



## AB098. 17. Unplanned re-operation and interventional radiology post appendicectomy: a meta-analysis

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**Background:** Emergency general surgery care accounts for >60% of hospital admissions and over 6,000 appendectomies are performed annually in Ireland. Re-intervention is an unexpected outcome following index appendicectomy and not subjected to a published meta-analysis to date. This meta-analysis evaluated the prevalence and potential predictors of reoperation and interventional radiology drainage post appendicectomy.

**Methods:** An ethically approved PROSPERO-registered (ID CRD42017069040) meta-analysis following PRISMA guideline using databases, PubMed and Scopus for studies from June 2012 to May 2017 was undertaken. Headings included “reoperation”, “return to operation theatre”, “complication”, “appendicectomy”, “outcome”, “abscess

drainage”. Articles scoring  $\geq 16$  for comparative and  $\geq 10$  for non-comparative using MINORS criteria were included. P values of  $< 0.05$  were considered statistically significant.

**Results:** A total of 2,810 articles reviewed were reduced to 52 qualifying studies for a final analysis of 315,312 appendectomies. Overall 0.8% (range, 0.0–14.2%) underwent re-intervention consisting of reoperation in 0.6% (range, 0.0–14.9%) and radiologic drainage rate 1.5% (range, 0.0–11.1%). Reoperations were significantly reduced by a laparoscopic approach, non-complicated appendicitis, and avoiding a drain. Single port versus triple port laparoscopy, laparoscopy versus conversion from laparoscopy to open, and the grade surgeon performing the appendicectomy were not associated with re-intervention.

**Conclusions:** This meta-analysis identified a small but notable reoperation and re-intervention rate, significantly increased by complex appendicitis and open surgery. Strategies promoting for earlier presentation and diagnosis with more widespread laparoscopic approaches may improve overall outcomes.

**Keywords:** Appendicectomy; emergency; re-operation; interventional radiology

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