



COVID-19 in Children: What We Know and What We Don't Know?

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Received: 31 July 2021 / Accepted: 11 August 2021 / Published online: 1 September 2021
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COVID-19 still is an ongoing pandemic [1]. We should be ready with all knowledge about COVID-19 in children to tackle a surge in children, if occur after widespread use of vaccination in adults.

In this issue of the Indian Journal of Pediatrics, a retrospective study by Nallasamy et al. reported the clinical profile and outcome of 31 children admitted with COVID-19 during the first wave, from a tertiary care center in Northern India [2]. There were 58% asymptomatic cases, 23% mild, 3% moderate, 13% severe, and 3% critical [2]. A multicentric study of 402 children from India reported asymptomatic disease in 35.8%, mild disease in 54.5%, and moderate-to-severe disease in 9.7% cases [3]. A systematic review including 27 studies (4857 patients) reported mild disease in 40%, moderate disease in 56%, severe disease in 3%, and critical disease in 1% cases [4]. The difference in severity % may be due to different inclusion criteria in studies.

The index study reported fever, diarrhea, and vomiting in 32%, 10%, and 10% cases, respectively [2]. Nearly similar trend of clinical features was seen in the multicentric study [3] and systematic review [4]. Children had varied clinical presentations, and a few clinical features to screen children for COVID-19 may miss many cases.

The investigations were done in only 7 children and lymphopenia, raised CRP, and abnormal chest radiograph was seen in 1 (16%), 3 (43%), and 3 (43%), respectively [2]. The multicentric study reported low total serum proteins (34.7%), lymphopenia (25.4%), transaminitis (26.4%), thrombocytopenia (22.1%), raised ferritin (58.9%), raised C-reactive protein (33.3%), and procalcitonin in 53.5% [3]. There is a need for prospective studies to establish the pattern of laboratory abnormalities in children.

Three (10%) children required PICU admission and mechanical ventilation; all had underlying comorbidity [2]. All children survived except 1 (3%) death. The mortality was 3.2% in the multicentric study, and all children who died had underlying comorbidity [3].

The infectivity and duration of infectivity of children with COVID-19 are not well studied. Further, the infectivity of asymptomatic children with COVID-19 and the risk of disease spread is not known.

The vaccination for COVID-19 is found to be effective in adults. There are few concerns about the vaccine in children. The trials of the vaccine are from adults, though some trials are going on in children. Most of the cases in children are mild, and the safety of the vaccine, especially long-term safety, in children is unknown; therefore, the blanket vaccination of all children should be viewed with caution [5]. Further, about half of the children are already seropositive for COVID-19 antibodies in India. As most severe/critical cases and almost all deaths due to COVID-19 occur in children with underlying comorbidity, this group of children should be considered for vaccination. Further, we have to see the effects of vaccination on the multisystem inflammatory syndrome in children (MIS-C).

Declarations

Conflict of Interest None.

References

1. World Health Organisation. WHO Coronavirus Disease (COVID-19) Dashboard. Available at: <https://covid19.who.int/>. Accessed on 31 July 2021.
2. Nallasamy K, Angurana SK, Jayashree M, et al. Pediatric COVID Management Team. Clinical profile, hospital course and outcome of children with COVID-19. *Indian J Pediatr.* 2021:1–6. <https://doi.org/10.1007/s12098-020-03572-w>.
3. Jat KR, Sankar J, Das RR, et al. Clinical profile and risk factors for severe disease in 402 children hospitalized with SARS-CoV-2 from India: collaborative Indian pediatric COVID study group. *J Trop Pediatr.* 2021;67:fmab048.
4. Meena J, Yadav J, Saini L, et al. Clinical features and outcome of SARS-CoV-2 infection in children: a systematic review and meta-analysis. *Indian Pediatr.* 2020;57:820–6.
5. Wilkinson D, Finlay I, Pollard AJ, Forsberg L, Skelton A. Should we delay covid-19 vaccination in children? *BMJ.* 2021;374: n1687.

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