

AB199. 202. The usefulness of pre-operative imaging in lowering negative appendectomy rates?

Carolyn Cullinane, Ben Creavin, Emer O'Connell, Brian Waldron

Department of General Surgery, University Hospital Kerry, Ratass, Tralee, Co Kerry, Ireland

Background: Acute appendicitis is the most common abdominal surgical emergency with the gold standard treatment being an appendectomy. Even with advanced adjuncts to diagnosis, negative appendectomy rates (NAR) remain high and currently no universal imaging algorithm exists. The aim of this study was to elucidate the clinical value of ultrasonography and CT in diagnosing appendicitis and correlate its impact on NAR.

Methods: A retrospective review of a prospectively maintained database of patients undergoing appendectomy for acute appendicitis was performed over a 3-year period. Radiological and histological reports of appendectomy

patients were analysed and compared with patients who went straight for surgery without imaging. Primary outcome was negative appendectomy rate.

Results: A total of 458 appendectomies were performed between 2016–2018. One hundred and ninety-two had imaging in the form of CT (n=74) or US (n=118) pre-operatively. The appendix was not visualised in 22.88% of ultrasound reports. The sensitivity and specificity of ultrasound scans was 91.66% and 48.38% respectively. The NAR was 29.66% in those who had pre-operative ultrasound compared to 10.8% who had pre-operative CT. Overall those who had pre-operative imaging had a NAR of 22.4% compared to those who had clinically confirmed diagnosis of appendicitis with a NAR of 29.58%.

Conclusions: CT is far superior to US in reducing NAR. Although the sensitivity of US scan was high this did not translate into a low negative appendectomy rate and its clinical contribution is questionable.

Keywords: Appendicitis; ultrasound; computed tomography; appendectomy; diagnosis

doi: 10.21037/map.2019.AB199

Cite this abstract as: Cullinane C, Creavin B, O'Connell E, Waldron B. The usefulness of pre-operative imaging in lowering negative appendectomy rates? *Mesentery Peritoneum* 2019;3:AB199.