



# The Enigma of Pediatric Multisystem Inflammatory Syndrome Temporally Associated with SARS-CoV-2 (PMIS-TS)

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Received: 25 May 2022 / Accepted: 2 June 2022 / Published online: 13 July 2022  
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The clinical syndrome of pediatric multisystem inflammatory syndrome temporally associated with SARS-CoV-2 (PMIS-TS) or multisystem inflammatory syndrome in children (MIS-C) was first reported during April–May 2020 [1–3]. Since then, though the literature describing the clinical spectrum has expanded, the exact pathogenesis still remains elusive and there is lack of high-level evidence to guide the most appropriate therapeutic regimen for PMIS-TS.

In this issue of Indian Journal of Pediatrics, Elilarasi et al. have published a series of 65 children with PMIS-TS from southern India [4]. This study elucidates the clinical spectrum of PMIS-TS. Despite similarities with other global and Indian series, there are certain peculiarities in this paper, such as higher frequency of coronary involvement; 67% of the study group had coronary dilatation. This is in contrast to other series from northern India reporting coronary involvement in 19%–20% of the study subjects [5, 6]. In our experience most of these resolved at 6-wk follow-up [5]; however, the outcome of coronary abnormalities has not been reported in the present study. In the Elilarasi et al. study, 75% (3/4) of children presenting with acute abdomen were operated [4]; this is an alarming observation and re-emphasizes the fact that PMIS-TS can present with various gastrointestinal manifestations including acute abdomen; and a high index of suspicion can avoid unwarranted surgical interventions. Another intriguing observation in this series is the presence hypertension observed in one child, although the authors have not discussed the possible reasons for same, it might not be related to PMIS-TS, which typically presents with hypotension.

The study team has made all possible attempts to rule out coinfections such as dengue, scrub typhus, etc., which is very crucial in settings like India, as there would be many infectious febrile conditions, which may have clinical features overlapping with PMIS-TS. With increasing seroprevalence for COVID antibodies, many febrile illnesses shall meet the definition of PMIS-TS. If overlooked, these children with underlying alternative diagnosis may erroneously receive immunosuppressive agents, particularly steroids, which may flare up the underlying infection.

Thus, till a reliable diagnostic biomarker of PMIS-TS is available or the existing definitions are revised, the onus lies on us clinicians to exclude all possible causes of fever before committing the diagnosis of PMIS-TS. On the other hand, timely diagnosis of PMIS-TS is also equally important to curtail the morbidity and mortality associated with PMIS-TS. The reported mortality in Indian series including the present study is high (6%–27%) as compared to the western world (1%–2%) [5–7]; these observations highlight the need of opportune diagnosis and management of PMIS-TS.

## Declarations

**Conflict of Interest** None.

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