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SHORT CASES IN CARDIOLOGY

Retained surgical swab misinterpreted as epicardial pacing wire on chest x ray

G McKillop, J H Reid

Retained surgical swabs remain a source of concern, possible morbidity, and potential litigation in postoperative patients.¹ Retained swabs are usually visible on radiographs because they contain a radio-opaque marker.² This case shows that these markers can be mistaken for epicardial pacing wires.

A 50 year old man presented with recurrent breathlessness and palpitation including documented ventricular tachycardia. He had a complex medical history including renal transplant, femoral capital aseptic necrosis, iron deficiency anaemia, and macrocytosis.

The relevant cardiovascular history included hypertension, hypercholesterolaemia, myocardial infarction (1980), and bilateral intermittent claudication. At coronary angiography, in May 1984, triple vessel disease was identified and in November 1984 triple vessel coronary artery bypass grafting was performed. Immediate postoperative complications of palpitation, persistent sinus tachycardia, and pyrexia eventually settled. From December 1984 to September 1989 he had repeated palpitation, including two admissions with documented ventricular tachycardia, despite treatment with amiodarone. In 1989 a further chest x ray was ordered. This showed a linear opacity of metallic density projected through the cardiac shadow and an increased retrocardiac density (fig 1). The metallic opacity on previous chest x rays had been assumed to be a retained epicardial pacing wire; however, the possibility of a

retained swab was raised at this stage. A left lateral chest x ray was obtained (fig 2). This showed a well defined opacity (diameter 5 cm) continuous with the posterior cardiac silhouette that contained the swab markers. Thoracotomy confirmed an abscess secondary to a retained swab at this site.

The patient had no further episodes of ventricular tachycardia until two years later when he re-presented with palpitations and amiodarone was restarted. He has been symptom free since.

Despite the long and complicated general medical and cardiovascular history in this patient we believe that the onset of palpitation and ventricular tachycardia immediately after the initial coronary artery bypass grafting and their cessation after diagnosis and removal of the swab with a subsequent, prolonged symptom free period suggests that the retained swab may have played a part in initiating the arrhythmias.

Though swab markers have a distinct appearance it is understandable that a linear metallic opacity in a post-cardiac surgery patient was mistaken for epicardial pacing wires. Cardiologists, cardiothoracic surgeons, and radiologists should be aware of this source of confusion.

Department of Clinical Radiology, Royal Infirmary of Edinburgh, Edinburgh
 G McKillop
 J H Reid

Correspondence to:
 Dr J H Reid, Department of Clinical Radiology, Royal Infirmary of Edinburgh, Lauriston Place, Edinburgh EH3 9YW.

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Figure 1 Posterior-anterior chest x ray showing wires and increased retrocardiac density.

Figure 2 Lateral chest x ray confirming soft tissue mass behind heart containing swab markers.