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Commentary: Is posterior pericardiotomy dangerous? Not based on evidence

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CENTRAL MESSAGE

According to current evidence, posterior left pericardiotomy is not associated with increased mortality and morbidity, and significantly decreases atrial fibrillation occurrence after cardiac surgery.

Rabelo and colleagues[1] retrospectively review a 19-year, single-center experience of 2535 subjects undergoing coronary artery bypass grafting, aortic valve replacement, or combined procedures. Propensity score matching was used to compare outcomes in patients who received a posterior pericardial tube (PPT) in addition to standard drains to those who did not (control group). The analysis showed that the incidence of postoperative atrial fibrillation (POAF) was lower (33% vs 43% [$P = .002$]) and the chest tube output was higher (700 vs 640 mL [$P = .001$]) in the PPT group. No statistical difference was found in any clinical outcomes. At multivariable analysis, the use of a PPT was independently associated with a decreased risk of POAF (odds ratio, 0.67; 95% CI, 0.52-0.88; $P = .003$), although the nonrandomized design is open to bias and confounders (particularly because a PPT was systematically used by only 1 of the surgeons involved in the study) and the reported results must be seen only as hypothesis-generating.

A growing amount of evidence supports the important role of retained pericardial blood in triggering POAF.[2] Posterior left pericardiotomy (PLP) efficiently drains the posterior pericardium and has been proven effective in reducing POAF in multiple randomized trials and meta-analyses, resulting in a class IIA recommendation in current guidelines.[3-5]

It is therefore surprising to read words of concern on the safety of PLP from Rabelo and colleagues.[1] A meta-analysis of 3531 patients undergoing cardiac surgery procedures found that patients receiving PLP did not have an increased risk of operative mortality, re-exploration, pulmonary complications, need for intra-aortic ballon pump, or longer hospital or intensive care unit length of stay.[4]

To date, the only reported PLP-related complication is a case of coronary graft herniation and compression (most likely related to the excessive length of the graft).[6] Rabelo and colleagues[1] quote a case of graft occlusion as an example of PLP-related complication,[7] but there is no evidence in the original source that this was related to PLP, whereas it is known that graft failure is relatively common after coronary artery bypass grafting.[8] Similarly, Rabelo and colleagues[1] cite a case of bleeding from the pericardial edges where the authors of the original publication clearly explain that this event occurred at the beginning of their experience with PLP when scissors were being used, whereas no bleeding was reported when they appropriately switched to using electrocautery,[9] as in the original description of the technique.[10]

It is also important to note that in a small prospective randomized trial, the use of a PPT was associated with a higher rate of complications compared with a right pericardial incision (re-exploration: 15% vs 2% [$P = .008$], pneumothorax: 5% vs 0% [$P = .08$], and pneumonia: 6% vs 2% [$P = .17$]), further contradicting Rabelo and colleagues'[1] statements.[11]

In an era where debate is being abandoned in favor of polarization,[12] and the basic academic principles of open, objective discussion are falling out of favor, we believe

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Received for publication Sept 20, 2024; accepted for publication Oct 3, 2024; available ahead of print Oct 29, 2024.

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JTCVS Open 2024;22:255-6
2666-2736

https://doi.org/10.1016/j.xjon.2024.10.004

that scientific works should still be based on an impartial and open-minded evaluation of the available data, rather than partisanism and ideologic contraposition.

Conflict of Interest Statement

The authors reported no conflicts of interest.

The *Journal* policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.

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