

## MIS-A after COVID-19: Points to Ponder

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Sir,

We read with interest the article by Arjun et al.<sup>1</sup> and congratulate the authors for the work-up of the patients and attempt to diagnose and treat MIS-A which often is underdiagnosed and ignored.<sup>2</sup> However, there are a few points to ponder in this case series.

- The diagnostic criterion adopted was the CDC case definition for MIS-A which includes any individual >21 years of age presenting with fever and cardiovascular involvement or rash and nonpurulent conjunctivitis in the presence of laboratory evidence of inflammation and antecedent SARS-CoV-2 infection. A recent proposed criterion includes the Brighton Collaboration Case Definition for MIS-A, which classifies MIS-A cases into "definite," "probable," "possible," and "insufficient evidence." It takes age above 21 as MIS-A and below that as MIS-C as a continuous spectrum. Arjun et al.<sup>1</sup> have also taken patients younger than 21 years of age, thereby justifying the same.
- The cardiac involvement in MIS-A has been found to be predominantly reversible in MIS-A.<sup>3</sup> Recovery of left ventricular ejection fraction (LVEF) within a few weeks following MIS-A suggests that LV dysfunction is usually a part of the systemic inflammatory response or acute stress rather than ischemic or a part of viral myocarditis. Arjun et al. have discharged five out of the six patients in stable condition. It is imperative to follow up these patients for a cardiac echocardiography to evaluate for return of LV function.
- Five of the six patients treated were given IVIG followed by steroids. There is a lack of uniform treatment strategy for MIS-A with supportive therapy and immunosuppression using steroids or other immunomodulators being used in the majority of cases. In the absence of large-scale clinical data and standard treatment protocols, treatment strategies in MIS-A are often based on therapies used for MIS-C. However, antibiotics and antithrombotics are often used concomitantly in many studies.<sup>4</sup> Whether any antibiotics and enoxaparin were utilized in the case series by Arjun et al.<sup>1</sup> can be of interest. As procalcitonin raised with negative blood culture points to an inflammatory etiology, use of steroids and IVIG is justified in all cases. The fifth patient in the case series has been reported to have died of secondary sepsis. He must have been given antibiotics subsequently.

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