



Clinical and Laboratory Findings of Children Affected with Adenovirus Infection

Arit Bhakta¹ · Pratik Thosani² · Sajith Surendran¹ · Ashok Kunchala¹ · R. W. Thergaonkar¹

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To the Editor: An outbreak of adenoviral infection by a recombination of type 3 and 7 strains occurred from December 2022 till the early months of 2023 in West Bengal [1].

During this epidemic, twenty-one patients aged between 0–5 y were admitted in the pediatric ward of our hospital with acute respiratory infection, testing positive for adenovirus using BioFire™ test for upper respiratory panel, between 15 February 2023 and 30 April 2023. The predominant clinical manifestations were rhinitis (9, 42.9%), laryngotracheobronchitis (7, 33.3%), pre-school wheeze (11, 52.4%) and pneumonia (5, 23.8%). Four (19.0%) and nine (42.9%) of the children had conjunctivitis and diarrhea respectively. Respiratory support required was oxygen by nasal cannula and heated humidified high-flow nasal cannula in eight (38.1%) patients each.

Six patients were found to have metabolic alkalosis. Urinary chloride was evaluated and found elevated (> 20 mEq/L) in four of these patients suggesting a renal cause [2]. Eight patients had hypokalemia; fractional excretion of potassium was tested and found elevated in five of these patients, again suggesting renal losses.

Seven (33.3%) patients had multi-system involvement where symptoms did not improve even after initial therapy for more than 5 d. Elevated IL-6 was noted in all patients suggesting cytokine storm. In two patients, IVIG (1 g/kg/d intravenously for 2 d) was administered without success. They were then treated with IV methylprednisolone 1 mg/kg/dose 6 hourly till afebrile followed by oral prednisolone

1–2 mg/kg/d for 3 d. Since this regimen was successful, it was repeated in the remaining five patients with good response. Complications in the form of Kawasaki disease and diffuse lung disease were seen in one patient each.

Hypokalemia and cytokine storm are reported in adenoviral infection [3, 4]. We additionally report metabolic alkalosis and response of cytokine storm to corticosteroids.

Declarations

Conflict of Interest None.

References

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✉ R. W. Thergaonkar
rantherg@gmail.com

¹ Department of Pediatrics, 3rd Floor, MCH Block, Command Hospital (Eastern Command), Kolkata, West Bengal, India

² Department of Microbiology, Command Hospital (Eastern Command), Kolkata, West Bengal, India