INTRODUCTION
Temporary epicardial pacing wires (TEPWs) are commonly used during cardiac surgery to meet unforeseen complications like heart blocks or asystole. These are generally considered to be safe. The incidence of major complications with their use is low, but could be life threatening. Complications can be divided into those encountered during placement, removal, or retention of temporary epicardial pacing wires. We report a rare case of prosthetic mitral valve endocarditis caused by TEPWs that migrated into the pulmonary artery, presenting 5 months following mitral and aortic valve replacement surgery that required percutaneous removal of these temporary pacing wires via a right femoral vein approach. This case highlights the fact that delayed complications can rarely occur due to retained TEPWs and may have serious consequences. This fact should be taken into account when the strategy on dealing with such wires following cardiac surgery is determined. Routine retention of temporary epicardial pacing wires is not recommended.

CASE REPORT
A 66 years old lady with history of diabetes, hypertension, and replacement of mitral valve (29 mm carbomedics standard), and aortic valve (21 mm carbomedics supra-annular), 5 months ago presented with a week history of feeling un-well, lethargy, loss of appetite associated with fever and rigors. On examination, she was haemodynamically stable. Cardiovascular examination revealed both prosthetic...
sounds with a flow murmur, the rest of the clinical examination was unremarkable. However, inflammatory markers were raised (CRP of 244). Transthoracic echocardiography raised the suspicion of mitral valve vegetation which was confirmed on the transesophageal echo (Figure 2). A clinical diagnosis of endocarditis was made and she was treated with antibiotics. Blood cultures grew Enterococcus faecalis and Pseudomonas aeruginosa. She developed episodes of non-sustained ventricular tachycardia and transient loss of vision in left eye one day following her admission. A CT scan of the chest (Figure 3) showed a foreign body within the left pulmonary artery. An attempt was made to retrieve this in the vascular radiology suite at a regional district hospital, which proved unsuccessful. Later the patient was transferred to this tertiary referral centre. The foreign body (retained TEPWs) was removed via the right femoral vein, with a 6 french multi-purpose guiding catheter and a Cook retrieval forceps system (Figure 4).

**DISCUSSION**

The incidence of major complications with use of TEPWs is low (0.4%), and most of these are related to the placement or removal of the wires.1 This includes bleeding, perforation of right ventricle and cardiac tamponade associated with placement of wire.2 During the removal of wires ventricular arrhythmias may occur; rare complications include tamponade due to atrial and ventricular lacerations and injuries to saphenous vein graft.3

It is common practice for the wires to be trimmed at skin level and left in situ if difficulties are encountered during wire removal. This assumes that there is more risk associated with removal than with retention of TEPWs.1 However, retained TEPWs may lead to significant complications. This is usually due to migration to adjacent structures. Reports in literature include TEPWs which have migrated into the lung leading to endobronchial obstruction and bronchiectasis,1 into the cardiac chambers and pulmonary artery causing ventricular tachycardia and cardiac arrest,2 through a bronchus resulting in a posterior mediastinal mass,4 into the peritoneal cavity 6 years post-cardiac surgery and through the tricuspid valve leading to severe tricuspid regurgitation.6 TEPWs have also been reported to cause para-cardiac mass due to organized haematoma with atrial compression,7 diaphragmatic herniation of the intra-abdominal contents into thorax8 and broncho-cutaneous fistula.9 Prosthetic valve endocarditis secondary to infection of the retained pacing wire is rarely seen in clinical practice.5,10

This report highlights a potential complication related to retention of TEPWs. This should be considered when the strategy on dealing with such wires following cardiac surgery is determined. The routine retention of TEPWs by cutting them flush with the skin is not recommended.11

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