Abstract: Effective image-guided medical management in effusive constrictive pericarditis

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Topic(s):
Imaging: Pericardial Disease

Citation:
A 59 year old man was admitted to hospitalization for persistent chest pain related to acute pericarditis. Within the admision tests, a transthoracic echography was performed, showing a moderate pericardial effusion with ventricular septal bounce and significant respiratory variations in mitral and tricuspid inflows, all of it consistent with effusive-constrictive pericarditis (Panel A). Anti-inflammatory treatment with ibuprofen and colchicine was started.

During the first 48 hours of admission there was a clinical and hemodinamic worsening in the patient’s condition that forced the performance of a pericardial window, obtaining a very little quantity of dense pericardial fluid. Looking for a more accurate study of the pericardium, a cardiovascular magnetic resonance (CMR) was performed, revealing a thick heterogeneous pericardial effusion (Panel B) and a significant late gadolinium enhancement of both pericardial layers (Panel C). All these findings where consistent with an effusive constrictive pericarditis with persistent inflammatory activity despite high doses of conventional inflammatory treatment. Furthermore, the growth of Propionibacterium acnes in the pericardial fluid disclosed the etiology of this condition.

Medical treatment was enhanced with high doses of intravenous corticosteroid, ceftriaxone and doxycycline. During the following days, the patient showed an excellent response achieving the complete clinical and echocardiographic relief of constrictive signs (Panel D).

Effusive constrictive pericarditis is characterized by the presence of pericardial effusion and constriction secondary to an inflammatory process of the pericardium. Pericardiectomy might be necessary in case of failure of medical treatment, a very common scenario in this kind of pericarditis.

Our case is remarkable because it demonstrates the value of CMR to detect persistent inflammation of pericardium despite high doses of conventional medical treatment for pericarditis guiding the successful escalation to intravenous corticosteroid and avoiding the risk of an unnecessary cardiac surgery.
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