



Safety and Tolerability of Remdesivir in Infants and Children with COVID-19

Tanu Singhal¹ · Juhi Mehrotra¹ · Santanu Sen¹

Received: 30 April 2023 / Accepted: 17 July 2023 / Published online: 4 August 2023
© The Author(s), under exclusive licence to Dr. K C Chaudhuri Foundation 2023

To the Editor: COVID-19 is a mild illness in children and generally requires only symptomatic therapy. Antiviral therapy may be considered in children with COVID-19 pneumonia or those with risk factors for disease progression [1]. Remdesivir and monoclonal antibodies are the only approved treatments for children [1]. There is limited data on the safety and tolerability of remdesivir in children.

We included all children below 18 y with confirmed SARS-CoV-2 infection at our centre who received at least 1 dose of remdesivir from 2020–2022. Remdesivir was given after taking due consent as per standard doses [1]. Information regarding demographics, indications for remdesivir, adverse effects and outcomes was analysed.

A total of 21 children (15 boys) with age ranging from 1 mo to 18 y (mean age 8 y) were included in the study. The indications for remdesivir were 4 children with moderate COVID-19 pneumonia (age related tachypnea with/without hypoxia), 4 children with computerized tomographic (CT) but no clinical evidence of pneumonia, 2 ventilated infants with nosocomial COVID-19 infection following post complex cardiac surgery and 11 children with mild COVID-19 infection with risk factors including post hematologic stem cell transplant recipients (n = 5), hematologic malignancy on chemotherapy (n = 5) and neonate with congenital heart disease (n = 1).

All children received the full course except two where therapy was interrupted due to transient elevation of liver enzymes/early discharge (1 each). No cases of sinus bradycardia were observed. Two patients with COVID-19 pneumonia and hypoxia also received steroids. Nineteen children

improved and were discharged. Two infants with COVID-19 infection following congenital heart surgery died but causal relationship with COVID-19 could not be established.

Our study adds to growing evidence of safety and tolerability of remdesivir in infants and children with COVID-19 [2–4]. However in the absence of a control group no conclusions about efficacy can be made.

Declarations

Conflict of Interest None.

References

1. Galindo R, Chow H, Rongkavilit C. COVID-19 in children: clinical manifestations and pharmacologic interventions including vaccine trials. *Pediatr Clin North Am.* 2021;68:961–76.
2. Goldman DL, Aldrich ML, Hagmann SHF, et al. Compassionate use of remdesivir in children with severe COVID-19. *Pediatrics.* 2021;147:e2020047803.
3. Samuel AM, Hacker LL, Zebracki J, et al. Remdesivir use in pediatric patients for SARS-CoV-2 treatment: single academic center study. *Pediatr Infect Dis J.* 2023;42:310–4.
4. Ong RYL, Seah VXF, Chong CY, et al. A cohort study of COVID-19 infection in pediatric oncology patients plus the utility and safety of remdesivir treatment. *Acta Oncol.* 2023;62:53–7.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

✉ Tanu Singhal
tanusinghal@yahoo.com

¹ Department of Pediatrics, Kokilaben Dhirubhai Ambani Hospital and Medical Research Institute, Mumbai, India