

The impacts of COVID-19 on elective general pediatric surgery

- A retrospective study of single institution in Japan -

by

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Abstract

Background: The impact of the COVID-19 era on pediatric patients who underwent elective surgery have not been fully investigated, especially in Japan. The aims of this study are to clarify the impact of COVID-19 pandemic on elective general pediatric surgery at our institution comparing the circumstances before, during, and after the pandemic, so that these findings can be used to develop strategies for improving protocols for coping with pandemic situations in the future.

Methods: Patients who underwent elective general pediatric surgery in the Department of Pediatric Surgery at St. Luke's International Hospital between 2017 to 2023 were assigned to three groups: 1) pre-COVID group (n=460), 2) COVID group (n=508), and 3) post-COVID group (n=81). Rescheduling of elective surgery, the reason for rescheduling and associated information were retrospectively extracted and investigated.

Results: The baseline characteristics were comparable between the groups except for a larger proportion of female patients in pre-COVID group compared with COVID group ($p<0.01$). The proportion of rescheduling were 5.4% (25/460), 14.6 % (74/508), and 35.8 % (29/81) in the pre-COVID, COVID, and post-COVID groups, respectively ($p<0.01$ between all groups). Most patient experienced only one rescheduling, however, some patients experienced multiple rescheduling (e.g. 2 to 5 times). Among the total rescheduling events (41, 94, 39 times in pre-COVID, COVID, post-COVID group, respectively), infectious disease and patient/parental inconvenience were the common reasons of rescheduling. Notably, the COVID group had some specific reasons for rescheduling which were related to the unique circumstance of the COVID-19 era (e.g. close contact with COVID-19 positive patient, pediatric ward closed due to COVID-19 cluster and concerning COVID-19 contact).

Conclusions: COVID-19 brought a significant impact on scheduling elective pediatric

surgery, even after calming down. Education of patients and efforts of medical staff are both important to provide appropriate elective pediatric surgery.

Keywords: viral infection, general anesthesia, pediatric general surgery

List of abbreviations

COVID-19	Corona-virus infectious disease, emerged in 2019
BT	Body temperature
SD	Standard deviation
CI	Confidence interval