalla Hajahmed Mohamed³.

¹ House officer. Khartoum Hospital, Khartoum, Sudan.

² Fifth-year Medical Student. University of Khartoum, Khartoum, Sudan.

³ Medical officer. Al-Ribat Teaching Hospital, Khartoum, Sudan.

INTRODUCTION: As of December 2021, the World Health Organization (WHO) reports that Coronavirus disease 2019 (COVID-19) led to about 5,403,662 deaths. While COVID-19 has resulted in millions of deaths worldwide to date, vaccination remains the mainstay of infection control. AZD1222 (AstraZeneca vaccine) was distributed in Sudan by the COVID-19 Vaccines Global Access facility in March 2021. It was added to the emergency use list by WHO in the middle of February 2021. However, vaccine safety among patients with autoimmune diseases, such as myasthenia gravis (MG), is yet to be established. MG is a relatively rare illness that could result in life-threatening complications. Myasthenic crisis is considered the most serious complication of MG that can lead to death due to aspiration and respiratory failure. Plasma exchange (PLEX), Immunoabsorption (IA), and intravenous Immunoglobulin (IVIG) are the first-line treatment for myasthenic crisis. It is proven that cortisone has a positive effect when used as add-on therapy with PLEX/IA and IVIG.

THE CASE: We report the case of a 37-year-old Sudanese female who presented to the emergency room with an exacerbation of her previously well-controlled MG following her second dose of AZD1222 vaccination. The exacerbation symptoms at time of presentation were severe generalized body weakness that increasing overtime and shortness of breath. Computerized tomography of the chest was performed, and it revealed no evidence of COVID-19. Management at the ER started with rehydration and IV methylprednisolone 1g, followed by IV hydrocortisone 200mg. She continued to deteriorate and was admitted to the intensive care unit where she was intubated and placed on a mechanical ventilator. IVIG was requested but couldn't be obtained due to the low-income setting, and fourteen days after admission patient died due to circulatory collapse. Our study aims to present an MG case with features of MG exacerbation following the administration of the second dose of AZD1222.

CONCLUSION: Little is known about the effect of different COVID-19 vaccines on subgroups of patients with autoimmune diseases like MG. Although the safety profile of AZD1222 is generally reassuring, people with severe underlying diseases were excluded from trials. Therefore, more efforts and experimental studies may be needed, with closer vigilance in MG patients. It has not been elucidated how the COVID-19 vaccine might provoke autoimmunity, but several theories have been proposed. Molecular mimicry theory can explain how the genetic material of a virus could provoke autoimmunity, it describes the cross-reactivity of antibodies produced against proteins that are encoded by viral genetic material with the proteins located at the post-synaptic membrane. There is a debate about whether vaccine benefit outweighs the risk in MG patients or not. However, we believed that MG patients should be informed about the benefit and risks of COVID-19 vaccination.

Key words: Myasthenia Gravis; COVID-19; Vaccine; AstraZeneca Vaccine; Case report. (Source: MeSH-NLM).

70. **THE EFFECT OF ORAL MAGNESIUM SUPPLEMENT ON PRE-ECLAMPSIA AND PERINATAL OUTCOMES IN PREGNANCY: A META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS.**

Abdulrhman Khaity¹, Khaled Albakri², Yasmineen Alabdallat², Othman Saleh², Hazem. S Ghaith³.

¹ MBBS, Faculty of Medicine, Elrazi University, Khartoum, Sudan.

² Fourth Year, Faculty of medicine, The Hashemite University, Zarqa, Jordan.

³ Fifth Year, Faculty of Medicine, Al-Azhar University, Cairo, Egypt.

INTRODUCTION: Magnesium is one of the most important nutritional factors that have a beneficial effect on pregnant women. Many studies evaluated the role of oral magnesium supplements as a non-pharmacological intervention for mother and neonatal protection in terms of these outcomes. There is a conflict between several clinical trials about the efficacy of oral magnesium supplements during pregnancy. Therefore, in this review, we represent class 1 evidence and address an unmet clinical need on the efficacy of different types of oral magnesium in pre-eclampsia, and prenatal outcomes in pregnant women. **METHODS:** During the preparation of this meta-analysis, we followed the PRISMA statement guidelines. A literature search of the Web of Sciences, Cochrane Central Register of Controlled Trials, and PubMed were conducted from inception until September 2022. We included randomized controlled trials (RCTs) comparing oral magnesium whether citrate, oxide, or aspartate hydrochloride with a placebo. The records of quality studies were screened and extracted. Additionally, the pre-eclampsia, preterm birth, and neonatal intensive care unit (NICU) admissions data were pooled as odds ratio (OR) in a fixed-effect model using Review Manager (v.3). Subgroup analysis was performed to investigate the efficacy of each type of oral magnesium on the outcomes. **RESULTS:** Five RCTs were included in this meta-analysis with a total of 2370 patients. The overall effect did not favor either of the two groups in terms of pre-eclampsia (OR= 0.99, 95% CI, [0.72, 1.37], p = 0.9), preterm birth (OR= 0.87, 95% CI, [0.62, 1.22], p = 0.4), and NICU admissions (OR= 1.37, 95% CI, [0.84, 2.22], p = 0.2). Based on the subgroup analysis findings, the use of oral magnesium supplements whether citrate, oxide, or aspartate hydrochloride in this population did not significantly increase or decrease the incidence of pre-eclampsia, preterm birth, and NICU admissions when compared with the control group. **CONCLUSION:** Ultimately, oral magnesium supplementation whether citrate, oxide, or aspartate hydrochloride may not have a beneficial effect on maternal and fetal outcomes during pregnancy. Therefore, the current evidence is insufficient to confirm the efficacy of oral magnesium for care practice among pregnant women. Despite that, these results need to be affirmed by major RCTs using magnesium supplements which have related to neonatal and maternal outcomes.

Key words: Magnesium; Meta-analysis; Pregnancy; Pre-eclampsia.

71. **THE EFFECT OF THE CORONAVIRUS DISEASE 2019 PANDEMIC ON UNIVERSITY STUDENTS' MENTAL HEALTH AND LIFE QUALITY: A RETROSPECTIVE COHORT STUDY.**

Khaled Albakri¹, Yasmeen Alabdallat¹, Abdulrhman Khaity²,
Jehad Feras Samhour³.

¹ Fourth Year, Faculty of medicine, The Hashemite University, Zarqa, Jordan.

² MBBS, Faculty of Medicine, Elrazi University, Khartoum, Sudan.

³ Fifth Year, Faculty of Medicine, University of Jordan, Amman, Jordan.

INTRODUCTION: Mental health disorders and low quality of life are considered common psychiatric problems resulting from the COVID-19 pandemic. Despite the significant importance of the knowledge and research about COVID-19 mental consequences, few studies are addressing it locally in Jordan. Therefore, the present study aims to investigate the effect of the coronavirus disease 2019 (COVID-19) pandemic on university students' mental health and life quality.

METHODS: A retrospective cohort study was undertaken for students in Jordanian universities using an online questionnaire. Our survey consisted of the Generalized Anxiety Disorder 2-item (GAD-2), The Patient Health Questionnaire 2-item (PHQ-2), UCLA Loneliness Scale, and the COVID-19–Impact on Quality of Life (COV19-QoL) scale to examine students' quality of life, loneliness, besides examining the difference between depression and anxiety, independently, before and during COVID-19 pandemic among Jordanian universities students. We analyzed the data using SPSS Software version 26.

