



## Accuracy of Findings of Ultrasound (USG) Examination in Pediatric Patients with suspected Appendicitis with Intraoperative Findings

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**Abstract : Background & Objectives:** Unspecified lower abdominal pain might confuse clinicians in diagnosing pediatric appendicitis. Ultrasonography, as an initial affordable tool, has been learned its role in reducing unnecessary appendectomy. This study aimed to determine the accuracy of ultrasonography in pediatric acute appendicitis and its correlation to intraoperative findings, confirmed by histopathology results. The result would verify other study experience.

**Methods :** The study was a diagnostic study which retrospectively review the children who underwent an ultrasound study for suspected appendicitis in pediatric surgery division of Haji Adam Malik Hospital and Universitas Sumatera Utara Hospital, Medan, North Sumatera between January 2014 until March 2019. We determined the accuracy along with sensitivity and specificity results of Ultrasonography (USG) using calculated formula. The comparison between ultrasonography results and intraoperative findings was analyzed using Chi Square test or its alternative.

**Results :** Among the 32 patients, male and female were almost equal in 1:1 ratio, with mean age of 14.06 ( $\pm$ 3.98) years old. Twenty-six patients were positively diagnosed as appendicitis using ultrasonography. Only two patients have no appendicitis based on intraoperative findings, confirmed by histopathology results. There is a statistically significant difference between ultrasonography findings and histopathology results ( $p=0,03$ ). We obtained the accuracy of ultrasonography in predicting appendicitis was 87.5%, with 86.7% sensitivity and 100% specificity.

**Conclusion :** Our results compare favorably with alternative studies, however indicate the potential for improvement in accuracy of image, with a future study incorporating new ways of categorizing ultrasound findings presently being undertaken.

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