Parvovirus B19 Infection Presenting with Cytopenias in Sickle Cell Disease and in Immunocompromised Host: A Case Series

Sandeep Kumar
Department of Microbiology, AIIMS, Raipur

Sanjay Singh Negi
Department of Microbiology, AIIMS, Raipur

Madhavi Madkey
Department of Microbiology, AIIMS, Raipur

Anudita Bhargava
Department of Microbiology, AIIMS, Raipur

Ruchi Khare
Department of Microbiology, AIIMS, Raipur

Abstract:

Introduction: Human Parvovirus B19 is a non-enveloped, single-stranded DNA virus with marked tropism for erythroid progenitor cells, leading to transient suppression of erythropoiesis. This case series describe the laboratory profile and associated clinical features of patients with confirmed Parvovirus B19 infection by RT PCR at a tertiary care centre.

Case 1: A 24-year-old female with sickle cell disease (HbSS) and history of multiple transfusions presented to medicine OPD on Nov 2024 with fever, chills, vomiting, body ache and diarrhoea for 2 days, along with pancytopenia, sudden haemoglobin drops, hepatosplenomegaly, hypotension and transaminitis, initially managed as sepsis. There was initial clinical improvement with resolution of sequestration crisis, but subsequently, patient landed in aplastic crisis. She improved with supportive care and was discharged with haemoglobin of 9.4 g/dL.

Case 2: A 5-year-old male with sickle cell disease on hydroxyurea, presented to paediatric OPD on Oct 25 with fever and bilateral lower limb pain. Examination showed severe pallor and moderate hepatosplenomegaly. Investigations revealed severe anaemia (Hb 3.9 g/dL), pancytopenia, and reticulocytopenia. He received intravenous antibiotics and two PRBC transfusions, with subsequent clinical and haematological improvement.

Case 3: An 18-year-old male with sickle cell disease (SCD) and recurrent Vaso-occlusive crises presented to medicine OPD on Oct 25 with acute severe back pain and bilateral hypochondrial abdominal pain. No infective focus was identified. Laboratory evaluation showed pancytopenia. He improved with analgesics and supportive care and was discharged.

Case 4: A 29-year-old male, a known PLHA on ART, presented in medicine OPD on Dec 25 with prolonged high-grade fever. Extensive infectious workup was negative. Imaging revealed hepatosplenomegaly and lymphadenopathy. HLH workup showed hyperferritinemia, pancytopenia,