RESULTS: The study included 537 participants, 371 (69.1%) of them were female, with a mean age of participants equal to 19.1 ± 0.84 , with a range of 17 to 22 years. Most of the participants were second-year students 393 (54.6%) and more than half of the participants never weekly exercised. the prevalence of depression, anxiety, and loneliness after the COVID-19 pandemic were 305 (56.8%), 311 (57.9%), and 371 (69.1%); respectively. Chi-square analysis revealed that females with loneliness, depression, and anxiety were statistically predominant ($p=0.014$, $p=0.023$, $p=0.000$; respectively). In contrast, there was no significant difference among basic academic years students in terms of these mental outcomes. The impact of the COVID-19 pandemic on depression scores of singles was significantly higher than those who were in relationships ($p= 0.008$). The less depressed students were those who sleep at the night and those who have hobbies ($p=0.02$, $p=0.007$; respectively).

CONCLUSION: Our study results highlighted and supported a significant change in the participants' scores regarding their mental status before and after the outbreak. Furthermore, several factors preserve the mental health of students against the consequences of the COVID-19 crisis, such as gender, having hobbies, being in a relationship, bedtime, and sleep hours. Additionally, the study found that loneliness, anxiety, and depression can predict life quality. Eventually, the government should provide more attention to the student's psychological issues. Future research should investigate which group of students have more susceptibility to being mentally affected by similar outbreaks to develop specific and efficient actions that are targeted to these certain groups, thus improving the chance of the psychological benefits.

Key words: Cohort; COVID-19; Depression; Mental Health.

72. **THE EFFECT OF MUSIC INTERVENTION ON ANXIETY AND PAIN DURING CESAREAN DELIVERY: A META-ANALYSIS OF 1513 PATIENTS.**

Abdulrhman Khaity¹, Mohammed Tarek², Yasmeen Alabdallat³, Khaled Albakri³, Mohamed Diaa Gabra⁴, Hazem. S Ghaith².

¹ MBBS, Faculty of Medicine, Elrazi University, Khartoum, Sudan

² Fifth Year, Faculty of Medicine, Al-Azhar University, Cairo, Egypt

³ Fourth Year, Faculty of medicine, The Hashemite University, Zarqa, Jordan.

⁴ Fifth Year, Faculty of Medicine. South Valley University, Qena, Egypt

INTRODUCTION: A cesarean section (CS) is one of the most common operations globally, with an estimated 18.5 million surgical procedures each year. Accordingly, music therapy has become a trendy possible solution in many clinical conditions and surgical procedures. However, most previous studies have shown conflicting findings regarding the efficacy of music in reducing pain and anxiety in women with cesarean delivery. Therefore, in this meta-analysis, we aimed to investigate whether music intervention has a beneficial effect on preoperative, intraoperative, and postoperative anxiety, pain, and vital signs in women with cesarean section. **METHODS:** We conducted a comprehensive search of Scopus, Web of Science, PubMed, and Cochrane Central was conducted for relevant randomized controlled trials (RCTs) from inception until August 2022. Data were extracted from eligible studies and pooled as standardized mean difference (SMD) or mean difference (MD) values in a random-effect model meta-analysis, using RevMan software. All the steps of this study were performed according to the PRISMA statement guidelines. **RESULTS:** Thirteen RCTs were included in this meta-analysis with a total of 1513 patients. Our study showed that music was superior to control in terms of overall anxiety score (SMD = -0.26, 95% CI [-0.39, -0.14], $p < 0.0001$), postoperative pain (SMD = -0.50, 95% CI [-0.74, -0.26], $p < 0.0001$), and the overall effect of diastolic blood pressure (DBP) (MD = -1.58, 95% CI [-3.11, -0.04], $p = 0.04$). The overall effect did not favor either of the two groups in terms of systolic blood pressure (SBP) and heart rate ((MD = -1.87, 95% CI [-4.04, 0.30], $p = 0.09$), (MD = -2.10, 95% CI [-4.78, 0.58], $p = 0.12$); respectively). **CONCLUSION:** Ultimately, the current evidence supports using music to alleviate the anxiety and pain of women during and after cesarean sections. In addition, our analysis revealed that music has a beneficial effect on DBP and intraoperative heart rate over control in patients with CS. However, the music did not differ significantly from the placebo in preoperative anxiety, postoperative heart rate, as well as SBP. Future RCTs are recommended to confirm the efficacy of music in the preoperative period and vital signs among women undergoing cesarean section.

Key words: Anxiety; Caesarean section; Meta-analysis; Music; Pain.

73. **KNOWLEDGE AND AWARENESS ABOUT AGGRAVATING FACTORS OF THE PEPTIC ULCER DISEASE: A CROSS-SECTIONAL STUDY.**

Abdulrhman Khaity¹, Khaled Albakri², Ruaa E. Taha³, Ahmed Mohammed Ali Yousif Abd Alla⁴.

¹ MBBS, Faculty of Medicine, Elrazi University, Khartoum, Sudan.

² Fourth Year, Faculty of medicine, The Hashemite University, Zarqa, Jordan.

³ Sixth Year, Faculty of medicine, Khartoum University, Khartoum, Sudan.

⁴ MBBS, Faculty of Medicine, Khartoum University, Khartoum, Sudan.

INTRODUCTION: Peptic ulcer disease is a gastrointestinal disorder due to the imbalance between the defense mechanism and gastric acid secretion. It affects 5-10% of the population worldwide and induces eight million deaths every year globally. In Sudan, this disease represents one of the major health problems. Limited studies have shown the knowledge level of Sudanese about aggravating factors of Peptic ulcer disease, which lead to more prevalent complications. Therefore, this study aimed to assess awareness about aggravating factors of peptic ulcer disease among the population of Khartoum state, Sudan. **METHODS:** A descriptive cross-sectional study targeted the general population in Khartoum state during the period from January to June 2022. We used an online survey form to collect data from the study population. The distribution of the questionnaire was done via social media tools. We analyzed the data using SPSS Software version 26. **RESULTS:** The study included 398 participants, 40.7% of them male and 59.3% female, with mean age equal to 24.9 (SD=8.9), and a range between (18-64). Most of the participants (77.1%) were unmarried and (89.2%) were educated. The type of food was the most known risk factor (79.1%) and the weather changes were the least known risk factor (8.5%) that have effects on peptic ulcers. There also was a significant difference between educated and non-educated people based on the awareness of peptic ulcer risk factors, as the second was higher ($p>0.000$). Furthermore, people with peptic ulcers and people who have one or more members of their family with peptic ulcers scored more than nonpatients and those who did not have ($p>0.000$, $p= 0.04$; respectively). **CONCLUSION:** In conclusion, awareness about aggravating factors of peptic ulcers was variable among the population in Khartoum state. Our study findings revealed a high knowledge effect of type of food, helicobacter pylori, analgesic medications, drinking coffee, smoking, and social stress of the majority population. As for other factors, weather changes, genetic factors, and body weight were associated with a poor level of awareness. Lastly, these results need to be affirmed by furthermore research with a large sample among the general population in different regions in Sudan.

Key words: Awareness; Aggravating factors; Knowledge; Peptic ulcer disease.

74. **RARE MANIFESTATION OF DIABETES MELLITUS IN COVID-19 PATIENT: A CASE REPORT.**

Kahan Mehta¹, Samir Mehta².

¹ Third-year Medical Student, GMERS Medical College, Vadodra, India.

² MBBS, BJ Medical College, Ahmedabad, India.

