LETTER TO EDITOR





Comment on: "Clinical Predictive Score for Cholecystectomy Wound Infection: WEBAC Score"

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To The Editor,

Chaochankit et al. are congratulated for delineating the utility of a convenient tool to predict post-cholecystectomy surgical site infections (SSIs), emanating from a diligent retrospective analysis of 4-year-long prospective infection control registry data. ¹ Duly acknowledging the noteworthy combination of patient- and surgery-related factors relevant to SSIs in the authors' WEBAC score, an additional facet of the index study merits elucidation in the best interest of the *Journal* readership. ¹

The group does not account for hypoalbuminemia in their surgical subset, for the purpose of the corresponding risk assessment. ¹ The above-stated fact deserves attention when independent researchers like Hennessey et al. outline preoperative hypoalbuminemia (serum albumin less than 30 mg/dl) as an independent risk-factor for the development of SSIs following gastrointestinal surgeries (relative risk; 95% confidence interval: 5.68; 3.45–9.35, multivariate *p*-value < 0.001). ² Remarkably, hypoalbuminemia was also linked to the severity of the resultant SSIs in the multi-institutional study by Hennessey et al. ²

Malnutrition, a multimodal complex pathology, has been demonstrated to feature in as high as 30–50% of the surgical patients. ³ Meanwhile, the use of albumin for mapping the nutritional status has received its' fair share of debates; the role of low albumin levels in affecting the outcomes of gastrointestinal surgeries can simultaneously not be undermined. ^{3,4} Even in the strict research frame of SSIs, a narrative review by Wiedermann, apprising hypoalbuminemia as a "surrogate and culprit of infections," provides for a reasonable bio-mechanistic plausibility to suggest pertinent casual associations between hypoalbuminemia and an enhanced propensity to primary and secondary infections. ⁵ Moreover, amidst literature suggesting subtle connections of the

serum albumin to age and smoking status (important components of the Chaochankit et al. WEBAC score), the absence of the former becomes all the more difficult to overlook, only when it classifies as a parsimonious preoperative parameter. ^{1,6,7}

Author Contribution Magoon R: writing the comment.

Declarations

Ethical Approval Not applicable.

Conflict of Interest The author declares no competing interests.

References

- Chaochankit W, Samphao S, Mahattanobon S, Sungworawongpana C. Clinical Predictive Score for Cholecystectomy Wound Infection: WEBAC Score. [Ahead of print, June 20] J Gastrointest Surg. 2023. https://doi.org/10.1007/s11605-023-05750-5.
- Hennessey DB, Burke JP, Ni-Dhonochu T, Shields C, Winter DC, Mealy K. Preoperative hypoalbuminemia is an independent risk factor for the development of surgical site infection following gastrointestinal surgery: a multi-institutional study. Ann Surg. 2010;252:325-9.
- Mosquera C, Koutlas NJ, Edwards KC, Strickland A, Vohra NA, Zervos EE, et al. Impact of malnutrition on gastrointestinal surgical patients. J Surg Res. 2016;205:95-101.
- Petch-In P, Saokaew S, Phisalprapa P, Dilokthornsakul P. The Association of Pre-operative Serum Albumin Levels and Postoperative In-Hospital Death in Patients Undergoing Gastrointestinal Surgeries in Thailand: A Retrospective Cohort Study. Drugs Real World Outcomes. 2023;10:341-9.
- Wiedermann CJ. Hypoalbuminemia as Surrogate and Culprit of Infections. Int J Mol Sci. 2021;22:4496.
- Cooper JK, Gardner C. Effect of aging on serum albumin. J Am Geriatr Soc. 1989;37:1039-42.
- Shaper AG, Wannamethee SG, Whincup PH. Serum albumin and risk of stroke, coronary heart disease, and mortality: the role of cigarette smoking. J Clin Epidemiol. 2004;57:195-202.

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