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IMAGES IN CARDIOLOGY

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Needle embolism in an intravenous drug user

A 28 year old man with a history of intravenous opiate abuse presented to the emergency department with pain in his right groin. Plain films revealed a retained needle fragment and he was admitted for observation. The following day he developed sudden onset central chest pain exacerbated by inspiration, and an ECG showed widespread concave ST segment elevation (panel A). A chest radiograph revealed that the needle fragment was overlying the cardiac silhouette (panel B), and a computed tomographic pulmonary angiogram demonstrated that the needle was located within the inferior wall of the right ventricle (panel C). There was no evidence of venous thromboembolism or infarction, and no detectable pericardial effusion. The needle fragment could not be visualised by echocardiography, and it was elected to treat him conservatively. His symptoms responded to analgesia, with resolution of the ECG changes, and he subsequently made a complete recovery without further intervention.

Needle embolism is a rare complication of intravenous drug abuse which has only been reported on a handful of occasions. Potential sequelae include cardiac perforation, tamponade, and infective endocarditis. Although experience is limited, our report indicates that selected patients can be managed safely without surgical exploration.

G S Low
N P Jenkins
B D Prendergast
npjenkins@doctors.org.uk