INTRODUCTION: Diabetes is an endocrinopathy and rare in the case of SARS-CoV-2, the virus primarily involves the lungs by its affinity to Angiotensin Converting enzyme(ACE-2) receptors, associated symptoms include Nausea, Vomiting, and Breathlessness. **CASE PRESENTATION:** We present the case of a 41-year-old male with pneumonia-like symptoms and a positive nasal swab RT-PCR test with Imaging studies highly suggestive of CO RADS-5 Progressive stage, the patient was immediately admitted to the Intensive care unit (ICU), and the treatment was started with Medical Oxygen, Intravenous Normal Saline Tablet Doxycycline, and Tablet Ivermectin as per the guidelines, he was admitted for 21 days. After 3 weeks the patient comes for a routine checkup and was found to have an elevated Fasting glucose level of 121 mg/dl (normal reference range 80-100mg/dl) further workup for diabetes revealed that he was a non-diabetic on the previous visit 2 months ago, he also had an increase in weight during this time. With the Body Mass Index(BMI) now being 30.2 from the previous 28.4 (Reference range >30 is obese), the pro-inflammatory cytokines like C-reactive protein were 111.6 (normal 0-6), and elevation in D-Dimer which is a fibrin degradation product was elevated to 1048ng/dl (normal range 0-500 ng/dl) other measures for the increase in blood sugar also showed elevation as seen in table 1. **DISCUSSION:** There have been many hypotheses to find a causal relationship between both Diabetes and COVID-19 like the use of Dexamethasone or that the virus produces proinflammatory cytokines like Interleukin-6(IL-6) that lead to impaired signaling and decreased lipolysis or that there is a direct action on the ACE 2 found in the pancreas by the virus and maybe the least looked upon factor being lockdown leading to sedentary life, no exercises and increase in consumption of fatty foods, whichever may be the case it could very well be a multifactorial cause with many of these ideas involved. **CONCLUSION:** In this case, the association may be with decreased physical activity and an increase in Lipolysis or the proinflammatory states as seen by the increase in the C-reactive protein and Interleukin-6 levels.

Table. Laboratory Values Before and After COVID-19.

Parameter	Values before COVID	Values after COVID	Reference range
Total WBC	4900	11,400	4000-10000/cu.mm
Platelet count	200000	450000	140000-440000/cu.m m
C-reactive protein	1.55	111.6	0-6
D-Dimer	0.4	1048	0-500 ng/dl
Interleukin (IL-6)	-	97.42	<10
Serum Cholesterol	127	220	130-200mg/dl
Alanine transaminase	-	54	6-45
Serum Creatinine	-	1.04	0.50-1.50
Random blood sugar	89	143	70-140mg/dl
HbA1C	-	7.40	4.3-6.2
Mean blood glucose	-	174.30	70-100mg/dl
Fasting Blood sugar	92	121	<100mg/dl
Post Prandial Blood sugar	120	159	<140mg/dl

Key words: Diabetes Mellitus; Endocrine Pancreas; SARS-Cov, D-Dimer; PCR; Reverse Transcriptase.

75. **ANTERIOR PITUITARY ENDOCRINE DYSFUNCTIONS IN PATIENTS WITH TRAUMATIC BRAIN INJURY IN THE NEUROSURGICAL UNITS OF THE YAOUNDE CENTRAL AND GENERAL HOSPITALS: A CROSS-SECTIONAL STUDY.**

A. Tchoussoknou¹, D.H Atia², Bello F³, M. Etoa³, V. Djientcheu⁵.

¹Seventh-year medical student. "Université des Montagnes", Bagangte, Cameroon.

²M.D. and free-lance researcher.

³M.D. Senior Lecturer. Neurosurgeon. Yaounde Central Hospital/University of Yaounde I, Yaounde, Cameroon.

⁴M.D. Senior Lecturer. Endocrinologist. Yaounde Central Hospital/University of Yaounde I, Yaounde, Cameroon.

⁵Full Professor. Neurosurgeon, Yaounde General Hospital/University of Yaounde I, Yaounde, Cameroon.

CT-scan lesions. No factors was significantly associated to the occurrence of PTED probably due to small sample size.

Key words: Traumatic brain injury; Post-traumatic endocrine dysfunction; Hypothalamo-pituitary axis.

INTRODUCTION: Post-traumatic endocrine dysfunction (PTED) is an important and relatively common complication of TBI (traumatic brain injury). It is usually undiagnosed and untreated making it a major cause of poor outcome in TBI patients as it can lead to death, delayed recovery, cognitive impairment, depression, sexual dysfunctions and infertility. **STUDY DESIGN:** Analytic cross-sectional study at the Yaounde Central and General Hospitals from January 2022 to April 2022. **OBJECTIVE:** The main aim of this study was to evaluate the endocrine dysfunctions and factors associated to their occurrence in patients presenting TBI at the neurosurgical units of the Yaounde Central and General Hospitals. **METHODS:** Patients were enrolled at the neurosurgical units Data was collected with the help of a questionnaire after obtaining their informed consent alongside with blood samples in the morning (between 8AM and 10AM) for screening of anterior hypothalamo-pituitary axis hormones (FSH, LH and TSH) and relative peripheral hormones (cortisol, T4, oestrogene in women and testosterone in men) using fluorescence immunoassay. The study population was made up of all patients diagnosed with TBI during the study period at study sites. Patients taking medications affecting the hypothalamo-pituitary axis were excluded. Variables of interest included socio-demographic variables, clinical variables and paraclinical variables. Data was inserted and analyzed using the software Statistical Package for Social Sciences (SPSS) version 26.0. Association between variables was done using Fisher's exact test. The association measure used was odd's ratio (OR) with confidence interval (CI) of 95%. **RESULTS:** A total of 33 participants were enrolled, out of which 26 responding to our inclusion criteria were retained and 7 excluded because they were on medications affecting the hypothalamo-pituitary axis. The median age of participants was 34 (26,75–41,25) years. There was a predominance of the male population with a sex ratio of 12:1. A total of 17 participants developed PTED (65.38%). The PTED encountered were FSH deficiency (12 patients at 46,1%), LH deficiency (10 patients at 38,4%), morning cortisol deficiency (5 patients at 19,2%), TSH deficiency (7 patients at 26,9%), testosterone deficiency (5 patients at 19,2%) and multiple deficiencies (12 patients at 46,1%). PTED was also found in 6 patients with severe TBI, 6 patients with moderate TBI and 5 patients with mild TBI (35.3%, 35.3% and 29.4%). In ≤ 7 days from TBI, 11 patients suffered PTED (64.7%) while after 7 days post-TBI, only 6 patients suffered PTED (35.3%). Tiredness was the most frequent symptom observed in 15 patients with PTED (88.2%). No factors associated to the occurrence of PTED were found in this study (p-values were all >0.05). **CONCLUSION:** This study suggests that PTED is a common condition amongst sufferers of TBI. PTED occurs in both genders and the most frequent types of anterior pituitary endocrine dysfunctions were hypogonadism, hypothyroidism and lastly corticotropic insufficiency. Most patients with PTED had associated

76. **KNOWLEDGE OF CANCER AMONG SYRIANS: A CROSS-SECTIONAL STUDY.**

Mohammad Badr Almoshantaf¹, Sarya Swed², Hidar Alibrahim², Haidara Bohsas³, Mohamad Nour Nasif², Wael Hafez⁴.

¹ Department of Neurosurgery, Ibn Al-Nafees Hospital, Damascus, Syria.

² Sixth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

³ Fifth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

⁴ Medical Research Division, Department of Internal Medicine, The National Research Centre, Cairo, Egypt.

