



AB099. Ultrasonography in acute appendicitis in paediatrics: the diagnostic yield

Anisah Farouk, Michael Devine, Shona Tormey, Anne Merrigan, Juliette Buckley

Department of Surgery, University Hospital Limerick, Dooradoyle, Co. Limerick, Ireland

Background: The most common cause of emergency surgery in the paediatric population is acute appendicitis. Ultrasonography remains the standard initial radiological investigation of choice in diagnosis of acute appendicitis in children, although significant variation in efficacy exists within different health centres. The objective of this study was to explore the diagnostic value and limitations associated with ultrasonography in acute appendicitis in a paediatric cohort while assessing the specificity and sensitivity. A secondary objective of the study was to evaluate the negative appendectomy rates in this tertiary referral centre.

Methods: A retrospective study of all paediatric patients who underwent appendectomy between the ages of 4 and 16 that had pre-operative ultrasounds from 01/01/2017

to 31/12/2018 was carried out in University Hospital Limerick. The Health InPatient Enquiry system and hospital radiology software were used to identify the required patients with assessment of clinical, radiological, intra-operative findings, and histological results.

Results: A total of 341 patients had an appendectomy over the 24-month period, 119 patients had pre-operative ultrasounds. Of these, following histopathology confirmation, ultrasonography was found to have a sensitivity of 36.67% and specificity of 98.31% with a positive predictive value of 0.95 and negative predictive value of 0.60. One patient was found to be falsely positive on US.

Conclusions: Though highly specific for appendicitis, the utility of obtaining a pre-operative ultrasound is low given the undesirable sensitivity and wide user variation, hence treatment in accordance with astute clinical examination is paramount.

Keywords: Acute appendicitis; paediatric appendicitis; appendectomy; sonography; validity

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