

the utility of mNGS when etiological diagnosis is difficult.

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MIS-C Triggered by Omicron Variant of SARS-CoV-2

World Health Organization (WHO) designated the new variant of SARS-CoV-2 (B.1.1.529) as Omicron on November 26, 2021 [1]. Analyzing the initial cases of Omicron in South Africa to assess the clinical severity of cases, Walter and colleagues concluded that compared to Delta variant, the odds of hospitalization due to severe disease were less [2]. Even though the severity is likely to be mild, its impact on children and subsequent development of MIS-C is unknown.

Pediatric hospitalization due to Omicron in Gauteng Province of South Africa, was noted to be more when compared to the previous waves. During a six-week period, there were nearly 6,287 children with Omicron and four children in their series died, not because of COVID-19, but due to underlying comorbidity [3]. No case of MIS-C was reported in their series. India detected its first Omicron case on December 2, 2021, in Karnataka. We report what we believe to be the first case of MIS-C due to Omicron in India.

A 3-year-old male child presented to us on January 4, 2022 with fever for 6 days and maculopapular rash over the trunk and extremities, bilateral non purulent conjunctival congestion and abdominal pain with vomiting. Both the parents of this child had PCR confirmed mild COVID-19 a week before. Clinical examination did not reveal any features of tropical infections such as dengue or enteric fever. Since child had fever >3 days with mucocutaneous and gastrointestinal involvement, MIS-C was considered and further investigations were done. Complete blood count and inflammatory markers revealed leukocytosis and significantly elevated CRP and hypoalbuminemia (**Table I**).

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Given the epidemiology, reverse transcriptase polymerase chain reaction for COVID-19 was done, which was positive (Ct value – 12.9). Child had all criteria for WHO case definition for MIS-C [5]. ECHO and ECG were normal. He was started on intravenous immunoglobulin (2 g/kg) and intravenous steroids (methyl prednisolone 10 mg/kg/day for 3 days initially) which was then tapered and stopped over 2 weeks, and was also started on aspirin (5 mg/kg/day). He became afebrile within 24 hours and was well on follow-up after 2 weeks. Repeat ECHO at 2 weeks was normal.

This child presented to us after a lag period of around 4 weeks after the first case detection in our country. Whole genome sequencing of the SARS-CoV-2 from the nasopharyngeal aspirate confirmed it to be an Omicron variant (**Web Fig.1**).

There is a steep rise in the number of SARS-CoV-2 infections in South Africa, US and Europe and CDC has reported a proportionate surge in MIS-C with the increase in the number

Table I Laboratory Parameters in the Index Case

Laboratory parameters	Value
Leukocyte count	1.53×10 ⁹ /L (N- 59%)
Hemoglobin	10.8 g/dL
Platelet count	271×10 ⁹ /L
C-reactive protein	64.2 mg/L
Serum sodium	130 mmol/L
Serum albumin	2.7 g/dL
Urine microscopy	Normal
D-dimer	2453 ng/mL
NT- Pro BNP	2774 pg/mL

of COVID cases in each of the previous waves [4]. Payne, et al. [5], in 2020 during the first wave of COVID 19 infection in US, reported the incidence of MIS-C per 1,000,000 person-months to be 5.1 (95% CI, 4.5-5.8) persons and MIS-C incidence per 1,000,000 SARS-CoV-2 infections was 316 (95% CI, 278-357) persons [5].

In children exposed for the first time to SARS-CoV-2 infection, when the Omicron variant was predominant, the disease severity has been observed to be significantly less than when compared to the period when Delta variant was predominant [6]. In a recent report from USA, the emergent Omicron cohort differed significantly from the Delta cohort in both pediatric and adult population in terms of emergency visits, hospitalization, ICU admissions and need for mechanical ventilation [7].

Though only minimal morbidity has been reported so far in children due to the Omicron variant, it is still not known whether the incidence of MIS-C triggered by Omicron is going to be more or less when compared to other variants of SARS-CoV-2.

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