Fracture and Intra-Cardiac Embolisation of a Totally Implantable Vascular Access Device

D. Nazareth R. Stables M. Ledson M. Walshaw J. Greenwood

Liverpool Heart and Chest Hospital, Liverpool, UK

Totally implantable vascular access devices (TIVADs) provide a semi-permanent route for administering intravenous medication in patients who receive repeated courses. They are relatively easy to look after and cosmetically acceptable, but may be associated with complications [1].

A 17-year-old male with cystic fibrosis while undertaking a course of home antibiotics for a pulmonary exacerbation, through a left internal jugular TIVAD (3 years old), developed pain and tenderness around the TIVAD site. At review there was a small swelling above the left clavicle. The screening linogram (fig. 1) revealed the catheter had fractured where it traversed the left clavicle and the distal portion projected over the heart and left lung base, suggesting fragment embolisation.

At right heart catheterisation via the femoral vein (local anaesthetic and 2-mm percutaneous access), the fragment having migrated through the pulmonary valve was within the left lower-lobe pulmonary artery and was retrieved using a goose neck snare device.

It seems likely that stretching forces applied to the catheter as the patient grew, plus friction where the catheter passed over the clavicle, caused the line to wear until it cracked.

This is the first report of embolisation of a catheter fragment beyond the right ventricle in an adult with cystic fibrosis. Any unusual symptoms related to the device should prompt immediate discontinuation of use and urgent imaging by means of chest radiography and screening linography.

Fig. 1. Linogram showing cracked catheter (A) and displaced fragment (B).

Reference

- 1 Aitken ML, Tonelli MR: Complications of indwelling catheters in cystic fibrosis: a 10-year review. *Chest* 2000;118:1598–1602.