Pericardial calcification: an uncommon presentation of rheumatic heart disease

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DESCRIPTION

A 42-year-old man presented to cardiology outpatient department with complaints of gradually progressive dyspnoea on exertion, easy fatigability and mild intermittent atypical chest pain for the past 9 months. Chest radiograph revealed mild cardiomegaly, enlarged left atrium and presence of multiple focal calcific specks along right inferior and upper left cardiac border (figure 1A). Transthoracic echocardiography showed thickened mitral valve leaflets with restricted mobility of posterior leaflet and mitral stenosis with mitral regurgitation.

CT angiography (CTA) was planned for evaluating cardiac and coronary morphology. CTA showed multiple foci of calcification along the pericardium, distributed along the lateral border of

both atrium, inferior border of right ventricle and inferolateral border of left ventricle (figure 1B,C). There was thickening of both mitral valve leaflets with commissural fusion, restricted motion of posterior mitral leaflet and small calcific speck at tip of anterior mitral leaflet (figure 1D,E). There was presence of subvalvular deformity in the form of chordae shortening and thickening. Lung parenchyma showed no features of active or past tuberculous infection with no significant mediastinal lymphadenopathy. These findings were consistent with rheumatic mitral valve disease with pericardial involvement in form of pericardium calcifications.

Rheumatic pericarditis may lead to pericardial effusion, fibrinous pericarditis or tamponade. Calcification of the involved pericardium has been

Figure 1 Frontal chest radiograph (A) shows cardiomegaly with enlarged left atrium along with linear calcific foci (black arrows) along cardiac borders, which were confirmed to be involving the pericardium (white arrows) on coronal reconstructed maximum intensity projection images of CT angiography (B, C). Short-axis (D) and long-axis (E) reconstructions reveal thickening of mitral valve (MV) leaflets along with speck of calcification involving the anterior MV leaflet (dotted black arrow) along with the pericardial calcifications (white arrows). LA, left atrium; LV, left ventricle.

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Learning points

- ▶ Rheumatic heart disease can lead to pericarditis, which can uncommonly result in a multifocal distribution of pericardial calcification.
- ▶ It is important to rule out tuberculosis as a cause of pericardial thickening and calcification before making this diagnosis.

described in literature previously; however, its real incidence is unknown.^{1 2} Before making this uncommon diagnosis, it is imperative to rule out tuberculosis as a cause of pericardial thickening and calcification, especially in developing countries, where patients belonging to the low socioeconomic strata can have coexisting tubercular infection along with rheumatic fever. In this case, typical rheumatic mitral valve lesions were present on CTA with pericardial calcifications with absence of any features suggesting present or past tubercular infection, which leaves

little doubt regarding the primary pathology being rheumatic in nature, with subsequent involvement of pericardium manifested as pericardial calcifications.

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