AB113. SOH23ABS_022. Retrospective audit assessing the performance of computed tomography and ultrasound in diagnosing acute appendicitis

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Background: Acute appendicitis continues to be a challenging diagnosis. Preoperative radiological imaging using ultrasound (US) or computed tomography (CT) has gained popularity as it may offer a more accurate diagnosis than classic clinical evaluation. The aim of this study is to assess the performance of US and CT on patients with histologically confirmed acute appendicitis who presented to St. Luke's hospital, Kilkenny.

Methods: This was a retrospective audit of 198 patients who had a laparoscopic appendicectomy between June 2021 and June 2022. This patient cohort was obtained from the Hospital In-Patient Enquiry department. The patient's imaging and histology reports were reviewed and analysed.

Results: The overall sensitivity of US on detecting acute appendicitis was 19.4% and the specificity was 96.4%. The positive predictive value and negative predictive value for US was 85.7% and 51.9%, respectively. The overall sensitivity of CT on detecting acute appendicitis was 94.9% and the specificity was 100%. The positive predictive value and negative predictive value for CT was 100% and 50%, respectively. The Negative Appendicectomy Rate was calculated to be 12.1%.

Conclusions: CT was found to be a much more accurate and useful imaging modality for diagnosing acute appendicitis in adults and adolescents when compared to US. US was found to have a high specificity, and therefore appeared accurate in excluding appendicitis. However, due to its poor sensitivity, it did not appear useful in diagnosing appendicitis. As such, the routine use of US in diagnosing acute appendicitis cannot be advocated, but may be beneficial in cases where there is clinical uncertainty.

Keywords: Appendicitis; computed tomography (CT); sensitivity; specificity; ultrasound (US)

Acknowledgments

Funding: None.

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.

doi: 10.21037/map-23-ab113

Cite this abstract as: Cuddihy T, Mustafa H, McIntyre T. AB113. SOH23ABS_022. Retrospective audit as-sessing the performance of computed tomography and ultrasound in diagnosing acute appendicitis. Mesentery Peritoneum 2023;7:AB113.