

Letter to the editor about the article “Procalcitonin and C-reactive protein as predictive biomarkers of anastomotic leak in colorectal surgery”

Carta al editor sobre el artículo “Procalcitonina y proteína C reactiva séricas como biomarcadores predictivos de dehiscencia de anastomosis intestinal en cirugía colorrectal”

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I have carefully reviewed the article published by Jiménez-Lizaola et al.¹ on predictive biomarkers for dehiscence. The authors present a diagnostic test study with 11 patients. They describe the statistical management of clinical and laboratory quantitative variables but do not present the sample size calculation, a basic requirement for a study of this nature. This work more closely resembles a case series to which a diagnostic test design has been adapted. The study has serious deficiencies, given that from its title and objective, it seeks predictors for anastomotic dehiscence in colorectal surgery, but only six of its cases were colorectal, as five were ileocolic. In no case is the precise level of the anastomoses, the technique used (manual or mechanical), or the approach (open or laparoscopic) described. There is a wide variation in the results of the quantitative variables presented with means and standard deviations, without clarifying whether an analysis was carried out to establish the distribution of the results, such as the Kolmogorov-Smirnov test. The quantitative variables were analyzed with a one-sample Student's t-test or Wilcoxon test. In both cases, this was incorrect, as a Student t-test for independent samples or a Mann-Whitney U test should have been applied if the distribution of results was abnormal.

The prevalence of the dehiscence phenomenon was 36.4%, a markedly high result in patients with optimal preoperative preparation conditions for elective surgery. Furthermore, 1 patient died on day 11 from a supposed acute myocardial infarction, but was discharged from the hospital with elevated C-reactive protein. The authors do not describe whether close monitoring was maintained or if the diagnosis of acute myocardial infarction was based on strict criteria, or if the patient died from abdominal sepsis. In any case, this should have been accounted for as operative mortality. Nor do the authors describe the management of patients complicated with dehiscence (new ostomy? percutaneous drainage? open abdomen?) or if early detection helped in any way. In conclusion, this study has poor utility due to the small sample, it does not present predictive values or areas under the curve, and the statistical analysis is inadequate. I agree with the authors that more studies with larger samples are required to confirm or rule out C-reactive protein and procalcitonin as predictors of anastomotic dehiscence.

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Conflicts of interest

The author declares no conflicts of interest whatsoever.

Ethical considerations

Protection of people and animals. The author declares that no experiments on humans or animals were carried out for this research.

Confidentiality, informed consent, and ethical approval. The study does not involve patients'

personal data nor does it require ethical approval. SAGER guidelines do not apply.

Statement on the use of artificial intelligence. The author declares that no type of generative artificial intelligence was used for the writing of this manuscript.

References

1. Jiménez-Lizaola RB, Fuentes-Orozco C, Pérez-Navarro JV, Morán-Galaviz. Procalcitonina y proteína C reactiva séricas como biomarcadores predictivos de dehiscencia de anastomosis intestinal en cirugía colorrectal. *Cir Cir.* 2022;90:775-80.