EPIDEMIOLOGY AND FACTORS ASSOCIATED WITH DISEASE SEVERITY AND MORTALITY AMONG HOSPITALIZED PEDIATRIC PATIENTS WITH COVID-19: A SINGLE-CENTER, RETROSPECTIVE COHORT STUDY

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INTRODUCTION

Variants of SARS-CoV-2 were found to have different clinical presentations and severity, but local data are lacking in the pediatric population. Our study aims to describe the clinical presentation and outcome of pediatric patients across the different SARS-CoV-2 variant surges.

METHODS

Children with COVID-19 admitted in PCMC from March 2020 to December 2022 were studied. Data was collected through chart review and Stata MP version 17 software was used for data processing and analysis. The patients were categorized by surge periods based on date of diagnosis as Pre-Delta, Delta, Omicron, and Post-Omicron. Logistic regression analysis was performed to determine the factors associated with severity and mortality.

RESULTS

A total of 502 patients were included. Seventy-one percent had co-morbidities (24% - neurologic, 21% - hematologic/oncologic). The leading co-infection was dengue (7%). Fever (57%), difficulty of breathing (35%), and cough (31%) were the most common symptoms. Shock was highest during the pre-Delta period. Having dengue, elevated inflammatory marker/s and abnormal chest radiograph were associated with severe disease. Eighty-six patients died (17%) and was highest during pre-Delta (24%) and lowest during post-Omicron (8%). The presence of gastrointestinal co-morbidity, blood stream infection, severe/critical COVID-19 and inotrope use were associated with mortality.

DISCUSSION

The results of this study provide valuable information on the clinical characteristics of COVID-19 in children and the differences during the different variant surge periods. Understanding the clinical features of COVID-19 in children is important to adequately assess, identify and manage children at highest risk of severe disease and death.

KEYWORDS

COVID-19, children, Philippines, epidemiology, clinical profile