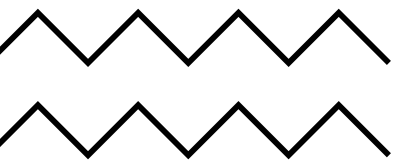


THE SAFETY OF PAEDIATRIC SURGERY BETWEEN COVID-19 SURGES: AN OBSERVATIONAL STUDY



Alder Hey Children's 
NHS Foundation Trust

Authors

S H El-Sheikha
N Permall
A. Howie
C. Parry
C. L. Shelton
S. Cobley
R. Craig
N. Herbert
P. Arnold
I. N. C. Okonkwo



Introduction

This Winter, the NHS faces an unprecedented challenge of managing elective and emergency services alongside the coronavirus pandemic (COVID-19).

Methods

This observational cohort study was conducted between 23rd March and July 5th 2020. Data was collected in two phases.

- Phase 1 was a retrospective analysis of urgent and emergency paediatric surgical cases presenting between 23rd March 2020 and 25th May 2020.
- Phase 2 commenced with prospective data analysis of all children and young people undergoing elective surgery between 26th May 2020 and 21st June 2020.

Within phases 1 and 2 we evaluated patient, surgical and hospital demographic data alongside SARS-CoV-2 RT-PCR testing outcomes utilising electronic case notes. In phase 2, unplanned admissions to critical care, 14-day re-admission rates and length of stay were also evaluated.

Conclusion

Our data suggest that in children and young people undergoing surgery during the endemic phase of COVID-19; a combined approach of 14-day household isolation, pre-operative testing and clinical screening confers comparable levels of safety and peri-operative outcomes to surgery undertaken before the COVID-19 pandemic.

Despite the ongoing COVID-19 pandemic, elective paediatric surgery must continue safely through subsequent waves of disease. This study may provide a model for addressing the ongoing challenges posed by COVID-19, as well as future pandemics.

Future work: COVID-KIDS study:

Multicenter UK study examining outcomes in context of schools restarting

Results

Planned surgery resumed 26th May 2020; in the four subsequent weeks there were 197 patients for emergency and 501 for elective procedures. A total of 488 out of 501 (97.4%) elective admissions proceeded, representing a 2.6% COVID-19-related cancellation rate.

There was no difference in the incidence of SARS-CoV-2 amongst children and young people who had or hadn't isolated for 14 days ($p > 0.99$).

One out of 685 (0.1%) children who had surgery re-presented to hospital with symptoms potentially consistent with SARS-CoV-2 within 14 days of surgery.

Outcomes were similar to those in the same time-period in 2019 for length of stay ($p = 1.0$); unplanned critical care admissions ($p = 0.59$); and 14-day hospital readmission ($p = 0.17$). However, the current cohort were younger ($p = 0.037$); of increased complexity ($p < 0.001$) and underwent more complex surgery ($p < 0.001$).



Elective patients:

- Family to self isolate for 2 weeks
- Swab <72hours pre op
- On day questionnaire: if high risk repeat swab <24hours pre op

