

## Peer Review

# Review of: "Effectiveness of the PAS for Diagnosing the Severity of Acute Appendicitis in Children: A Cohort Study"

Meer M Chisthi<sup>1</sup>

1. General Surgery, Medical College Trivandrum, Thiruvananthapuram, India

The introduction effectively presents acute appendicitis (AA) in children and introduces the Pediatric Appendicitis Score (PAS) as a diagnostic tool. It provides relevant epidemiological data, mentions the Jerusalem Guidelines, and outlines why the PAS is a useful tool in emergency settings. The study design and patient selection criteria are well described. The division into simple and complicated appendicitis groups is clear, as are the definitions of each type based on intraoperative findings. The manuscript also details the statistical methods and variables used in the PAS assessment. The manuscript includes several well-structured tables summarizing the study population, PAS parameters, and statistical findings. However, a few areas could be improved: Table 1 (PAS Parameters): While this table outlines PAS scoring criteria, it would help to briefly define what each parameter indicates in appendicitis progression (e.g., why leukocytosis is a key marker). Figure 2 (ROC Curve): This is a key figure, but the explanation in the text does not clearly discuss what the AUC of 59.3% means in clinical terms. Table 6 (Operative Findings vs. PAS): The table is useful, but grouping similar findings together (e.g., listing perforated and gangrenous appendicitis together under "complicated") would improve readability. The odds ratio for  $PAS \geq 8$  (OR = 2.246,  $p = 0.077$ ) suggests a trend toward predicting severity but is not statistically significant—this should be highlighted more strongly in the discussion. The study only examines  $PAS \geq 8$ , whereas other studies have evaluated CRP, symptom duration, and combined scores—this limitation could be further emphasized. Suggested Improvement: Explicitly state that while  $PAS \geq 8$  increases the probability of severe appendicitis, it is not sufficient alone and should be used in combination with other markers. The main conclusion that  $PAS \geq 8$  alone is not a reliable predictor of severity is well supported by the AUC

of 59.3% and the non-significant OR of 2.246. The discussion acknowledges previous research that used multi-variable models (e.g., CRP + PAS + symptom duration), which strengthens the argument that the PAS should not be used in isolation.

## **Declarations**

**Potential competing interests:** No potential competing interests to declare.