INTRODUCTION: The worldwide burden of cancer continues to rise, mainly due to global demographic changes and an increase in cancer-causing habits, such as smoking, especially in low-income countries. The Syrian National Cancer Registry (SNCR) estimates that 17,599 new cancer cases were diagnosed before the start of the war in 2011. According to statistics from the Al Bairouni 2020 hospital-based registry, which includes data on more than 60% of Syrian cancer patients, the number of cancer diagnoses has been rising in Syria. There is no research conducted in Syria to determine people's knowledge about cancer and risk factors, symptoms, and signs. This research aims to determine how well-informed Syrians were on the following topics: (i) the age-related risk and prevalence of cancer; (ii) cancer signs and symptoms; and (iii) cancer risk factors. In addition, determining how well-informed different demographic categories.

METHODS: This is a cross-sectional study which was conducted in Syria. Participants who were eligible to participate in the study who were residents of Syria irrespective their age or gender. The instrument of survey was a structured questionnaire the content of which was adapted from the validated cancer awareness measure (CAM) the cam was translated to Arabic and a scoring system was applied to the questionnaire. The questionnaire was distributed via several social media platforms. **RESULTS:** A total of 1463 participants completed the questionnaire. There were 768 respondents (52.5%) said that there is no relation between age and cancer. Almost all the participants (85.6%) thought that the breast cancer is the most common cancer among women, while around half of the participants (55.1%) reported that the prostate cancer was the most common cancer among males. The most frequently reported cancer symptom was unexplained weight loss (73.2%), followed by unexplained swelling/lump (66.5%). The level of knowledge about cancer signs/symptoms among the participants were good in 623 (42.6%), fair in 594 (40.6%), and poor in 246 (16.8%). The most commonly recognized risks of cancer were smoking (83.5%). **CONCLUSION:** According to this research, taking into consideration the war and the bad economic situation that Syria is facing, Syrians' knowledge towards cancer is acceptable. However, it is not meeting the ideal expectations. More research should be held to dig deeper into this issue.

Key words: Knowledge; Cancer; Awareness; Syria.

77. **KNOWLEDGE OF COLORECTAL CANCER AMONG SYRIANS: A CROSS-SECTIONAL STUDY.**

Mohammad Badr Almoshantaf¹, Sarya Swed², Hidar Alibrahim², Haidara Bohsas³, Mohamad Nour Nasif², Wael Hafez⁴, Ahmad Aldaas⁵.

¹ Department of Neurosurgery, Ibn Al-Nafees Hospital, Damascus, Syria.

² Sixth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria

³ Fifth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria

⁴ Medical Research Division, Department of Internal Medicine, The National Research Centre, Cairo, Egypt.

⁵ Department of ENT, Damascus, Syria

frequency of advanced cases of colorectal cancer by increasing the number of screening programs for colorectal cancer in Syria.

Key words: Knowledge; Cancer; Colorectal; Syria.

INTRODUCTION: The incidence of colorectal cancer is the second highest among women and the third highest among males. Screening for the disease has resulted in a significant decrease in both the prevalence and death rate of colorectal cancer (CRC) during the last two decades. Research has indicated that people unaware of the dangers of colorectal cancer may not participate in diagnostic procedures, which delays detection and reduces the likelihood of survival. **AIM:** This cross-sectional research seeks to examine the level of knowledge of CRC risk factors in Syria and the variables correlated with a greater level of awareness. **METHODS:** An online cross-sectional study was conducted from 1 to 25 August 2022 to assess the Syrians' degree of awareness of Colorectal Cancer risk factors in Syria and the characteristics associated with a high level of understanding. The survey is based on another study, and the sample inclusion criteria of study participants were Syrian nationals aged 18 or older from all Syrian governorates. The questionnaire included 35 questions divided into 3 sections, sociodemographic variables such as (age, sex, marital status, educational level, occupation...etc.), evaluation of participant knowledge of colorectal cancer risk factors such as (alcohol consumption, Red meat consumption, lack of fiber in the diet, obesity, and old age), and symptoms such as (blood in stool, abdominal pain, constipation, change in defecation habits, general tiredness, unexplained weight loss). **RESULTS:** Among 702 Syrian national participants, (n=430, 61.3%) were females, and (n=272, 38.7%) males. Only (n=67, 9.5%) participants have a chronic disease. Most participants have shown good knowledge of colorectal cancer symptoms (n=301, 42.9%), and (n=297, 42.3%) participants have shown moderate knowledge of colorectal cancer symptoms. Only (n=123, 17.6%) participants have shown a good understanding of colorectal cancer risk factors, whereas (n=293, 41.7%) have demonstrated poor knowledge. Educational level was related to greater knowledge of colorectal cancer risk factors (P-value 0.05). No correlation was found between other variables and a good awareness of colorectal cancer symptoms and risk factors (P-value > 0.05). Ph.D. degree of educational level (OR = 15.41, 95% CI: 1.211–196.16; P-value<0.05) was associated with good awareness of colorectal cancer symptoms and Widowers' marital status (OR = 7.351, 95% CI: 1.22–44.285; P-value<0.05) was associated with good awareness of colorectal cancer risk factors. Most participants were somewhat confident in their ability to recognize colorectal cancer symptoms (43.60%), whereas just 4.60 % of people were highly confident in their ability to recognize them. Only (24.10%) The participants were not confident in identifying colorectal cancer symptoms. **CONCLUSION:** According to our findings, there is insufficient understanding of the colorectal cancer symptoms and risk factors that contribute to the disease's development in patients and its detection in its late stages. Consequently, there is a greater need to increase colorectal cancer awareness and education programs on the disease's signs and symptoms and its risk factors. It may be possible to minimize the

78. KNOWLEDGE OF CHOLERA AMONG SYRIANS: A CROSS-SECTIONAL STUDY.

Mohammad Badr Almoshantaf¹, Sarya Swed², Hidar Alibrahim², Haidara Bohsas³, Mohamad Nour Nasif², Wael Hafez⁴, Ahmad Aldaas⁵.

¹ Department of Neurosurgery, Ibn Al-Nafees Hospital, Damascus, Syria.

² Sixth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

³ Fifth Year. Faculty of Medicine. Aleppo University. Aleppo. Syria.

⁴ Medical Research Division, Department of Internal Medicine, The National Research Centre, Cairo, Egypt.

⁵ Department of ENT, Damascus, Syria.

INTRODUCTION: Cholera is a communicable acute bacterial infection caused by a gram-negative bacterium that is *Vibrio Cholera*. Worldwide, is estimated that an incidence of 1.3–4.0 millions of cholera infection, leading to 21,000–143,000 deaths annually. Prevention of cholera require a proactive approach rather than reactive, as it's identified to be the best strategy to decrease the cholera spreading risk in given population or community. Recently WHO warned that, the cholera spreading risk in Syria is very high, which linked to drinking of untreated water and food contamination.

