

PAEDIATRIC EMERGENCY LAPAROTOMY AUDIT (PELA): A UK TERTIARY CENTRE EXPERIENCE.

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Aims: The NELA (National Emergency Laparotomy Audit) report published in July 2016 has raised serious concerns about the process of care and outcomes in adult's Emergency Laparotomy. It has also shown that the mortality rate within 30 days of surgery in adults was 11%.

There is no such audit established yet for children in the UK.

The aim of this study was to investigate the outcomes of Paediatric Emergency Laparotomies Audit (PELA) conducted at our centre.

Methods: Data was collected using Hospital Episode Statistics for this retrospective study (2008-2015). Neonates and cases of appendicitis were excluded. Results were analysed using SPSS with p value ≤ 0.05 as significant. An extensive literature search was also done to investigate the evidence in children and adult practice.

Main Results: Out of 161 patients [with male: female ratio (1.5:1); median age 2.8years (1month-17.6years); ASA score 2 or more in 49%, co-morbidities in 31%], history of previous abdominal surgery was identified in 37% cases. Median time from admission to operation was 15 hours. Median hospital stay was 8 days, with 6 days median post-operative stay. 51% cases required ITU/HDU care. 39% operations were performed out-of-hours(18.00-08.00). Indications for operation were: bowel adhesion-obstruction(35%); intussusception(25%); volvulus(9%), malrotation(6%); other(24%). Operative procedures were: adhesiolysis(29%); open reductions of intussusception(23%); bowel resection-anastomosis(18%); Ladd's(6%), other(25%).

The mortality within 30 days of operation was 3.1% (5/161).

Total mortality was 4% (3.7% within 90 days of the operation).

Causality parameters of deceased cases vs overall cohort were not different (details summarised in table 1). Important morbidities were *readmissions* 22%(35/161) and reoperations 5% (8/161).

On literature search, no study was found from developed countries.

Conclusions: In comparison to adult studies (e.g. NELA), morbidities and mortalities were lower in PELA. There is an urgent need of multicentre study to further define the outcomes of PELA.

	Median age	Known co-morbidity	Previous relevant surgical history	ASA ≥ 2	% cases performed out-of-hours	Post-op PICU admission
Overall study	2 year 10 month	31% (50)	37%(60)	49%(79)	39%(61)	51%(82)
Deceased cases	4 month	28%(1)	14%(2)	71%(5)	50%(3)	100%(7)
P value	0.14	0.95	0.71	0.75	0.86	0.49

Table 1: Causality parameters of deceased cases vs overall cohort