43. **MANAGEMENT OF COVID-19 IN A SICKLE CELL ANAEMIA PATIENT: A CASE REPORT**

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BACKGROUND: COVID-19 has had a significant impact on global healthcare systems, causing severe cases with acute respiratory distress syndrome, multi-organ failure, and death. Survivors of the virus may also experience long-term health problems. Sickle cell disease (SCD), an inherited red blood cell disorder, is characterized by chronic hemolytic anemia, vascular occlusion, and organ deterioration. SCD primarily affects African Americans, and common symptoms include acute and chronic pain, as well as severe conditions like acute chest syndrome and stroke. **METHODS**: We present the case of a 19-year-old female with sickle cell anemia who presented with symptoms of illness, jaundice, and no fever after receiving intravenous paracetamol. They were stable overall, with a Glasgow Coma Scale (GCS) score of 15/15 and no abnormal chest sounds. The patient had red, soft stools for two days and reduced bowel movements. Bowel sounds were normal, and they had sufficient urine output but experienced lower limb edema without joint swelling. Blood pressure was 107/62 mm Hg, mean arterial pressure was 72 mm Hg, pulse rate was 104 beats per minute, respiratory rate was 21 breaths per minute, and random blood glucose level was 102.5 mg/dL. The patient tested positive for COVID-19 via Polymerase Chain Reaction (PCR) testing. Laboratory results revealed low hemoglobin (6.8 g/dL), red blood cell count (2.16 x 10^6/micL), and high white blood cell count (22.4 x 10^3/micL) with 75.4% neutrophils. Hematocrit was 18.5%, mean corpuscular volume (MCV) was 85.7 pictogram/cell, mean corpuscular hemoglobin (MCH) was 31.4, mean corpuscular hemoglobin concentration (MCHC) was 36.7 g/dL, and platelet count was 215/micL. Other laboratory findings included urea (8 mg/dL), total protein (6.8 g/L), total bilirubin (2.15 mg/dL), direct bilirubin (0.98 mg/dL), aspartate aminotransferase (AST) (107 IU/L), alanine aminotransferase (ALT) (30 IU/L), alkaline phosphatase (ALP) (178 IU/L), and C-reactive protein (CRP) (48 mg/L). The patient's management plan involved intravenous dextrose and sodium chloride infusion, ceftriaxone (Samixon®), warfarin as needed, paracetamol as needed, folic acid once daily, vitamin C and zinc supplementation, levofloxacin once daily, Enema (Enemax) as needed, Pantoprazole (pantodac) (40 mg), nebulized hypertonic saline solution three times daily, diclofenac sodium (vortex) (75 mg) twice daily, and rivaroxaban (15 mg) twice daily. The patient received two blood transfusions during their hospital stay, with the first occurring on the first day of admission. **CONCLUSION**: Sickle cell anemia patients are at a higher risk of severe COVID-19 infection and associated complications. Early detection and treatment of complications are crucial. Blood transfusion, particularly red blood cell exchange transfusion, may be beneficial in managing these patients, reducing respiratory distress and the need for intensive care. However, more research is needed to establish optimal management strategies. This case report provides valuable insights into the presentation and management of sickle cell anemia patients with COVID-19. Clinicians should consider the examination findings and laboratory investigations for diagnosis and management. Limitations of this report include the lack of baseline information and long-term follow-up data, emphasizing the need for further research to generalize the findings.

Key words: Anemia; Sickle Cell; COVID-19; Erythrocyte Transfusion (Source: MeSH-NLM).