



[Role of clinical judgment and tissue harmonic imaging ultrasonography in diagnosis of paediatric acute appendicitis.](#)

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Source

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Abstract

ABSTRACT:

BACKGROUND:

Appendicitis is the most common surgical emergency in children; yet, diagnosis of equivocal presentations continues to challenge clinicians.

AIM:

The objective of this study was to investigate the hypothesis that the use of a modified clinical practice and harmonic ultrasonographic grading scores (MCPGS) may improve the accuracy in diagnosing acute appendicitis in the pediatric population.

PATIENTS & METHODS:

MAIN OUTCOME MEASURES:

Sensitivity, specificity, and accuracy of the modified scoring system. Five hundred and thirty patients presented with suspected diagnosis of acute appendicitis during the period from December 2000 to December 2009 were enrolled in this study. Children's data that have already been published of those who presented with suspected diagnosis of acute appendicitis- to whom a special clinical practice grading scores (CPGS) incorporating clinical

judgment and results of gray scale ultrasonography (US) was applied- were reviewed and compared to the data of 265 pediatric patients with equivocal diagnosis of acute appendicitis (AA), to whom a modified clinical practice grading scores (MCPGS) was applied. Statistical analyses were carried out using Z test for comparing 2 sample proportions and student's t-test to compare the quantitative data in both groups. Sensitivity and specificity for the 2 scoring systems were calculated using Epi-Info software.

RESULTS:

The Number of appendectomies declined from 200 (75.5%) in our previous CPGS to 187 (70.6%) in the MCPGS ($P > 0.05$). Specificity was significantly higher when applying MCPGS (90.7%) in this study compared to 70.47% in our previous work when CPGS was applied ($P < 0.01$). Furthermore, the positive predictive value (PPV) was significantly higher (95.72%) than in our previous study (82.88%), ($P < 0.01$). Overall agreement (accuracy) of MCPGS was 96.98%. Kappa = 0.929 ($P < 0.001$). Negative predictive power was 100%. And the Overall agreement (accuracy) was 96.98%.

CONCLUSIONS:

MCPGS tends to help in reduce the numbers of avoidable and unnecessary appendectomies in suspected cases of pediatric acute appendicitis that may help in saving hospital resources.

- 1- [J Ren Care](#). 2012 Mar;38(1):43-9. doi: 10.1111/j.1755-6686.2011.00237.x. Epub 2011 Nov 15.