HEMATURIA AS AN EARLY SIGN OF MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN (MIS-C): A CASE REPORT OF A BOY WITH MULTIPLE COMORBIDITIES

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While clinical course of SARS-CoV-2 infection seems to be milder or asymptomatic within pediatric population, growing attention has been laid to the rare complication elicited by virus, multisystem inflammatory syndrome in children temporarily associated with COVID-19 (MIS-C). Published definition and criteria of MIS-C include persistent fever, multisystem involvement and elevated markers of inflammation, without obvious microbial inflammation or other plausible diagnosis. The aim of this case report is to emphasize diversity of symptoms of MIS-C.

We present a case of a ten-year-old boy with multiple comorbidities who developed MIS-C after asymptomatic SARS-CoV-2 infection. To our knowledge this is the first reported case of transient gross hematuria as an early sign of MIS-C. Beside hematuria, patient also presented persistent fever and elevated markers of inflammation, with no other sign of renal affection.

Moreover, he had discrete erythematous maculopapular rash on the right lower leg. Within the next two days, his condition continued to worsen despite the broad-spectrum antibiotic therapy. He started to vomit and developed abdominal pain, conjunctivitis, arrhythmia and mild left ventricular systolic dysfunction with hypotension and pleural effusion. High level of clinical suspicion for MIS-C was supported by laboratory findings (elevated ESR, CRP, proBNP, D-dimers and fibrinogen) along with positive IgG SARS-CoV-2 antibodies and negative microbiological cultures. The patient was given intravenous immunoglobulin (IVIG) at a dose of 2 g/kg and began to show instantaneous clinical improvement, including downtrend of fever and inflammatory markers.

Despite the growing reports of the MIS-C in the literature, there is still paucity of studies describing the various clinical manifestation and laboratory finding in this serious condition which can be easily mistaken for many others inflammatory diseases. Therefore, pediatric professionals must be aware of (many) unusual presentations of COVID-19 associated disease in order to early recognize and treat such challenging patients.