Abstract: P584

An unusual cause of pericarditic chest pain

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Introduction

The evaluation and management of patients presenting with chest pain remains a diagnostic challenge and the differential diagnosis includes a broad range of diseases. Different disease processes can mimic pericarditic pain characteristics.

Purpose

To report a rare case of an extensive chronic type A aortic dissection, likely 2 months old given clinical scenario, in a patient referred for CMR with a clinical diagnosis of pericarditis and suspicion of hypertrophic cardiomyopathy.

Case presentation

A 44-year-old Caucasian male, smoker, with past medical history of gout and obesity presented 2 months earlier at the Emergency department with 48-hour history of intermittent mild central chest pain, worse on inspiration and lying supine. On examination the patient appeared well, blood pressure was 160/90 mmHg, pulse was regular, with no pulse deficit. Electrocardiogram showed widespread deep T-wave inversion in lateral and inferior leads, and mild PR depression leads V1 and V2. Laboratory results were completely normal. Transthoracic echocardiogram showed normal left ventricular size and systolic function, and normal pericardium. However, there was moderate concentric hypertrophy with a suggestion of lack of apical tapering. The patient was diagnosed with pericarditis based on clinical presentation and ECG findings, but was scheduled for CMR to further delineate cardiac anatomy and assess for hypertrophic cardiomyopathy.

CMR revealed the unexpected finding of extensive type A aortic dissection, with a visible entry tear at the sinotubular junction (Figure 1, A and B). The ascending aorta was moderately dilated (50 mm at the level of the main pulmonary artery) and there was moderate aortic regurgitation. Coronary arteries were not involved. The dissection involved the brachiocephalic trunk and left subclavian artery, and continued into the descending aorta (Figure 1C) to the level of the renal arteries, with flow evident in both the true and false lumens. There was no evidence of hypertrophic cardiomyopathy. The pericardium was normal.

The patient underwent elective ascending aorta and aortic hemiarch replacement with resuspension of the native aortic valve, two weeks after the diagnosis. The operation was uncomplicated, and post-operative computed tomography imaging demonstrated satisfactory aortic appearances (Figure 1D).

Conclusion

Aortic dissection is a life-threatening condition which can present with a broad range of symptoms, including
pericarditic chest pain. A high index of suspicion is essential in all patients presenting to the emergency department with chest pain, especially in those with predisposing risk factors or high-risk conditions. Stanford type A aortic dissection is a vascular emergency with a high mortality rate. Only a small proportion of type A aortic dissections overcome the critical acute phase and are diagnosed upon delayed presentation of symptoms or incidentally.