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Commentary: Postpericardiotomy syndrome remains an enigma

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Readers of the *Journal* will find interest in this article on postpericardiotomy syndrome (PPS) after surgical aortic valve replacement from the CAREFIB group of investigators.¹ The current study continues the CAREFIB group's interest in the syndrome. The article is well written and provides insight into PPS.

The authors report on 671 patients operated with isolated surgical aortic valve replacement. PPS was defined by at least 2 of the following: (1) fever without alternative cause, (2) pericarditic or pleuritic chest pain, (3) pericardial or pleural rubs, (4) pericardial effusion, and/or (5) pleural effusion with elevated C-reactive protein. PPS was categorized as moderate when no invasive intervention occurred and severe when invasive intervention occurred (eg, pericardial or pleural drainage).

The median duration of follow-up was 9.0 (6.1-12.0) years. PPS developed in 75 (11.1%) patients and was classified moderate in 51 (7.6%) and severe in 24 (3.5%) of patients. The median time to diagnosis was 16 (11-36) days. Interventions in the severe PPS group included evacuation of a pericardial effusion in 15 patients and evacuation of a pleural effusion in 11 patients.

The authors reported that patients with severe PPS had increased all-cause mortality (adjusted analysis: hazard ratio 2.01 but rather wide 95% confidence interval of 1.03-3.91; $P = .040$) with a median time from diagnosis to death of 460 (83-1300) days. Correlation may not imply causation. The listed causes of death are variable, and the numbers do not easily add up to the reported total of 7. PPS was listed as cause of death in only 1 patient. Pneumonia, atherosclerotic heart disease, and aortic valve stenosis were also listed as causes of death in apparently several patients.

In a previous publication on PPS after open-heart operations, the CAREFIB group excluded from analyses patients

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CENTRAL MESSAGE

Postpericardiotomy syndrome occurs in about 10% of patients after isolated surgical aortic valve replacement. The syndrome may put patients at increased risk of long-term mortality.

who died within 30 days after surgery.² The authors state this was done to minimize the false-negative diagnoses. Such was not done in the current analysis. Examination of Figure 4 demonstrates an early drop in the survival curves suggestive of increased operative mortality in the severe and no-PPS groups. Should operative mortalities have been excluded?

The authors reported that the first-line medication use was glucocorticoids in 64% of the patients with PPS, whereas only 20% received colchicine. This treatment paradigm is counter to current guidelines, which recommend colchicine as the first-line treatment. The authors make note of this in the discussion section of the manuscript. It is unclear the impact of misdirected first-line medication use with glucocorticoids on the mortality endpoint.

The study raises several important questions in need for further study. How to differentiate postoperative pneumonia from PPS? Is there a sex-age interaction? Is there an important distinction between moderate and severe PPS? And, most importantly, how do the adverse events of PPS influence mortality? The authors recognize the issues. Further study is warranted.

References

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