


A 24-year-old woman presented with 8-week history of recurrent left pleuritic chest pain, shortness of breath, and hemoptysis. Past medical history was significant for d-transposition of the great arteries, repaired with an arterial switch operation at birth, followed by homograft patch repair of the stenotic pulmonary trunk during childhood. CT pulmonary angiogram showed a large calcified mass in the pulmonary trunk (Panel A, solid arrow) with chronic emboli to segmental pulmonary arteries bilaterally (Panels B and C, dotted arrows; Supplementary data online, Videos S1) and left pleural effusion (Panel B, asterisk). The large central mass also caused subtotal occlusion to the left lung, reducing perfusion to 5% on nuclear perfusion scan (Panels Di–ii). Despite these findings, right ventricular systolic pressure was estimated to be normal at echocardiography. Formal right heart catheterization was deemed inadvisable in the presence of the central pulmonary artery mass. The patient subsequently underwent removal of the central mass and endarterectomy of the calcified fragment in the right lower lobe artery (Panels B and C, circle). The excised central mass (Panel E) was firmly attached to the pericardial patch used to repair the main PA at the previous operation. Histology demonstrated predominantly calcified material (Panel F, solid arrow) with chronic thrombus and small focal areas of fibrotic tissue (Panel F, dotted arrow).

To our knowledge, this is the first reported case of calcific pulmonary emboli related to prior congenital cardiac repair. The implanted homograft the patient received in childhood likely served as the nucleation site for thrombosis. The long interval between surgery and complication, along with its rarity, translated to a very unusual diagnosis.

MPA, main pulmonary artery; Ao, aorta; Rt, right; Lt, left.

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