The Right Iliac Fossa pain Treatment Audit

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On behalf of the RIFT Group

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The West Midlands Research Collaborative has run two national audits. Over 170 centres have participated in WMRC projects across the UK. All collaborators are recognised as fully PubMed-citable co-authors.
National Appendicectomy Audit

- 3,326 patients across 95 centres
- Initial laparoscopic approach in 66.3%
- Negative appendicectomy rate 20.6% (range 3-37%)
- Trainee performed appendicectomies not associated with increased risk of 30-day complications
- Appendicectomies performed at the weekend not associated with increased complications
- Timing of operation not related to pathological findings
Outcome of appendicectomy in children performed in paediatric surgery units compared with general surgery units.

Tiboni S¹, Bhangu A, Hall NJ; Paediatric Surgery Trainees Research Network and the National Surgical Surgical Research Collaborative.

Abstract

BACKGROUND: Appendicectomy for acute appendicitis in children may be performed in specialist centres by paediatric surgeons or in general surgery units. Service provision and outcome of appendicectomy in children may differ between such units.

METHODS: This multicentre observational study included all children (aged less than 16 years) who had an appendicectomy at either a paediatric surgery unit or general surgery unit. The primary outcome was normal appendicectomy rate (NAR). Secondary outcomes included 30-day adverse events, use of ultrasound imaging and laparoscopy, and consultant involvement in procedures.

RESULTS: Appendicectomies performed in 19 paediatric surgery units (242 children) and 54 general surgery units (461 children) were included. Children treated in paediatric surgery units were younger and more likely to have a preoperative ultrasound examination, a laparoscopic procedure, a consultant present at the procedure, and histologically advanced appendicitis than children treated in general surgery units. The unadjusted NAR was significantly lower in paediatric surgery units (odds ratio (OR) 0.37, 95 per cent confidence interval 0.23 to 0.59; P < 0.001), and the difference persisted after adjusting for age, sex and use of preoperative ultrasound imaging (OR 0.34, 0.21 to 0.57; P < 0.001). Female sex and preoperative ultrasonography, but not age, were significantly associated with normal appendicectomy in general surgery units but not in paediatric surgery units in this adjusted model. The unadjusted 30-day adverse event rate was higher in paediatric surgery units than in general surgery units (OR 1.90, 1.18 to 3.06; P = 0.011). When adjusted for case mix and consultant presence at surgery, no statistically significant relationship between centre type and 30-day adverse event rate existed (OR 1.59, 0.93 to 2.73; P = 0.091).

CONCLUSION: The NAR in general surgery units was over twice that in paediatric surgery units. Despite a more severe case mix, paediatric surgery units had a similar 30-day adverse event rate to general surgery units. Service provision differs between paediatric and general surgery units.
RIFT audit standards

- Appendicectomy should be performed laparoscopically unless contraindicated

- The negative appendicectomy rate should be <20%

For centres with higher or lower rates, risk stratification of all patients presenting with RIF pain will allow interpretation of this rate in light of baseline case-mix
Methods

- Prospective multicentre data collection
- Three 2-week data collection periods
- Inclusion criteria: Consecutive patients referred with RIF pain or suspected appendicitis (no age restrictions)
- Exclusion criteria: pregnancy, previous appendicectomy or right hemicolecotomy
Data collection

- Presenting signs and symptoms
- Investigations + Imaging
- Risk scoring
- Management (incl. inter-hospital transfer)
- Use of laparoscopy
- Histology
- Readmission and re-intervention rates
Outputs

- National re-audit
- Variation in adult and paediatric practice
- Validation of Alvarado and AIR scores (age stratified)
- Derivation and validation of novel score

- Development of PAEDS app:
  - Paediatric Appendicitis in ED Scoring
  - Simple calculators for paediatric analgesia and antibiotic dosing and fluid prescribing
Impact of trainee research collaboratives in the UK

Individual surgical trainees link together in research collaboratives, working together to deliver multi-centre research

GI surgery trainee collaboratives have run studies across 99% of the 241 GI surgical units in the UK

Cumulative participation of UK GI surgical centres in trainee collaborative studies:

- 2012: 106 centres (44%)
- 2013: 183 centres (76%)
- 2014: 230 centres (95%)
- 2015-16: 238 centres (99%)

Progress

- UK/ Ireland: 200 units
- Spain/ Portugal: 60 units
- Italy: 65 units

- Today is day 12 of period 1: 1,185 cases logged

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