Intra-cardiac erosion of a pectus bar

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A 25-year-old man presented with acute pleuritic chest pain and dyspnoea with type I respiratory failure. Past medical history comprised of mild asthma and surgical correction of pectus excavatum 9 years prior by elevation of the sternum and stabilization over a Lorenz Pectus bar. Examination demonstrated tachypnoea, pansystolic murmur at the left lower sternal edge and giant V-wave jugular venous pulsation. ECG showed sinus tachycardia, right bundle branch block, and rightward axis. CT pulmonary angiography suggested segmental pulmonary arterial filling defects, but was particularly remarkable in view of an intra-cardiac location of the pectus bar (Panels C and D). Trans-thoracic echocardiography also revealed a foreign body passing through a disrupted and severely regurgitant (but not stenotic) tricuspid valve and excluded significant pericardial effusion (Supplementary data online, Videos S1 and S2). Remarkably, surgical exploration confirmed the bar had migrated through the anterior atrio-ventricular groove and coronary artery. The right lateral tip was now located in the right atrium, extending via the disrupted tricuspid valve and right ventricle through the RV apex into the lateral chest wall (Supplementary data online, Figure S3). The absence of any substantial haemo-pericardium was consistent with a gradual erosion and concomitant healing rather than acute perforation. Pannus and thrombus were present in the right ventricle. Extraction of the bar and tricuspid valve repair was successfully undertaken, and the patient was discharged with anticoagulation.

Supplementary data are available at European Heart Journal – Cardiovascular Imaging online.

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