

Negative Appendicectomy Rates in the Era of Cross Sectional Imaging

Shoieb Hossain Mridha*

Doncaster & Bassetlaw Hospitals NHS Foundation Trust, United Kingdom

Ayman El-Shihaby

Doncaster & Bassetlaw Hospitals NHS Foundation Trust, United Kingdom

Tim Wilson

Doncaster & Bassetlaw Hospitals NHS Foundation Trust, United Kingdom

Abstract:

Introduction: Although Appendicitis is mainly a clinical diagnosis, the use of cross sectional imaging to aid patient flow has increased dramatically in our institution since the COVID pandemic. CT (computed tomography) scan has a high predictive value for appendicitis. The aim of this audit was to examine the effect of increased CT use on negative appendectomy rates.

Methods: A retrospective serial cohort of 50 case of emergency appendicectomy were identified from electronic theatre records in 2023 (July–September). Electronic patient records were used to collect demographic data and information on preoperative imaging and postoperative histology. Negative appedicectomy rate was compared to previous local records and with the National standard.

Results: Median age was 49 years (range 18–84), male: female ratio– 44: 56. Preoperative CT imaging was used in 42/50 patients (84%). The rest underwent other imaging modalities or did not have imaging. Only two patients (aged 20 & 25) had negative histology for appendicitis. Both these patients were female and did not have any CT scans. Our negative appendicectomy rate in this cohort was 4%. This compares to a rate of 30.6% in 2013 when our department last audited this. The accepted national standard for negative appendicectomy rate is < 20%.

Conclusion: Our trust has a very low negative appendicectomy rate, which is likely to be due to high CT use. This improves patient flow, reduces bed occupancy and minimise operative morbidity. These advantages need to be offset against the morbidity and cost of CT use.