AIM: We conducted this study with aiming to assess the level of knowledge, attitude and practice regarding risks of cholera infection, preventive measures and preparedness among community in Syria. Consequently, recommending suitable measures based on study results. **METHODS:** An online cross-sectional study was conducted in Syria to assess knowledge, attitude, and practice regarding cholera and cholera vaccine among general population in Syria. The inclusion criteria for participation were Syrian nationality aged 18 or more, male or female, from all governorates of Syria, never have cholera previously, and were willing to participate. The questionnaire was consisting of four sections. The first section was about sociodemographic data. The second section evaluated respondents' self-reported knowledge on cholera and divided into two parts (2a: Knowledge on cholera, its prevention and treatment. 2b Knowledge on cholera vaccine). The third section evaluated respondents' self-reported practice relating to cholera and its vaccine, this section divided into two parts (3a: Practice relating cholera and its treatment/management. 3b: Practice relating cholera vaccine. The fourth section inquired respondents' attitude toward cholera and cholera vaccine. 52.9% thought that cholera outbreaks happen in summer seasons. **RESULTS:** Among 1563 Syrian national participants, (n=982, 62.8%) were females, and (n=581, 37.2%) males. 60.9% of respondents did not recognize the cholera in the first place. Passing watery stool was the most recognized symptom of cholera with 50.3%, severe dehydration with 31.1%, and repeated vomiting with 10.3%. Lack of safe drinking water was recognized as the most common cause for cholera. Most respondents (54.1%) have chosen IV saline as the treatment of choice for cholera. 85.3% of respondents are with providing health care to the infectants in health centers. **CONCLUSION:** According to our findings, there is insufficient understanding of the cholera symptoms and risk factors. The need for better understanding of such common outbreaks is essential to counter them. Consequently, there is a greater need to increase cholera awareness and education programs on the disease's signs and symptoms and its risk factors.

Key words: Knowledge; Cholera; Outbreak; Syria.

79. **ELECTROCONVULSIVE THERAPY USE IN PREGNANT PATIENTS CASE REPORT**

Roxana Nouri-Nikbakht,¹ Dr. Gwen Levitt².

¹ MA. Fourth-year Medical Student. AT Still University, School of Osteopathic Medicine in Arizona, Mesa, Arizona, USA.

² DO. Research Director, Department of Psychiatry, Valleywise Health Medical Center, Phoenix, Arizona, Attending Psychiatrist, District Medical Group, Phoenix, Arizona, Associate Professor University of Arizona Medical School-Phoenix, Midwestern University Medical School, Mayo Medical School-Arizona

INTRODUCTION: ECT has been used as an intervention for patients with treatment resistant depression, severe psychosis, catatonia, acute mania, certain types of schizophrenic syndromes, and suicidality. ECT is safe in all trimesters, whereas certain medications are only safe at certain times during pregnancy and can be associated with more severe side effects. ECT does not interfere with breastfeeding. Moreover, ECT use in pregnancy has not been shown to increase risk of labor and delivery complications or congenital anomalies, while untreated depression or pharmacotherapy for depression can do so.

CASE PRESENTATION: We discuss three cases in which pregnant patients with psychiatric diagnoses of bipolar disorder or schizoaffective disorder receive ECT in combination with pharmacotherapy. ECT improved the symptoms of the patients in these cases, but only one of the three patients was discharged home with her baby. **CONCLUSION:** The women in these cases demonstrate that ECT can be a helpful treatment for psychosis and depression, especially in combination with pharmacotherapy. ECT is safe and effective for both the mother and the fetus. ECT should be considered alongside other mainstays of treatment with special consideration to possible pregnancy-related safety measures.

Key words: Pregnancy; Electroconvulsive Therapy; Schizophrenia; Depression; Case report.

80. **ASSESSMENT SYRIAN POPULATION KNOWLEDGE, ATTITUDES AND PERCEPTIONS TOWARDS STROKE: A CROSS-SECTIONAL STUDY FROM SYRIA.**

Yazan Khair Eldien Jabban¹, Sarya Swed², Haidara Bohsas³, Hidar Alibrahim², Nagham Jawish¹, Bisher Sawaf⁴, Wael Hafez⁵.

¹ Sixth year - Faculty of Medicine - Damascus University, Damascus, Syria.

² Sixth Year. Faculty of Medicine. Aleppo University. Aleppo, Syria.

³ Fifth Year. Faculty of Medicine. Aleppo University. Aleppo, Syria.

⁴ MD, Internal Medicine Department, Hamad Medical Corporation, Doha, Qatar.

⁵ MD, Medical Research Division, Department of Internal Medicine, The National Research Centre, Cairo, Egypt.

INTRODUCTION: Based on the stroke mortality rate, Syria was ranked 98th worldwide in 2020. Approximately 80% of strokes are avoidable by managing well-known modifiable risk factors, such as diabetes, hypertension, and cardiovascular disease. Due to the high prevalence of several modifiable risk factors for stroke in Syria, it is necessary to increase Syrians' understanding of strokes and encourage people to engage in healthy practices to eradicate these risk factors. This research aimed to evaluate the knowledge, attitudes, and health-related perceptions of adult Syrians about stroke.

METHODS: This cross-sectional research was conducted between 2 September and 10 October 2022 among Syrians using an online survey to measure their knowledge, attitudes, and practices regarding stroke. This questionnaire was derived from a previously published article, and the inclusion criteria for this research were all Syrian residents aged 18 or older. The questionnaire utilized for this study consisted of three major sections: socio-demographic data, knowledge of stroke, and attitudes and perceptions about stroke.

RESULTS: 53.3 % of the 1,143 research participants were female. Most respondents (94.3%) recognized the brain as the organ impacted by stroke. Hypertension was the stroke's most identifiable cause and risk factor (72.8% and 73.6%, respectively). 72.8 % of participants recognized hypertension and atherosclerosis as causes of stroke. 94.3 % of survey participants accurately identified the oranges impacted by the stroke; however, only 50.1% properly identified the warning symptoms. 61.4 % of participants utilize the Internet as a source of stroke-related information. 22.3% of individuals aged 21 to 30 had identified at least one stroke warning sign. 12.58% of individuals with a high socioeconomic position have shown a solid understanding of stroke risk factors. Females were projected to be 1.55 times more knowledgeable about stroke warning signs than men (P value<0.05). It was expected that participants who believed that stroke is avoidable would be 2.2 times more knowledgeable about stroke warning signals than those who disagreed (P value<0.05). Participants who identified more than four causes of stroke were expected to have 14.77 times more knowledge of stroke risk factors than those who did not (P value<0.05). **CONCLUSION:** Our research shows that although knowledge of stroke risk factors and symptoms is moderate to good, there is still a lack of perceptions toward this disease. Hopefully, this will encourage hospitals and other medical groups to continue their awareness-raising campaigns about the dangers of this illness. Stroke prevention and community response may be greatly enhanced by raising public consciousness of the condition and fostering individual agency in coping with it.

Key words: Knowledge; Attitude; Perceptions; Stroke; Cross-Sectional; Syria.

81. **REDDIT USERS' QUESTIONS AND CONCERNS ABOUT ANESTHESIA.**Khalid El-Jack¹, Korey Henderson², Anietie U. Andy³, Lauren Southwick⁴.¹ Third-year Medical Student. Perelman School of Medicine, Philadelphia, United States.² Second-year Medical Student. Perelman School of Medicine, Philadelphia, United States.³ PhD. Center for Digital Health, University of Pennsylvania, Philadelphia, United States.⁴ MPH. Center for Digital Health, University of Pennsylvania, Philadelphia, United States.

INTRODUCTION: Patients utilize social media in search of support networks. Reddit is one of the most popular social media sites and allows users to anonymously connect. Anesthesia patients are actively using Reddit to discuss their treatment options and experiences within the medical system. **METHODS:** Posts published on an active Reddit forum on Anesthesia (i.e., /r/Anesthesia) were used. Big Query was used to collect posts from /r/Anesthesia. We collected 3,288 posts published between December 2015 and August 2019. We collected a control group of 3,288 posts from a Reddit forum not related to Anesthesia. Using latent Dirichlet allocation (LDA) we extracted 20 topics from our data set. The LDA topic themes most associated with posts in /r/Anesthesia compared to the control group were determined. **RESULTS:** LDA analysis of posts in /r/Anesthesia relative to a control group produced 6 distinct categories of posts (Table 1). The posts most associated with /r/Anesthesia when compared to a control group were posts belonging to the "Physician-Patient Experience" category (Cohen's d= 0.389) while the posts least associated with /r/Anesthesia were from the "Uncertainties" category of posts (Cohen's d= 0.147). Example experiences from members of the /r/Anesthesia forum highlight subjective experiences of patients undergoing anesthesia. **CONCLUSION:** The language used on social media can provide insights into an individual's experience with anesthesia and inform physicians about patient concerns. Anesthesiologists are poised to address these concerns and prevent anonymous misinformation by providing verified physician insights on the forum /r/Anesthesia.

