

AB171. 13. Ultrasound as investigation of acute appendicitis in paediatric population

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Background: Acute appendicitis is the most common emergency abdominal surgery, with a lifetime prevalence of 7%. Most often it affects patients between 10–20 years old, which means a large portion of these are paediatric patients. Accurate and timely diagnosis is challenging due to atypical presentation and difficulty obtaining a reliable history and physical examination in younger children. Ultrasound is the first imaging modality used for diagnosis of acute appendicitis due to its wide availability, low cost and no risk of ionizing radiation. This study aims to evaluate need of ultrasonography in diagnosing acute appendicitis in paediatric population.

Methods: This cross-sectional validation study is done in St. Luke's Hospital Kilkenny looking in paediatric population presented from January 2015 to December 2016 with diagnosis of acute appendicitis and underwent appendectomy.

Data is collected from HIPE for all the patients who have appendectomy. Ultrasound results are from NIMIS and histology is checked from laboratory inquiry software using patient hospital record number. All patient who presented with diagnosis of acute appendicitis underwent appendectomy from 7 to 17 years were included in the study. Patients who had diagnosis of acute appendicitis but treated conservatively were excluded from the study.

Results: A total of 189 patients underwent appendectomy with clinical diagnosis of acute appendicitis. Ninety-four were male and 95 were female. Seventy-eight patients had ultrasound scan to assess for acute appendicitis. Four patients were diagnosed with acute appendicitis on ultrasound with sensitivity of 50%. Ultrasound was negative for acute appendicitis in 74 patients with specificity of 50%. Positive predictive value of ultrasound scan is 5.13% and negative predictive value of 94.87%. Sixty-three percent patient with clinical diagnosis of acute appendicitis had confirmation on histology.

Conclusions: Acute appendicitis is clinical diagnosis. Ultrasound is not useful in diagnosis of acute appendicitis due to its low sensitivity and specificity.

Keywords: Appendicitis; diagnosis; ultrasound; efficacy

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