LETTER TO THE EDITOR

DOI: https://doi.org/10.5114/kitp.2024.138626

Comment on: "Evaluation of perioperative risk factors in pediatric patients with left ventricle outflow tract obstruction"

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Kardiochirurgia i Torakochirurgia Polska 2024; 21 (1): 70

Önemli *et al.* retrospectively evaluated the perioperative risk factors contributing to post-surgical complications in 58 pediatric patients with left ventricle outflow tract obstruction (LVOTO) [1]. Duly acknowledging the merit of the research idea, we wish to present our reflections on this subject of clinical interest.

Of note, the nutritional status of the pediatric surgical subset, especially in the developing world, happens to be often compromised wherein the inexorable systemic inflammatory response to cardiopulmonary bypass (CPB) only furthers the contextual predisposition to postoperative complications [2, 3]. Meanwhile, Önemli *et al.* delineated the inflammatory role of the neutrophil-to-lymphocyte ratio (NLR) in their pediatric patients with LVOTO; it is on juxtaposing the nutritional and the pro-inflammatory predilection that the absence of an account for the preoperative serum albumin (SA) becomes particularly difficult to overlook in the index analysis [1, 2, 4]. Indeed, the independent researchers Leite *et al.* noted that hypoalbuminemia was a common finding in children with heart disease where SA < 3 g/dl was found to be associated with poor postoperative outcomes such as surgical infections and, for that matter, mortality (*p*-values of 0.0026 and 0.0138, respectively) in their study population [2]. At the same time, a retrospective analysis by Lee *et al.* revealed important links between the preoperative SA levels and postoperative acute kidney injury in a pediatric cardiac surgical setting involving a total of 505 patients (odds ratio: 0.506, 95% confidence interval: 0.325–0.788, $p = 0.003$) [4]. Even more interestingly, Yoon *et al.*, albeit in an adult cardiac surgical cohort, reported evidence for lower SA levels in patients with elevated hematological inflammatory indices such as the systemic immune-inflammation index (SII), which is computed as the NLR × platelet count [5].

In reference to the intraoperative details also, one remains perplexed as to the corresponding doses of the vasoactive drug infusions employed in the Önemli *et al.* study participants given the authors' presentation of the percentage of the patients receiving the respective vasopressor or the inotrope [1]. Herein, they could have very well resorted to the use of any of the described dose summative formulas such as the vasoactive-inotropic score (VIS), for the purpose of hemodynamic support quantification [1, 6]. Moreover, relevant literature exists to suggest the prognostic implications of VIS itself in pediatric cardiac surgery [6]. Last but not least, the elucidation of the authors' institutional practices regarding the degree of hypothermia CPB, the use of prophylactic steroids, and modified ultrafiltration could have contributed to the lucidity of their study findings [1, 7].

Disclosure

The authors report no conflict of interest.

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Received: 19.02.2024, **accepted:** 17.03.2024, **online publication:** 30.03.2024.