COVID-19 in a Young Infant — A Fatal Multisystem Inflammatory Disorder

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Received: 20 October 2020 / Accepted: 28 December 2020 / Published online: 6 January 2021
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To the Editor: A previously healthy 2-mo-old infant presented with fever, inspiratory stridor, and multiple episodes of focal clonic seizures. He was in compensated shock with respiratory distress and had altered sensorium at admission for which he was appropriately managed. He tested positive for COVID-19 by reverse transcription-polymerase chain reaction (RT-PCR). His baseline investigations were: hemoglobin 8.3 g/dL, total leukocyte count (TLC) 21,260/mm³ (N-79/L-14), platelet 5.5 lakhs, calcium 5.71 mg/dL, phosphorus 7.16 mg/dL, vitamin D < 4 ng/mL, parathyroid hormone (PTH) 246 pg/mL, elevated procalcitonin (4.04 ng/mL), interleukin (IL) 6 (57 pg/mL), ferritin (536 ng/mL) and normal hs C-reactive protein (0.10 mg/dL). Chest radiograph showed bilateral infiltrates. His cerebrospinal fluid analysis was normal but ultrasound cranium showed meningeal thickening. His clinical and laboratory profile fulfilled the criteria for multisystem inflammatory syndrome in children (MIS-C). He was given injection dexamethasone and was planned for injection Remdesivir but could not be given due to transaminitis. Due to initial clinical improvement on conservative management, he was not given steroids and/or intravenous immunoglobulin (IVIG) but respiratory distress persisted due to COVID pneumonia which later worsened and he succumbed to his illness. His final diagnosis was COVID-19 pneumonia with pediatric acute respiratory distress syndrome [arterial partial pressure of oxygen (PaO₂)/ fraction of inspired oxygen (FiO₂) = 107] with hypotensive shock with meningoen- cephalitis with multisystem inflammatory syndrome with hypocalcemia with vitamin-D deficiency.

There is very limited data available regarding manifestations of COVID-19 in young infants. As per Wu et al. in

72,314 COVID-19 cases, children comprised only less than 1% and out of this, 20% cases comprised young infants [1]. Young infants can have more critical presentation compared to older children [2, 3]. Many cases of MIS-C or atypical Kawasaki-like illness have been reported in previously healthy children in older age group after SARS-CoV-2 infection [4], but reports in infants are scarce. This case highlights MIS-C in infants and stresses the need for timely appropriate management.

Compliance with Ethical Standards

Conflict of Interest None.

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