

Kawasaki disease like presentation of Multisystem inflammatory syndrome in children - A Case report

Dr Gargi H Pathak¹, Dr Anuya V Chauhan², Dr Priyanka Goswami^{3*}

¹ Professor and Head of the unit, Department of Pediatrics, BJMC

² Assistant professor, Department of Pediatrics, BJMC

³ Third year resident , Department of Pediatrics, BJMC

Corresponding Author: Dr Priyanka Goswami

Email: goswamipriyanka1993@gmail.com



Abstract

A new COVID-19 related clinical syndrome in children called Multisystem inflammatory syndrome in children (MISC) has been reported, with significant inflammation and similarities to Kawasaki disease (KD) with concurrent SARS-CoV-2 in Europe and in USA since 7 April 2020. On 25th April, concerns were initially raised in the United Kingdom regarding a cluster of children of various ages, presenting with a Multisystem inflammatory state who required intensive care, and who all displayed "overlapping features of toxic shock syndrome and atypical Kawasaki disease with blood parameters consistent with severe COVID 19 in children. Clinical presentations were variable, with significant gastrointestinal (GI) symptoms, cardiac disease, mild or absent respiratory symptoms, and variable incidence of rash, red eyes, oral mucous membrane changes. Later on this was diagnosed as part of a post covid Multisystem inflammatory disease (MISC). We report one patient admitted in Civil hospital, Ahmedabad with high grade fever for more than three days along with manifestations of multisystem disease involving cardiovascular system with myocarditis, and gastrointestinal system in form hepatitis, widespread blanchable rashes and respiratory distress due to pleural effusion. The clinical features had similarly to features of Kawasaki disease. Patients also had raised inflammatory markers in form of increased CRP, ESR, PT, APTT. Covid IgG antibody was found positive and patient was treated as per MISC protocol with steroid, IVIG and aspirin together with proper supportive management in form of oxygen through High flow nasal cannula and ionotropes for shock. Multiple theories on pathogenesis have been suggested in form of Antibody dependent enhancement precipitating kawasaki like illness due to cytokine storm provoked by type 1 and 3 interferon. Role of STING (Stimulator of interferon gamma) pathway has been found to be involved in MISC. With proper treatment as per protocol it is possible to successfully discharge patients with MISC admitted in decompensated states.

Keywords: MISC, Kawasaki, steroids, PIMS-TS, blanchable rashes, COVID 19 antibody