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Management of post-pericardiotomy constrictive pericarditis

We read the article by Mikhail *et al.* with great interest regarding their management of a case of post-pericardiotomy constrictive pericarditis (CP).[1] They describe a case of a 68-year-old man who underwent recent cardiac surgery presenting 4 weeks post-operatively with biventricular failure with preserved ejection fraction and evidence of post-pericardiotomy CP on invasive haemodynamic and multimodality imaging. Given the lack of improvement with intravenous furosemide and colchicine, the decision was made for urgent surgical pericardiectomy, which was technically challenging, requiring a second pericardial decortication procedure. Subsequently, he developed acute right ventricular dysfunction requiring veno-arterial extracorporeal membrane oxygenation support, multiorgan failure, and eventual death. The authors emphasized the importance of incorporating multimodality imaging [including cardiac computed tomography (CT), echocardiogram, and cardiac magnetic resonance (CMR)] to diagnose CP and guide management.

CP post-cardiac surgery is a complication that is challenging to diagnose, occurring in 2–5% of patients with post-pericardiotomy syndrome (PPS), requiring a high index of suspicion and associated with significantly worse outcomes.[2] Although the mainstay treatment of CP is surgery in chronic cases, there may be a role for medical therapy in transient constriction, especially in the early postoperative phase.[2,3] Anti-inflammatory drugs, including non-steroidal anti-inflammatory drugs and/or corticosteroids, with colchicine may resolve the transient constriction until the resolution of the pericarditis, preventing the progression to chronic, non-reversible constriction. In patients with recurrent or incessant pericarditis with evidence of constriction and/or steroid contraindication, there is evidence for interleukin-1 antagonists, namely anakinra, for pericardial constriction reversal. It has been proposed as a last-line option for CP treatment before pericardiectomy, especially in the presence of inflammation.[2,4] In PPS with early signs of constriction, we prefer starting with corticosteroids or anakinra to avoid delays that could lead to permanent constriction, especially in the first 3–6 weeks. Elevation in C-reactive protein (CRP) and imaging evidence of pericardial inflammation on cardiac CT and/or CMR may help identify patients with potentially reversible forms of constriction. Thus, anti-inflammatory therapy should be considered to avoid invasive procedures like pericardiectomy.[3]

Given this patient's subacute presentation post-pericardiotomy, constrictive physiology, increased signal intensity on T2, and late gadolinium enhancement on CMR (representing acute inflammation), this patient could have possibly benefited from corticosteroids or Anakinra.[5] The CRP levels (which have not been reported) could have helped guide this treatment strategy. Of note, the diagnosis of CP is usually based on the clinical picture of right heart failure and evidence of constriction on imaging with ventricular interdependence and pericardial inflammation. Cardiac catheterization is rarely required and should only be considered when non-invasive methods do not provide a definite diagnosis of constriction.[3]

In conclusion, CP is a challenging diagnosis, requiring a high index of clinical suspicion. In addition to multimodality imaging, inflammatory markers like CRP help identify reversible constriction and guide therapy. An adequate trial of medical therapy should be considered, preferably with corticosteroids or anakinra, especially in early PPS when signs of early constriction are present and inflammation is reversible. Surgical options should be reserved for patients unresponsive to medical therapy.

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Ahmed Aldajani[1]*, Michael Chetrit[1], and Vartan Mardigyan[2]
[1]Division of Cardiology, McGill University Health Centre, 845 Rue Sherbrooke O, Montreal, QC H3H 0G4, Canada; [2]Division of Cardiology, Jewish General Hospital, 3755 Chem. de la Côte-Sainte-Catherine, Montréal, QC H3T 1E2, Canada

* Corresponding author. Tel: +1 514 934-1934, Email: ahmed.aldajani@mail.mcgill.ca

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