Clinical vignette

Giant left atrial appendage aneurysm

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A 67-year-old lady was referred to our hospital because of abnormal findings on a simple chest radiograph. The chest radiograph showed a markedly prominent left cardiac border (Panel A). Because a radiolucent cleft (Panel A, arrow heads) was observed in the lower medial side of the bulge, the bulging shadow rather looked like a longish mass (Panel A, asterisk). She had a complaint of atypical chest discomfort and a history of embolic stroke. Physical examination revealed no abnormalities except irregular pulse. The baseline ECG showed atrial fibrillation. Cardiac 64-slice multidetector computed tomography (MDCT) was undertaken, which demonstrated normal coronary arteries and a 4 × 6 × 8 cm-sized left atrial appendage aneurysm (LAAA) containing thrombus (Panel B). Transesophageal echocardiography was unremarkable, except a dilatation of the left atrial appendage. Transesophageal echocardiography clearly showed a huge aneurysm of the left atrial appendage and confirmed a mobile thrombus within it (Panel C). Because the patient strongly refused the surgery, she was discharged with oral anticoagulant therapy.

There are several conditions such as mediastinal mass, pericardial cyst, cardiac tumour, pericardial, or extracardiac fluid collection that can generate a prominent left cardiac border on the simple chest radiograph. If the prominent left cardiac border is incidentally found on the chest radiograph, and combined with atrial fibrillation and history of embolic stroke, a giant LAAA containing thrombus could be suspected, although it is extremely rare. Because the anomaly has a potential source and risk for systemic embolization and arrhythmia, surgical resection should be recommended even in asymptomatic patients.

Panel A. Simple postero-anterior chest radiograph shows a markedly prominent left cardiac border. Because there is a radiolucent cleft (arrow heads) indicating epicardial fat between the giant LAAA and the left ventricle, the bulging shadow looks like a longish mass (asterisk).

Panel B. Cardiac 64-slice MDCT. On 2 min delayed venous phase images, a 4 × 6 × 8 cm-sized left anterior mediastinal mass (asterisk) communicates with the left atrium and is opacified except a non-enhancing filling defect (arrow). These findings indicate a giant LAAA (asterisk) with a thrombus (arrow). LA, left atrium; LV, left ventricle.

Panel C. Transesophageal echocardiography demonstrates a giant LAAA (asterisk) and a mobile thrombus (arrow) within it. LA, left atrium; LV, left ventricle.