

Letter to the editor about the article “Association between complete blood count parameters and histologically proven acute appendicitis”

Carta al editor sobre el artículo “Asociación entre los parámetros del hemograma y la apendicitis aguda histológicamente comprobada”

Enes Ağırman^{1*}, Rifat Peksöz², and Sabri S. Atamanalp²

¹Department of General Surgery, Erzurum City Hospital; ²Department of General Surgery, Atatürk University Research Hospital. Erzurum, Turkey

To the Editor,

We read with great interest the article by AlHarmi R., titled “Association between complete blood count parameters and histologically proven acute appendicitis.” This publication highlights the importance of laboratory values in the diagnosis of acute appendicitis¹. Acute appendicitis is the most common surgical emergency in both pediatric and adult populations. Its diagnosis relies on clinical findings, blood parameters, and imaging modalities. While the diagnostic efficacy of imaging methods currently exceeds 90%, their utilization can be restricted by various factors. In pediatric patients, challenges include patient non-compliance, concerns regarding radiation exposure from computed tomography (CT), and the inherent difficulty for pediatric patients to articulate symptoms. In adults, pregnancy and contrast-induced nephropathy are additional considerations limiting CT use. Ultrasonography offers a non-invasive and safe alternative, but its widespread applicability is hindered by the necessity for specialized operator skills, preventing its routine use by all clinicians. Particularly for physicians practicing in rural settings, blood parameters emerge as the most readily available and crucial diagnostic tool. Among laboratory assessments, the complete blood count holds a prominent position. Its rapid turnaround time, near-universal accessibility in healthcare

facilities, and satisfactory diagnostic value render it a valuable diagnostic instrument. Consequently, studies investigating blood parameters in patients with acute appendicitis are of considerable significance. The authors’ valuable contribution will undoubtedly enrich the existing literature. However, engaging in a discussion about this study will contribute to both the current study and future investigations. We’ve shared some aspects of this study that piqued our interest and offered recommendations for the article.

First, the authors indicated that the platelet-to-lymphocyte ratio (PLR) demonstrates diagnostic utility, even if at a low value. However, the diagnostic efficacy values of PLR (AUC, sensitivity, and specificity) are insufficient for its use in diagnosis or differential diagnosis. It’s possible that other parameters not assessed in the study might have similar diagnostic efficacy to PLR.

Second, bilirubin has recently emerged as a significant laboratory parameter under investigation for determining acute appendicitis and predicting complicated appendicitis². Notably, it serves as an important indicator for detecting perforation, particularly in pediatric patients³. We recommend that the authors consider incorporating bilirubin levels into their current or prospective studies, as this could yield more impactful findings.

***Correspondence:**

Enes Ağırman

E-mail: agirman_enes@hotmail.com

2444-0507/© 2025 Academia Mexicana de Cirugía. Published by Permanyer. This is an open access article under the terms of the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Date of reception: 29-06-2025

Date of acceptance: 07-07-2025

DOI: 10.24875/CIRUE.M25000908

Cir Cir (Eng). 2025;93(6):677-678

Contents available at PubMed

www.cirurgiaycirujanos.com

Third, the inclusion and exclusion criteria should be clearly defined. Many conditions, such as systemic diseases, hematological disorders, malignancies, and pregnancy, directly influence blood parameters⁴. Therefore, patients with these conditions should be excluded from the study. The article does not provide information on whether such patients were included.

Another point to consider is the negative appendectomy rate, which is reported in the literature to be between 10% and 15%, with some studies even reaching 30%⁵. However, in your study, this rate appears to be 0%. Could you please explain how this is accounted for? Or, if such cases existed, were these patients excluded from the study?

Finally, when describing the clinical characteristics of the study groups, including information such as duration of symptoms (days), length of hospital stay, and any complications that developed, would lead to a better understanding of the patient cohorts. This information could be presented in descriptive statistics of the study groups table

We congratulate the authors on their successful study and eagerly await their response to our letter.

Sincerely,

Funding

The authors declare that they have not received funding.

Conflicts of interest

The authors declare no conflicts of interest.

Ethical considerations

Protection of humans and animals. The authors declare that no experiments involving humans or animals were conducted for this research.

Confidentiality, informed consent, and ethical approval. The study does not involve patient personal data nor requires ethical approval. The SAGER guidelines do not apply.

Declaration on the use of artificial intelligence. The authors declare that no generative artificial intelligence was used in the writing of this manuscript.

References

1. AlHarmi R. Association between complete blood count parameters and histologically proven acute appendicitis. Asociación entre los parámetros del hemograma y la apendicitis aguda histológicamente probada. Cir Cir (Eng). 2025;93:28-34.
2. Peksöz R, Dişçi E, Kaya A, Ağırman E, Korkut E, Aksungur N, et al. Significance of laboratory parameters in diagnosing acute appendicitis during pregnancy. ANZ J Surg. 2022;92:121-7.
3. Koirala DP, Gupta AK, Dahal GR, Shrestha BM, Shrestha S, Neupane S, et al. Role of hyperbilirubinaemia as a predictor of complicated appendicitis in paediatric population. Afr J Paediatr Surg. 2022;19:61-4.
4. Peksöz R, Bayar B. The role of complete blood count parameters in diagnosing acute appendicitis and measuring the severity of inflammation. Ulus. Travma Acil Cerrahi Derg. 2021;27:654-61.
5. Jukić M, Nizeteo P, Matas J, Pogorelić Z. Trends and predictors of pediatric negative appendectomy rates: A single-centre retrospective study. Children (Basel). 2023;10:887.