Severe COVID-19 in an Infant with Severe Acute Malnutrition

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The SARS-CoV-2 is responsible for severe viral pneumonia. WHO declared COVID-19 a pandemic on 11th March 2020 [1]. The pandemic is undermining nutrition across the world, particularly in low- and middle-income countries [2]. The worst consequences of this crisis is borne by children.

A 6-mo-old female infant presented with fever, diarrhea, difficulty in breathing since 5 d and was admitted in the pediatric isolation ward of a tertiary level hospital of Udaipur, Rajasthan (India). On GPE baby was febrile, had tachycardia, tachypnea with chest retraction and nasal flaring. SpO₂ was 94% on room air. Baby had pallor, hyperpigmented knuckles, and thin and hypopigmented hair. Weight-for-length was < 3 SD of the median. Systemic examination revealed bilateral crepitations on auscultation. Nasopharyngeal swab of the infant for RT-PCR was positive.

On laboratory testing there was dimorphic anemia (Hb 8.7 g/dL), TLC was 4200/ dL, platelet count was normal, serum CRP was raised (88.29), D-dimer was high (8299 ng/mL), serum ferritin was also raised (1650 ng/mL). HRCT revealed multiple patchy area of consolidation.

Treatment started immediately according to protocol of the Ministry of Health and Family Welfare of India with O₂ inhalation, IV antibiotics, IV methylprednisolone, inj. enoxaparin. Feeding initiated via NG tube. Baby improved and O₂ support was weaned off after 5 d and baby was discharged after nutritional rehabilitation.

Severe acute malnutrition predisposes children to various infections due to decrease in immune response. Malnutrition affects both the innate and adaptive immune responses [3]. Some micronutrients have important role in innate immune

response. Although COVID-19 has been largely causing asymptomatic illness in children but presence of comorbidities is a risk factor for severe illness. Previous case report on a malnourished child with severe COVID-19 reported death of the child [4]. Early diagnosis and treatment will result in better management of patients and fewer mortality.

Declarations

Conflict of Interest None.

References

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