

# MIS-C/A/V: There is More to It than Meets the Eye!

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Sir,

We read with interest the comments of Ish et al. who have rightly pointed out the grey areas in MIS-A diagnosis and treatment and how to move forward. The case definition of MIS-A is constantly evolving, and there are some variations between CDC, WHO, and RCPCH guidelines. A similar multisystem inflammatory syndrome (MIS) has been reported following SARS-CoV-2 vaccination (MIS-V), and this has been included in the Brighton Collaboration case definition by Vogel et al.<sup>1,2</sup> We do see MIS post-COVID-19 vaccination in our practice, and albeit rare it is important to consider this in the diagnostic entity. We also agree that the Brighton Collaboration case definition for MIS be followed widely as it allows flexibility of including all age-groups and also include vaccine-related MIS. MIS needs to be specified as “definite,” “probable,” “possible,” or “insufficient evidence” MIS-C/A/V to improve diagnosis and management.<sup>2</sup> This will help the clinicians to consider treatment for MIS based on the probability and also help formulate an uniform treatment regime.

The cardiac involvement in MIS-A appears to be part of the inflammatory syndrome and was found to be reversible in our case series. All those who recovered underwent repeat echocardiography prior to discharge and were noted to have improved or normal LV function.<sup>3</sup>

In our case series, four patients had abdominal pain and diarrhea, three had hypotension, and all had elevated CRP and procalcitonin; thus, initial differential diagnosis also included sepsis syndrome of probable GI source. One patient was initially admitted in the surgical ward with fever and abdominal pain mimicking appendicitis, an abdominal infection. In our series, all received empiric antibiotic for 48 hours till blood cultures were reported as negative and sepsis was ruled out. All received IVIG as the initial therapy until blood culture report was ready and noted as negative; majority also received methylprednisolone as they had ongoing features of MIS-A after IVIG therapy.<sup>3</sup> As there is no clear treatment recommendation for MIS-A, we followed the ACR stepwise approach to immunomodulatory treatment in MIS-C with IVIG and/or glucocorticoids as first-line agents.<sup>4</sup> Prophylactic anticoagulation was used in all patients. MIS-A is a mimicker of infection and needs to be kept as a differential, especially if the

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patient has features like rash, conjunctivitis with a recent history, or contact with COVID-19 infection.

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