

# AB016. SOH22ABS010. A comparison of intra operative diagnosis to histopathological diagnosis of acute appendicitis in paediatric and adult cohorts: an analysis of over 1,000 patients

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**Background:** Appendicitis is a common general surgical emergency. The role of removing a normal appendix is debated. However, this relies on accurate intra-operative diagnosis of a normal appendix by the operating surgeon. This study aimed to compare surgeon's intra-operative assessment to final histological result acute appendicitis in paediatric and adult patients.

**Methods:** All patients who underwent appendicectomy over a 14-year period in a general surgical department were identified using the prospective Lothian Surgical Audit system and pathology reports retrieved to identify final histological diagnosis. Open appendicectomy was selected to examine, as the routine practise at our institution is to remove a normal appendix at open appendicectomy.

**Results:** A total of 1,035 open appendicectomies were performed for clinically suspected appendicitis. Sensitivity of intraoperative diagnosis of appendicitis with operating surgeon was high at 95.13% with no difference between trainee and consultant surgeon or between adult and paediatric cases. Specificity of intra-operative diagnosis was lower in the paediatric group (32.58%) than in the adult group (40.58%). Women had a higher rate of negative

appendicectomy than men.

**Conclusions:** The results of this study highlight some discordance between histological evidence of acute appendicitis and intra-operative impression. Therefore other clinical variables and not just macroscopic appearance alone should be used when deciding to perform appendicectomy.

**Keywords:** Acute appendicitis; histopathology; intra-operative diagnosis; pathology; surgical training

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## Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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