

AB175. 107. The over-reliance on imaging in diagnosing acute appendicitis

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Background: Appendicitis has long been considered a clinical diagnosis. However, with the advent of easily accessible radiology, this very notion is under challenge. This study was undertaken to assess the diagnostic pathways employed in the management of acute appendicitis, focusing primarily on the increasing reliance on imaging in modern practice.

Methods: To rule out observer effect, a retrospective and prospective cohort study was conducted between January 2017 and December 2017. Included were all adult patient presentations with suspected acute appendicitis at a tertiary teaching hospital in Perth, WA, Australia. Data review captured key demographics, radiology utilisation, operative modality, complications and histopathology reports.

Results: A total of 418 patients presented with suspected acute appendicitis. The median age was 34 (range, 18–91). Fifty-six percent (n=234) were in the retrospective group and 54% (n=224) were female. The overall negative appendicectomy rate was 21.8% (P=0.21). Seventy-two point five percent (n=303) patients had imaging performed. Of the 103 clinically diagnosed and 150 diagnosed using computed tomography (CT), the positive rate on histopathology was 83.5% and 81.5% respectively (P=0.23). The negative appendicectomy rate for ultrasound reported acute appendicitis was 19% (n=16). The *t*-test for equality of means Standard Error 0.23 (P=0.005) revealed that imaging delayed time to surgery.

Conclusions: This study highlighted the increasing reliance on radiology with 72% of patients who presented to emergency department (ED) with suspected acute appendicitis undergoing some form of imaging. On analysis there was no statistical significance between the accuracy of clinical diagnosis *vs.* imaging aided diagnosis when juxtaposed against final histology. In addition, imaging comes with the burden of cost and delayed time to surgery.

Keywords: Appendicitis; imaging

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