A Descriptive Cross-Sectional Study on Reverse Transcriptase Polymerase Chain Reaction (RT-PCR) Cycle Threshold Level, Mortality and Pediatric Respiratory Distress Syndrome Among COVID-19 patients Admitted at Philippine Children's Medical Center

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BACKGROUND

The real time reverse transcriptase polymerase chain reaction cycle threshold values are inversely related to viral load and believed to have a role in terms of mortality and severity of the disease however, there is limited data in children

OBJECTIVE

This study aimed to determine the RT-PCR cycle threshold level in relation to mortality and pediatric acute respiratory distress syndrome (pARDS) among pediatric COVID-19 patients

METHODS

A descriptive cross sectional study was done on patients with RT-PCR confirmed covid-19 admitted at Philippine Children's Medical Center from September 2020 to June 2021

RESULTS

50 nasopharyngeal swab specimens from children admitted for COVID-19 were analyzed, 12 (24%) had acute respiratory distress syndrome. Among the 12 children who had pARDS, six (50%) expired; in those without pARDS, two (5.26%) expired. There was no difference in cycle threshold values between patients who died and who survived, as well as those with or without pARDS

CONCLUSION AND RECOMMENDATION

We have no evidence to demonstrate a difference in Ct values alone between children who died or survived, or those who developed pARDS or those who did not. Ct values may be explored in more detail with age groups in future studies. Ct value was not associated in developing pARDS or mortality.

Keywords: severe acute respiratory syndrome coronavirus 2, RT-PCR cycle threshold, mortality, pediatric acute respiratory distress syndrome