LETTER TO THE EDITOR

Braz J Cardiovasc Surg 2026;41(2):e20250164
https://doi.org/10.21470/1678-9741-2025-0164
ISSN: 1678-9741

Commentary on "Can Posterior Pericardial Incision Truly Improve Postoperative Complications After Cardiac Surgery?"

Dear Editor,

The article "Can Posterior Pericardial Incision Truly Improve Postoperative Complications After Cardiac Surgery?", published in the Brazilian Journal of Cardiovascular Surgery (or BJCVS) as "a systematic review and meta-analysis", caught our focus. Rising on days 2 - 3 is a frequent surgical condition happening within the 10 - 65% range named postoperative atrial fibrillation (POAF)[1]. As postoperative fluid usually accumulates in the pericardial space, standard chest tubes are less likely to infiltrate posterior effusions behind the heart, which intensifies the risk of complications that involve tamponade. Posterior pericardial effusions may progress to tamponade in the left atrium, assisting POAF[2]. This study, comprising a meta-analysis of 14 randomized controlled trials (RCTs) (2,275 patients), found that posterior pericardiotomy (PP) profoundly drops postoperative effusion and POAF[3].

It is essential to examine the history and methodology of PP to comprehend its therapeutic relevance. Beginning in 1995, an incision in the posterior pericardium directed pericardial fluid in the left pleural cavity[4]. PP implies a 4-cm longitudinal incision crossing the inferior pulmonary vein to the diaphragm, parallel and posterior to the left phrenic nerve[2]. Several other studies have been conducted to demonstrate the efficacy of this surgical intervention. A meta-analysis of 18 RCTs (3,531 patients) showed that PP *vs.* no intervention substantially depresses POAF, tamponade, and both early and late effusions[4]. In a trial of 2,168 coronary artery bypass grafting patients at the Royal Hobart Hospital (2008 – 2022), PP noticeably lowers POAF and tamponade compared to controls[5]. In the RCT of 420 cardiac surgery patients (2017 – 2021), the posterior left pericardiotomy group showed exceptionally reduced rates of POAF and pericardial effusion compared to controls[6]. There remain lots of unresolved concerns regarding PP, particularly considering the long-term consequences involving heart function, arrhythmia occurrence, and patient well-being in living. To accommodate research gaps, massive, multinational RCTs firmly established strategies that are essential, as they include an expanded spectrum of the population undergoing evaluation, including young children and people who live in middle- to lower-income countries.

The assurance of posterior pericardial incision as a cure for atrial fibrillation along with related disorders is emphasized in this article, specifically because of its ability to encourage fluid outflow as well as minimize pericardial effusions, each of which increases the consequences of surgery. Several questions persist, however, particularly about its prolonged impact on heart function, recurrence of challenges, and quality of life. Additional investigation is needed to investigate potential negative consequences, especially those related to higher coagulability, and involves a wider range of patient statistics, including children and people from low-resource environments, to properly understand its wider consequences.

Artificial Intelligence Usage

The authors declare that no artificial intelligence tool was used in the preparation of this letter.

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Editor-in-chief Henrique Murad

How to cite: Sohail F, Shoukat SA, Ali B. Commentary on "Can Posterior Pericardial Incision Truly Improve Postoperative Complications After Cardiac Surgery?". Braz J Cardiovasc Surg. 2026;41(2):e20250164. doi:10.21470/1678-9741-2025-0164.

Article received on May 13th, 2025.
Article accepted on June 3rd, 2025.

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Brazilian Journal of Cardiovascular Surgery
vol. 41, no. 2, e20250164, 2026
Sociedade Brasileira de Cirurgia Cardiovascular,
ISSN: 0102-7638
ISSN-E: 1678-9741

DOI: https://doi.org/10.21470/1678-9741-2025-0164