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Clinical Image

A Fractured Catheter Due to Pinch-off Syndrome

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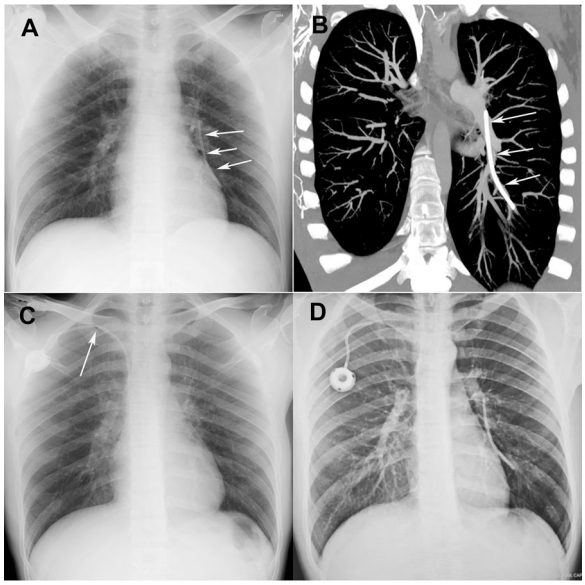

Fig. 1. Posteroanterior chest radiograph (A) and coronal CT reconstruction (B) demonstrating a catheter fragment lodged in the left lower-lobe pulmonary artery (arrows). Posteroanterior chest radiograph (C) showing focal narrowing of the central venous catheter due to compression at the junction of the first rib and the ipsilateral clavicle, consistent with pinch-off syndrome (arrows). Posteroanterior chest radiograph (D) demonstrating catheter rupture, with the distal fragment projected over the region of the left lower-lobe pulmonary artery.

A 32-year-old man underwent chest X-ray (Fig. 1A) and computed tomography (Fig. 1B) examinations, which demonstrated the presence of a radiopaque foreign body lodged in the left lower-lobe pulmonary artery. A long-term central venous catheter (Port-a-Cath) had been implanted for the treatment of osteomyelitis approximately 3 years previously. A retrospective review of previous imaging studies yielded a chest radiograph taken approximately 6 months after catheter placement demonstrating focal compression of the catheter between the first rib and clavicle, with associated luminal narrowing, characteristic of pinch-off syndrome (Fig. 1C).

The catheter was removed approximately 6 months after that examination. At that time, chest radiography demonstrated the rupture of the device with embolisation of a catheter fragment to a branch of the left lower-lobe pulmonary artery (Fig. 1D). Notably, these imaging studies were interpreted without formal radiological review, and the abnormal findings were not recognised. Consequently, the intravascular embolised catheter fragment remained in the pulmonary arterial system for more than 2 years. Endovascular retrieval was proposed, but the patient declined intervention.

Pinch-off syndrome can occur with Port-a-Caths placed via subclavian venous access, resulting in catheter malfunction due to compression between the clavicle and first rib by the subclavius–costoclavicular complex [1–4].

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Declaration of generative AI and AI-assisted technologies in the writing process

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Conflicts of interest

The authors declare not to have any conflicts of interest that may be considered to influence directly or indirectly the content of the manuscript.

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