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Commentary: Postpericardial syndrome after cardiac surgery: Is it really benign?

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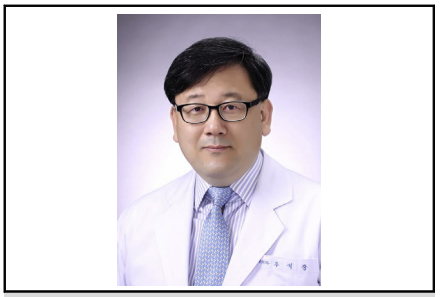

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CENTRAL MESSAGE

PPS is generally regarded as a benign condition, but because severe PPS may increase mortality risk, patients should be treated for both the condition itself and to prevent disease progression.

Lehto and colleagues[1] report on the long-term outcomes of postpericardiotomy syndrome (PPS) occurring after aortic valve replacement (AVR) surgery. The patient cohort was drawn from 2 large Finnish multi-institutional clinical trial databases, namely CAREAVR (Consortium of Studies in the Field of Atrial Fibrillation, Stroke, and Bleeding in Patients Undergoing Aortic Valve Replacement) and CAREBANK (Cardiovascular Research Consortium—A Prospective Project to Identify Biomarkers of Morbidity and Mortality in Cardiovascular Interventional Patients),[1] in which a total of 671 AVR patients (bioprosthesis, n = 361 and mechanical, n = 310) were included. The median follow-up duration was 9 years for survival and 5 years for other adverse events. Only AVR patients were enrolled to avoid confounding that may be caused by including various types of cardiac surgery patients. PPS, diagnosed according to the guidelines for the diagnosis and management of pericardial disease,[2] was found in 11.2% (n = 75) of the cohort. Although there were no overall differences in all-cause mortality between the PPS and non-PPS cohorts, and PPS is generally considered a relatively benign condition, it is remarkable that the authors observed differences in the outcome according to severity; that is, moderate (n = 51; 7.6%) versus severe PPS (n = 24; 3.6%) in which a significant concentration of PPS-related mortality occurred in the severe PPS group (n = 7 patients), which occurred within the first 24 postoperative months. Therefore, despite the overall benign nature of PPS in terms of survival outcomes, this study directs our attention to the effects of severe PPS in particular and the importance of addressing this end point. Although PPS was not found to be significantly associated with an overall higher incidence of major stroke, stroke or transient ischemic attack, or major bleeding, PPS was generally responsible for prolonged hospitalization, increased readmissions, and additional medical therapy. Furthermore, whereas PPS was also associated with a higher incidence of new onset atrial fibrillation after hospital discharge, this event was reportedly transient and did not seem directly correlated with increased mortality risk. Therefore, the data suggest a primary PPS-related risk of death with progression to severe disease.

Currently there is no standardized criteria for accurately diagnosing PPS, and identification of PPS in the actual clinical setting is less straightforward due to the nonpathognomonic nature of the symptoms and signs, such as fever, pericardial/pleural effusion, or transient elevation of inflammatory markers such as C-reactive protein level, all of which may be observed during the normal postoperative recovery period following cardiac surgery. Consequently, in the ''real world'' this may possibly cause under estimation of PPS and lead to delay in more timely institution of focused therapy for PPS. At this point, several questions remain. What is the most effective strategy to prevent severe PPS, and what laboratory and imaging studies should raise the alarm bells indicating to the risk of progression to severe PPS? No standardized treatment protocol is currently available and there are no guides to monitor the treatment

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efficacy of PPS. In the present study alone, relapse occurred in 16% of the 75 PPS patients, stressing the need to develop more effective treatment strategies. Although there were no reported cases of constrictive pericarditis—a rare severe form of complication—it may occur secondary to recurrent pericarditis leading to significant PPS related morbidity.[2] A prospective, double-blind randomized study by Finkelstein and colleagues[3] showed that colchicine may be effective for preventing PPS[3] and this was confirmed by the double-blind, randomized Colchicine for Prevention of Postpericardiotomy Syndrome and Postoperative Atrial Fibrillation clinical trial.[4] Dexamethasone was not found to be as efficacious for preventing PPS progression.[5] Despite the recommended use of colchicine in the guidelines, a general consensus regarding not only the optimal medication but also therapeutic strategy is lacking.[3] This is probably due to the limited experience and awareness of this condition. Although this study is in keeping with the current literature reporting that the overall prognosis of PPS is generally good,[6] it also underlines the significance of severe PPS as a separate, higher mortality risk factor warranting the need to develop a more effective treatment strategy. Therefore, greater efforts should be directed at solving questions relating to the underlying pathogenesis and risk factors actively leading to PPS disease progression.

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