Table. Latent Dirichlet Allocation Topics Associated with /r/Anesthesia Posts with Correlated Words Used to Highlight the Topic and Redacted Illustrative Examples.

Category / Theme	Operational Definition	Cohen's D	Correlated Words	Redacted Illustrative Posts
Physician Experience	Posts surrounding relationship between members of the care team and patients	0.389	Anesthesia, surgery, procedure, sedation, anesthesiologist, patient, anesthetic, surgeon, pain, experience	Hello everybody, I underwent a procedure this morning while sedated. I came and read the pinned post in this subreddit since I had been worrying about it for weeks, and it truly helped me relax. I generally struggle with quite severe anxiety relating to my health. While getting ready this morning, I was still a little on edge, but my amazing and caring anesthesiologist basically informed me that given my health, she wouldn't even bother describing extreme risks; she only said that I might feel nauseous and have a sore throat after. I was asleep with one of the nurses holding my hand, and when I awoke, I was overjoyed. After roughly 4 hours of being awake, I feel great! The fear of the unknown made me worried, but I now get that it is truly okay. Thank you for your help across this forum.

Medication	Posts surrounding medication administration	0.365	Patient, risk, blood, propofol, dose, patients, anesthetics, pressure, drug, higher	Why does the white IV fluid hurt when it is inserted? I'm not sure what it was, but it quickly reached my brain and knocked me out in minutes Too bad it HURT LIKE HELL on my arm. Has Reynaud's been linked to this? I really struggle with that. What was this fluid, and why did they claim that some feel pain with it and others don't?
Health Care Infrastructure	Posts including various members of healthcare industry as a whole	0.336	CRNA, work, practice, school, medical, experience, states, nurse, job, hospital	I am currently completing a respiratory therapy AA program in California. I am very interested in pursuing anesthesia of some kind, and I am deciding between going to medical school to become an anesthesiologist, moving out of state to become an anesthesiology assistant, or returning to nursing school after I graduate from respiratory school and possibly pursuing a CRNA in the future. Can someone please describe the distinctions between the roles in terms of autonomy and the duties of each job?
Procedures	Posts surrounding specific procedures requiring anesthesia administration	0.304	Surgery, pain, block, body, nerve, heart, hospital, hours, spinal, epidural	I'm going to have a tummy tuck, and I read an article about someone who had general anesthesia and woke up, but they were paralyzed from the medication given along with the general anesthetic, so they couldn't tell anyone they were awake. I'm very scared right now! This surgery takes six hours! I hope I don't wake up during any of it, but if I do, I'd like to know how to let someone know so they can put me back to sleep!
Personal Inquiries	Posts including direct questions regarding anesthesia	0.201	Question, future, important, making, fact, learn, true, difficult, situation, personal	I have a cardiac problem and have a procedure tomorrow. I'm seeking feedback before scheduling this sedated procedure. For the last few years, I've experienced a persistent cough, shortness of breath, and periodic chest discomfort that feels like a heart attack (along with pain in my left arm, jaw, and back), as well as irregular heartbeats while lying down....I'm worried that because I'm unsure of whether I have a problem or not, I won't know whether I should be sedated for the surgery until I get more information. Even though it's a colonoscopy and not surgery, I'm worried.
Uncertainties	User posts regarding patient worries and fears	0.147	I'm, don't, shit, stop, smoking, give, smoke, week, anxiety, die	Help me. I spent three weeks without doing any drugs. A friend of mine invited me out to drinks last Thursday (also something I must stop, but anyway). I let him know that I stopped doing drugs and that I needed to keep clean (especially for two weeks) since I am scheduled to undergo major surgery on April 15... Does anyone here have any information on whether I should be able to have the surgery? Has anyone ever smoked meth and felt sick afterwards?

Key words: Social Media; Facebook, Reddit; Twitter, Anesthesia.

82. HEARING LOSS AFTER COVID-19 VACCINES: A SYSTEMATIC REVIEW AND META-ANALYSIS.

Khaled Albakri¹, Yasmeen Jamal Alabdallat¹, Omar Ahmed Abdelwahab², Mohamed Diaa Gabra³, Mohamed H. Nafady⁴, Dr Ebraheem Albazee⁵.

¹ 4th year Medical Student, Faculty of Medicine, The Hashemite University, Jordan.

² 6th year Medical Student, Faculty of Medicine, Al-Azhar university, Cairo, Egypt.

³ 6th year Medical Student, Faculty of medicine, South Valley University, Qena, Egypt.

⁴ Assistant Lecturer, Faculty of Applied Health Science Technology, Misr University for science and technology, El Giza, Egypt.

⁵ Kuwait Institute for Medical Specializations, Kuwait City, Kuwait.

INTRODUCTION: Hearing loss is generally classified as conductive hearing loss (CHL) and sensory-neural hearing loss (SNHL). It has been reported that COVID-19 infection may affect the vestibular-hearing system causing dizziness, tinnitus, vertigo, and hearing impairment. However, other studies reported that COVID-19 did not lead to significant hearing impairment. Many studies in the literature have reported hearing loss as a complication of COVID-19 vaccines. However, no systematic review or meta-analysis summarizes the literature on this topic. **METHODS:** We performed a comprehensive search for the following databases: PubMed, Cochrane (Medline), Web of Science, and Scopus. All studies published in English till October 2022 were included. These include case reports, case series, prospective and retrospective observational studies, and clinical trials reporting hearing loss following COVID-19 vaccines. Newcastle Ottawa scale (NOS) was used to assess the risk of bias for observational studies. NIH tools were used for non-controlled before and after clinical trials and case reports and case series. A third author solved any disagreements. We analyzed the data using SPSS Software version 26. **RESULTS:** A total of 630 patients were identified, with a mean age of 57.3 that ranged from 15 to 93 years old. The majority of the patients were females, 339 (53.8%). In addition, 328 out of 609 vaccinated patients took the Pfizer-BioNTech BNT162b2 vaccine, while 242 (40%) took the Moderna COVID-19 vaccine. The mean time from vaccination to hearing impairment was 6.2, ranging from a few hours to one month after the last dose. Most patients reported unilateral sensorineural hearing loss post-vaccination 593 (94.1%). In order to report the fate of cases, a follow-up was initiated with a mean of 15.6 and a range of 2 to 63 days after the initiation of the treatment. A total of 20 patients were fully recovered, and 11 reported no response. Three out of 328 patients who took the Pfizer-BioNTech BNT162b2 vaccine fully recovered, while five reported partial recovery. According to the chi-squared test, there is a statistically significant difference between patients in terms of fate and the type of COVID-19 vaccination (P-value = 0.001) while reporting no significant difference in dose number prior to the onset of the symptoms (P-value = 0.65) and gender (P-value = 0.4). The ANOVA test was conducted to compare vaccine types and the number of doses in terms of mean time from vaccination to hearing impairment onset. The results found a significant difference between vaccine types (P-value < 0.000) while showing no significance in terms of the number of doses prior to the onset (P-value = 0.6). **CONCLUSION:** There is a statistically significant difference between patients in terms of fate and the type of COVID-19 vaccination while reporting no significant difference in dose number prior to the onset of the symptoms and gender. Further, we concluded that there is a significant difference between vaccine types while showing no significance in terms of the number of doses prior to the onset.

