

Editorial

Update on Treatment of Covid-19 in Children

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Since its emergence in December 2019 in Wuhan, China, more than three years, and a half has passed, yet the world is still grappling with the far-reaching impacts of the COVID-19 pandemic. Many countries endured a devastating blow during the second wave of COVID-19, witnessing a significant rise in severe cases among children and instances of multisystem inflammatory syndrome in children, surpassing the numbers seen during the initial wave of the pandemic [1].

While numerous countries have successfully developed effective COVID-19 vaccines for adults, options for pediatric populations have only recently emerged. The Drugs Controller General of India (DCGI) granted emergency approval for the use of COVISHIELD and COVAXIN in pediatric patients aged 12 years and older [2]. However, despite considerable research efforts, a definitive cure or treatment for COVID-19 remains elusive. Several drugs, including remdesivir, casirivimab/imdesivimab, ivermectin, baricitinib, and tofacitinib, have garnered significant attention, but none can be hailed as a panacea [3].

In the realm of adult COVID-19 treatment, a plethora of uncontrolled and controlled trials, along with comprehensive meta-analyses, have been conducted. In contrast, high-quality studies focusing on children are still in the pipeline [4]. Initially perceived as having a lower risk of contracting COVID-19, especially in its severe form, recent data has revealed that children are susceptible to developing MIS-C, with concerns that they may be disproportionately affected by a potential third wave. Despite India initiating a pediatric trial of COVAXIN for children aged 6 to 12 years, mass vaccination of children soon remains uncertain [5].

The comprehensive analysis, which included a total of 7,780 patients, only provided a summary of treatment approaches. It specifically focused on medications given to 614 children.

In January 2021 Irfan et al. Conducted a review, with a larger group of 9,935 patients compared to ours. However, our study solely concentrated on COVID 19 treatment. Deliberately excluded studies that lacked information about the treatments used. This is different from the two reviews that mainly examined the characteristics.

Regarding remdesivir in adults a meta-analysis indicated a statistically significant decrease in mortality rates and an improvement in recovery time. There was also a reduction in events and serious adverse events associated with its use. On the hand a published meta-analysis on tocilizumab for severe COVID 19 in adults did not provide conclusive evidence supporting its use. Measures such as mortality rate, risk of intensive care unit admission and the need for ventilation were found to be similar between those who received tocilizumab and those who did not. Similarly, when it comes to corticosteroids for COVID 19 in adults' findings from studies have been inconsistent. Make it difficult to definitively determine their protective benefits. However, the RECOVERY trial demonstrated improved outcomes with dexamethasone treatment for severe cases. Unfortunately, there is currently no review available for children due to the lack of completed controlled trials, with published results.

Up to this point, most studies and meta-analyses involving children have primarily centered on clinical features and outcomes, offering only peripheral insights into the treatment regimens applied [6]. Among the types of medications used, anti-inflammatory drugs such, as corticosteroids and antiviral medications like remdesivir have shown the promising results for treating severe cases of COVID 19 in children. In cases of multisystem inflammatory syndrome in children, immunoglobulin along with anti-inflammatory or immunomodulatory drugs like anakinra, aspirin and anticoagulants play a significant role,

in therapy. It's worth noting that most mild cases can be effectively treated with measures.

References

1. Jain S, Sen S, Lakshmivenkateshiah S, Bobhate P, Venkatesh S, Udani S, et al. Multisystem inflammatory syndrome in children with COVID-19 in Mumbai, India. *Indian Pediatr.* 2020; 57: 1015-9.
2. Thanh Le T, Andreadakis Z, Kumar A, Gómez Román R, Tollefsen S, Saville M, et al. The COVID-19 vaccine development landscape. *Nat Rev Drug Discov.* 2020; 19: 305-6.
3. Weinreich DM, Sivapalasingam S, Norton T, Ali S, Gao H, Bhore R, et al. REGN-COV2, a neutralizing antibody cocktail, in outpatients with Covid-19. *N Engl J Med.* 2021; 384: 238-51.
4. Siemieniuk RA, Bartoszko JJ, Zeraatkar D, Kum E, Qasim A, Martinez JPD, et al. Drug treatments for Covid-19: living systematic review and network meta-analysis. *BMJ.* 2020; 370: m2980.
5. Livemint. Covaxin trials on children aged 6-12: AIIMS Delhi to start recruitment from Tue. 2021.
6. Panda PK, Sharawat IK, Panda P, Natarajan V, Bhakat R, Dawman L. Neurological complications of SARS-CoV-2 infection in children: A systematic review and meta-analysis. *J Trop Pediatr* 2020. 2021; 67: fmaa070.