

Spectacular migration of a central venous catheter into the pulmonary artery

A 44-year-old woman consulted us with local swelling at the insertion site of a central venous port system. She had been undergoing chemotherapy for advanced gastric cancer via a totally implantable central venous catheter system for 9 months. Physical examination was normal except for the local swelling. Chest x-ray demonstrated disappearance of the catheter from the connection site of its subcutaneous port. An unexplained abnormal linear structure was found in the mediastinal shadow (figure 1).

She underwent contrast-enhanced CT, which revealed a complicatedly looped catheter structure extending from the main pulmonary trunk to the bilateral pulmonary arteries (figure 2). Fortunately, no obvious adhesion or thrombus formation around the catheter could be observed. We diagnosed that the central venous catheter had detached itself from the subcutaneous port system and migrated into the pulmonary arteries.

The start of this event was unclear, but the absence of adhesions or thrombus suggested that it may have happened within days to weeks. We attempted (and succeeded with) the percutaneous removal of the catheter from the pulmonary artery using intravascular retrieval forceps without complications.

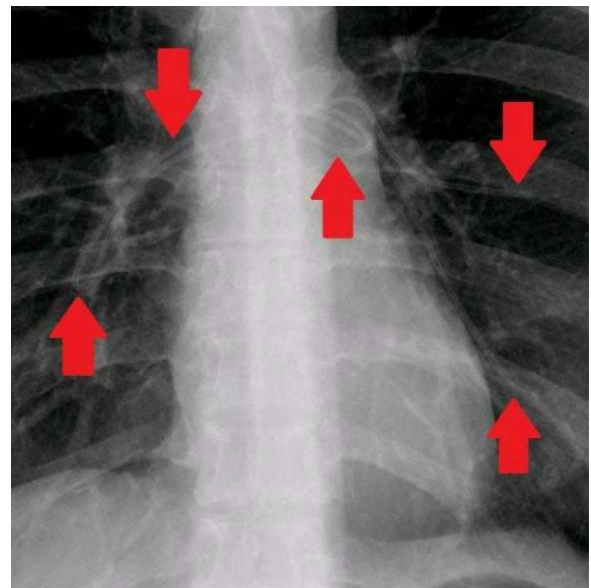


Figure 1 Chest x-ray. Focused view of the mediastinal shadow. Red arrows indicate an unexplained abnormal linear structure.

An intravascular foreign body can cause vascular injury, thrombus formation or device-related infection. Haemoptysis due to vascular injury and pulmonary thrombus or abscess formation, especially in the pulmonary artery, have been previously reported.¹

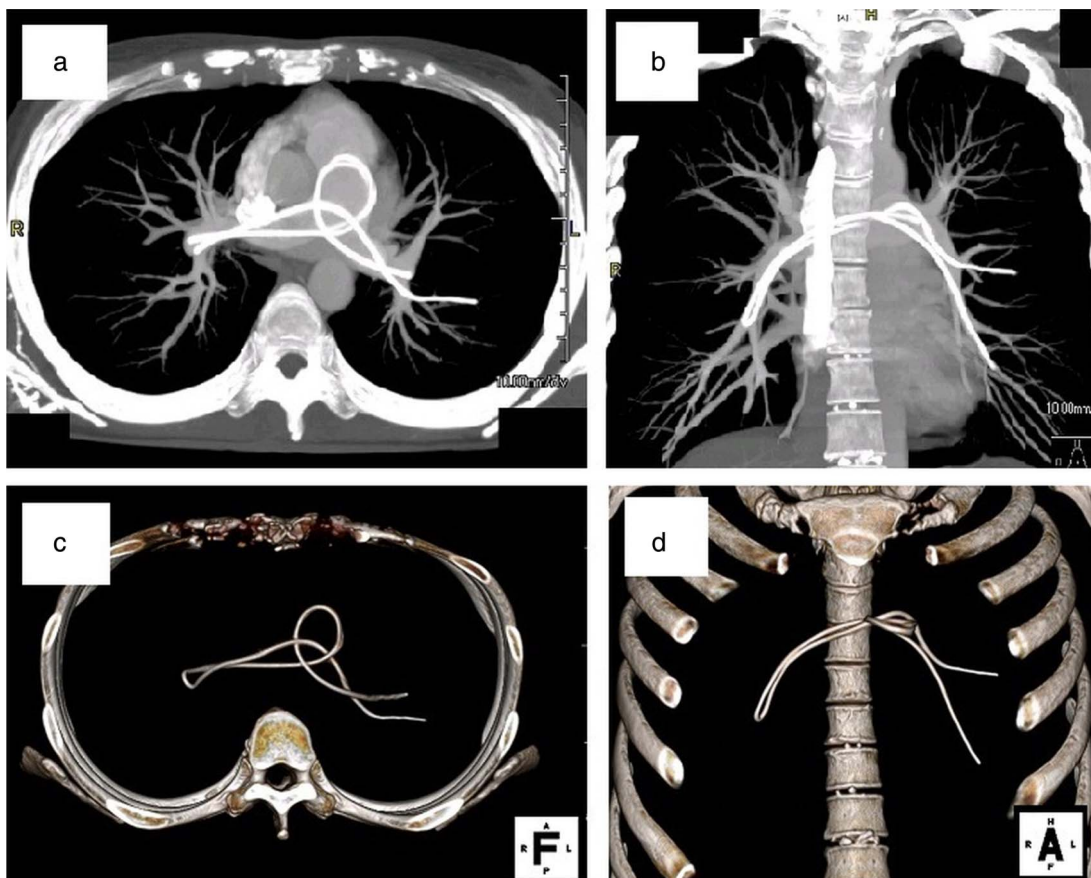


Figure 2 Three-dimensional reconstitution of chest CT revealing the spectacular migration of the central venous catheter into the pulmonary arteries. (A) Axial plane of the maximum intensity projection (MIP) view. (B) Frontal plane of the MIP view. (C) Axial view of the three-dimensional reconstitution of chest CT (3D-CT). (D) Frontal view of the 3D-CT without part of the ribs or spine.

We here experienced a rare case of spectacular migration of the catheter into the pulmonary artery. Three-dimensional CT proved very useful in the diagnosis and preoperative detailed examination.

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