

COVID-19 Infection in Children Admitted to Academic Hospitals in Central South Africa

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Abstract : Background: During the COVID-19 pandemic, the Omicron variant was highly infectious in children and resulted in high hospital admission rates in this population compared to other SARS-CoV-2 variants. This study aimed to determine the prevalence of SARS-CoV-2 infection in hospitalized children in the Free State Province of South Africa. Methods: This prospective cross-sectional study was conducted from January 2022 to April 2023 in the Free State, South Africa. A total of 320 admitted children between the ages of 0-12 years were recruited. All participants were tested for SARS-CoV-2 using the nucleocapsid antibody rapid test. Parent and caregiver vaccination history was also collected. Results: In our study, 46.8% of the children tested positive for SARS-CoV-2. The highest infection rate was observed in neonates (60%). All children were admitted for various reasons, and none were screened for suspected SARS-CoV-2 on admission. Of the infected population, 28% were premature, 12.6% had gastrointestinal tract infections (GIT), 12% had respiratory conditions (12%), and 10% had central nervous system conditions (CNS). 43.3% of the infected children were from vaccinated parents or caregivers. Conclusion: Our study showed that a high number of hospitalized children tested positive for SARS-CoV-2 while admitted for conditions unrelated to COVID-19. Most, if not all, children did not exhibit COVID-19-specific symptoms, and this may be due to the omicron variant, which was highly infectious but less virulent and was associated with mild disease.

Keywords : SARS-CoV-2, Omicron variant, antibodies, children, admission diagnosis

Conference Title : ICPCH 2024 : International Conference on Paediatrics and Child Health

Conference Location : Cape Town, South Africa

Conference Dates : November 04-05, 2024