32. **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**

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BACKGROUND: 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. **AIM:** 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 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 (Source: MeSH-NLM).