Key words: COVID-19; Vaccine; Deafness; Hearing.

83. **EFFECTS OF SOCIAL DISTANCING AND LOCKDOWN PROTOCOLS ON FATALITY RATES OF COVID-19 IN THE U.S DURING THE FIRST YEAR OF THE PANDEMIC.**

Valerie Hardoon¹, Bryant A. Pierce², Solomon C. Mbanefo², Harin N. Shah², Kanav Markan³, Marika L. Forsythe².

¹ MD. American University of the Caribbean School of Medicine, Cupecoy, Sint Maarten.

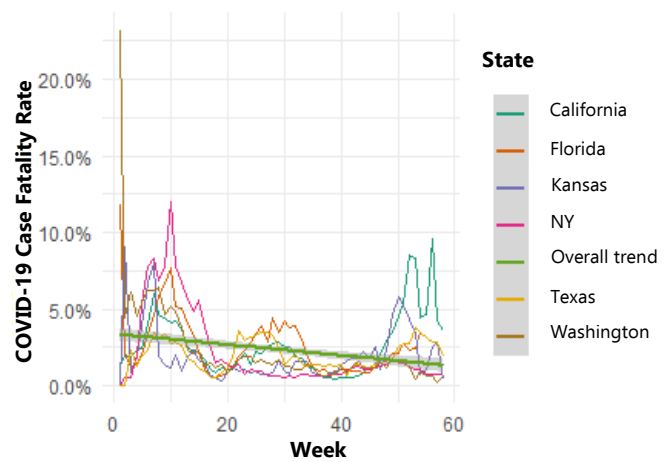
² MD. Saba University School of Medicine, The Bottom, Saba, Caribbean Netherlands.

³ MD. American University of Integrative Sciences School of Medicine, Bridgetown, Barbados.

INTRODUCTION: SARS-CoV-2, the coronavirus strain responsible for the COVID-19 pandemic, can lead to severe respiratory disease and death. Worldwide, government officials tried to protect its citizens by mandating various lockdowns and social distancing policies to curb the spread. In the United States, each state initially implemented a transition or “phasing” policy that included varying degrees of safety protocols. This allowed them to re-open gradually, the goal being to reduce transmission rates while simultaneously allowing for higher degrees of public gatherings and events. The initial lockdown was observed to help suppress the pandemic, and the states—with guidance from the CDC—were left to their own agenda on how to best re-open their economy. This strategy was seen as optimal during the early stages of the pandemic. Our study aimed to determine if there was a correlation between fatality rates and phase transitions across the states. **METHODS:** The states selected for this study allowed for evaluation of different management styles throughout the phase transitions. COVID-19 case rates varied across the U.S.; some states observed higher infection rates than others. Thus, six states, each from regions with different caseloads and safety protocol compliance, were selected for this study: Florida, California, New York, Washington, Kansas, and Texas. Metrics such as incidence and mortality rate of COVID-19 infection were obtained from their respective government websites, allowing fatality rates to be calculated and compared using Bayesian logistic mixed models. **RESULTS:** There are significant outcomes when analyzing the data individually and as part of a meta-analysis. When examining the fatality rates across phases grouped by individual state, there was a downward trend with each transition except in Texas. New York was found to have the lowest median fatality rate (median [IQR]; 0.011 [0.007, 0.017]), followed by Washington (0.014 [0.011, 0.020]), Kansas (0.014 [0.009, 0.021], Texas (0.018 [0.013, 0.028]), California (0.021 [0.011, 0.037]), and Florida (0.022 [0.011, 0.034]). However, when the states’ data was pooled an overall downward trend was demonstrated, with a median fatality rate of 0.039 [0.019, 0.067] in phase 0, dropping to 0.010 [0.007, 0.013] by phase 4. A decrease in fatality rate odds by about 33.4% through each phase transition was observed when combining all the states. **CONCLUSION:** Based on our results, implemented safety protocols and phase transitions were shown to assist in controlling the spread of COVID-19 as the states re-opened during the first year of the pandemic. Differences in fatality rates throughout the U.S. can likely be explained by how disciplined each state was with quarantine requirements and social distancing policies. This allowed certain states to control the infectious spread more efficiently than others, thus allowing them to progress through the phase transitions at different rates as they returned to normal. Future studies are warranted and can incorporate additional states for a more robust sample size. Further accounting for confounding variables, such as patient comorbidities and the introduction of

COVID-19 vaccines at the end of 2020, would also allow insight into how fatality rates have been affected across the U.S.

Figure. Fatality Rate of the Six Study States in the U.S. over the First 58 Weeks of the Pandemic. There is an Overall Downward Trend over Time.



Key words: COVID-19; Phase transition; New York; Washington; Kansas; Texas; California; Florida (Source: MeSH-NLM).

84. **CASE REPORT: DIAGNOSIS AND MANAGEMENT OF LONG-STANDING ESSENTIAL HYPERTENSION ON A TEENAGER.**

Miguel Moreta¹.

¹ Sixth-year Medical Student. Pontificia Universidad Católica Madre y Maestra, Santo Domingo, Dominican Republic.

INTRODUCTION: Hypertension affects about one third of the worldwide adult population, in patients aged 18 to 39, prevalence of hypertension is 7.3%. The risk factors for primary hypertension in young adults are the same as in older adults, which include family history of hypertension, poor diet with excess intake of sodium, lack of physical activity, obesity and excess intake of alcohol or tobacco smoking. The treatment of choice for essential hypertension in young adult are lifestyle changes but there is no consensus on the role pharmacological treatment in young hypertensives. **THE CASE:** A 19-year-old patient present with a worsening five-year history of palpitations felt in the abdominal region, tachycardia and high blood pressure. He had a body mass index of 31.3 kg/m², suboptimal diet and level of physical activity (though he was previously very active) and a family history of essential hypertension. Possible secondary causes of hypertension were ruled out and a diagnosis of essential hypertension was reached through 24-hour ambulatory blood pressure monitoring. The patient was treated with a combination of 5mg amlodipine and 5mg bisoprolol per day as well as lifestyle changes. **CONCLUSION:** This case highlights the increasingly young age of presentation of essential hypertension, especially since the patient refers presence of symptoms as early as 14 years old when he had a relative lack of risk factors. It is important to rule out other potential causes of hypertension in young adults before making a diagnosis of essential hypertension.

Table. Summarized Report of Ambulatory Blood Pressure Monitoring Results.

Period	Hour	Mean Systolic mmHg (± SD)	Mean Diastolic mmHg (± SD)	Mean HR BPM (± SD)	BP Load Systolic (%)	BP Load Diastolic (%)
Overall	14:48-14:10 (23h and 22 min)	143 (15.5)	79 (11.0)	83 (13.3)	85	36
Awake Period	07:00 - 22:00	146 (15.3)	81 (10.1)	85 (11.9)	80	30
Asleep Period	22:00-07:00	135 (13.5)	72 (11.7)	74 (14.5)	100	56

Legend: SD: standard deviation.

Key words: Essential Hypertension; Ambulatory Blood Pressure Monitoring; Palpitations; Young Adult; Case Report.

85. **GUIDING PRINCIPLES FOR THE CONDUCT OF VIOLENCE STUDY OF HEALTHCARE WORKERS AND SYSTEM (ViSHWaS): INSIGHTS FROM A GLOBAL SURVEY.**

Tanya Amal¹, Akshat Banga², Umme Habiba Faisal³, Gaurang Bhatt⁴, Aisha Khalid¹, Mohammed Amir Rais⁴, Nadia Najam⁵, Rahul Kashyap⁴, Faisal A. Nawaz⁵.

¹ MBBS, Maulana Azad Medical College, New Delhi, India.

² MBBS, Sawai Man Singh Medical College, Jaipur, India.

³ MBBS, All India Institute of Medical Sciences, Kalyani, India.

⁴ MBBS, All India Institute of Medical Sciences, Rishikesh, India.

⁵ MD, MSc, Harvard Medical School, Boston, USA.

⁶ Doctor of Dental Medicine DMD, Faculty of Medicine of Algiers, Algiers, Algeria.

⁷ MBBS, Hamdard College of Medicine and Dentistry, Karachi, Pakistan.

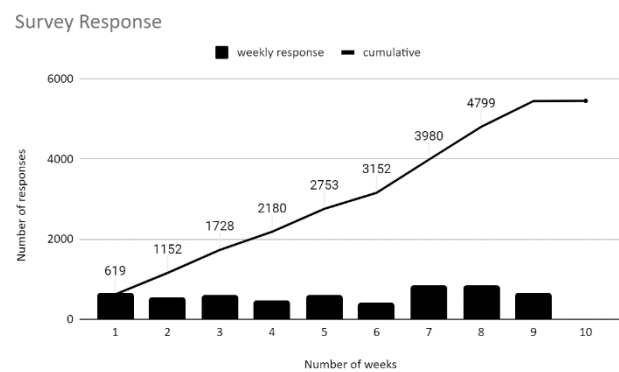
⁸ MBBS, MBA, Anesthesiology and Critical Care Medicine, Mayo Clinic, Rochester, MN, USA.

⁹ MBBS, Al Amal Psychiatric Hospital, Dubai, United Arab Emirates.

INTRODUCTION: Globally many studies have reported on violence faced by healthcare workers. However, there is still a lack of homogeneous data to give us a concrete understanding of the present scenario on a global scale. Conducting a global survey required a robust team organization structure, unique dissemination strategies accounting for the regional limitations, and continual networking to maintain and propagate the pool of survey collaborators and responders. This study aims to describe the strategies that helped carry out a global survey-based study, the lessons learned, and recommendations for future studies. **METHODS:** This cross-sectional survey-based study was based on methodology of the "Hub and Spoke" model with the core team and sub-groups about different regions and managing country leads. The study was conducted across eight weeks from 6th June 2022 to 8th August 2022. The key steps included team organization, strategy formulation for survey dissemination and data collection, launching the project on social media, and conducting a post-survey amongst the collaborators. The Core Team convened weekly via video conference platforms to discuss the modus operandi, including the responsibilities of team members in communicating with HCWs from each country; strategies for data extraction and analysis. A standard message was created for the survey in English, which was spread via text, audio and video messages; the message was tailored according to the target region and population. The language barrier was managed by creating an audio translation or shifting to "an interviewer-administered" questionnaire. Call for leads and collaborators was organized through social media platforms and incentivized by proposing collaborative authorship. **RESULTS:** A core team of 11 members from 7 countries was assembled, which expanded to 40 country leads from around 110 countries. We also amassed more than 75 regional collaborators who worked to provide feedback and spread the message. The "Violence Study of Healthcare Workers and Systems" (ViSHWaS) amassed 5500 responses across the world. A weekly alternating trend in the number of survey responses was observed for eight weeks. Guiding principles garnered through this collaborative project include focusing on 1. Effective team organization, 2. Ensuring external validation of survey tool, 3. Personalized communication, 4. Global networking, 5. Timely communication for maintaining momentum, and 6. Addressing regional limitations. The post-survey analysis showed that WhatsApp messaging was the most common modality used for survey dissemination, followed by in-person meetings and text messaging. The successful techniques were noted to be 1. Direct communication with respondents, 2. Regular progress updates, 3. Responsiveness for

regional and country lead's needs 4. Timely troubleshooting. The most common barriers for the respondents were limitations in language proficiency, technical fallouts, lack of compliance with, and difficulty understanding the questionnaire. **CONCLUSION:** In this global survey-based study of more than 5500 responses from over 110 countries, valuable lessons in team management, survey dissemination, and addressing barriers to collaborative research. We thereby recommend incorporating the guiding principles from this study to design future surveys on a global scale.

Figure. Graph of the Study Based on Surveys of More than 5500 Responses from More than 110 Countries.



Key words: Surveys and Questionnaires; Workplace Violence; Health Personnel.

86. **EXPLORING THE DISPROPORTIONATE IMPACT OF COVID-19 IN OLDER ADULTS IN CANADA.**

Mujabad Shah¹, Karan Gupta², Yamini Sharma³, Vineeta Singh⁴, Carla Emilia Ibarra⁵, Kajan Kugathasan⁶.

¹ D.O. Second-year Medical Student, Noorda College of Osteopathic Medicine, Utha, USA.

² M.S. Postgraduate institute of medical sciences and research, Chandigarh, India.

³ M.D. Avalon University School of Medicine, Willemstad, Curacao.

⁴ M.B.B.S Adesh School of Medicine Science, Bhatinda, India.

⁵ M.D. Pontificia Universidad Catolica Del, Ecuador.

⁶ M.D. Windsor University School of Medicine, Cayon, St. Kitts and Nevis.

INTRODUCTION: Many patients recovered from COVID-19 without requiring any critical treatment, vulnerable populations such as older people, especially those with comorbidities, are more likely to develop a severe infection and face higher mortality rates.

BACKGROUND: Why are older Adults are Higher Risk? The majority of older adults have comorbid conditions, which are associated with a higher risk for COVID-19. Many live in residential care homes, which have seen the highest number of COVID-19 cases due to tightly shared living spaces. With weakened immune systems, older adults living in poverty face additional challenges in protecting themselves from the virus, as it is difficult for them to comply with public health measures such as social distancing. 32.5% of individuals in the lowest income quartile were hospitalized due to COVID19, compared to only 11.4% of individuals from the highest income quartile. **METHODS:**

The data was retrieved from the Canadian MIS Database (CMDB) and the discharge abstract database (DAD). The CMDB contains financial and statistical operations information on public hospitals and regional health authorities across Canada. Case selection is based on COVID-19 diagnosis codes available in the International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Canada (ICD-10-CA). **RESULTS:** The aging population faced higher rates of hospitalization throughout the pandemic. The average length of hospital stay was also higher for older adults—hospitalizations of individuals under age 65 without comorbidity 41,707 with comorbidity 12,372. Hospitalizations of individuals 65 and older without comorbidity were 22,221 with comorbidity 24,731—Higher Hospitalization rates and issues of inequality in the healthcare system globally. As the pandemic progressed, hospitalization increased in number significantly. The average length of stay for individuals younger than age 65 without comorbidity is 7.7 days compared to 17.0 days in patients with comorbidity. The average full length of stay for individuals 65 and older without comorbidity was 13.2 days, While in patients with comorbidity 19.2 days. Older adults also had higher in-facility death rates due to COVID-19 hospitalization. The in-facility death rate of individuals younger than 65 without comorbidity is 2.5%, With comorbidity at 12.9%. In-facility death rate of individuals 65 and older without comorbidity is 14.4%, with comorbidity at 23.2%.

CONCLUSION: By analyzing and comparing various hospitalization rates for Canada, the precise data indicate that older adults have been disproportionately impacted by COVID-19. It is now important to determine the underlying structural issues that have caused this inequality to prioritize healthy aging.

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