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An incidental finding with a challenging percutaneous solution

Achado acidental com solução percutânea desafiadora

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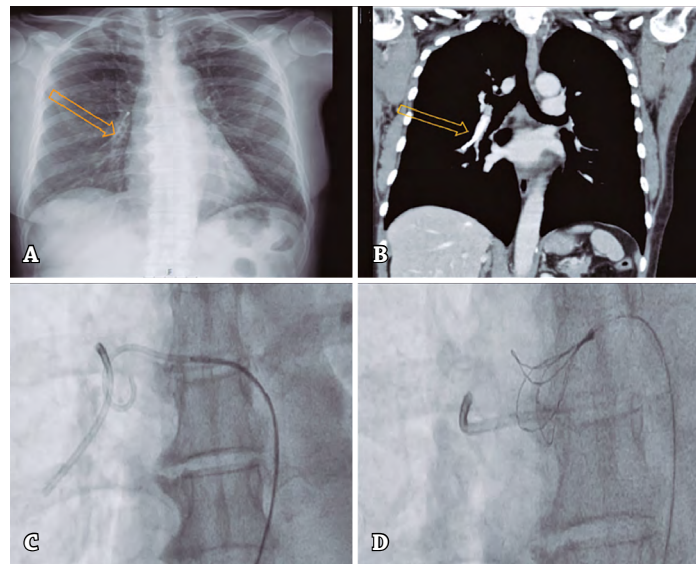


Figure 1. (A) Chest X-ray: intravascular portion of central venous catheter in the right pulmonary artery. (B) Thoracic computed tomography: intravascular portion of central venous catheter in the right pulmonary artery. (C) 5-F pigtail catheter grabbing one of the edges of the catheter fragment. (D) 6-F EN-Snare® catheter that collected catheter fragment.

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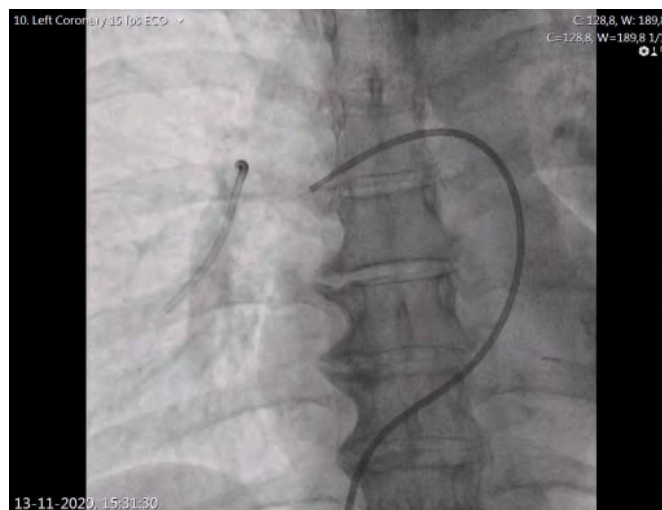
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Figure 2. Catheter fragment after removal.



Video 1. Injection of contrast shows an intravascular portion of central venous catheter placed between the two branches of right pulmonary artery.

A 59-year-old female patient with breast cancer (ductal carcinoma *in situ*), treated with chemotherapy, radiation therapy and hormone therapy as relevant past medical history.

During follow-up in oncology consultation, the patient presented cough and underwent a chest X-ray and thoracic computed tomography that revealed a fracture and embolization of intravascular portion of central venous catheter to the right pulmonary artery (Figures 1A and 1B). The patient was referred to cardiac catheterization lab for percutaneous removal of the intravascular portion of the central venous catheter.

A 7-F Swan-Ganz catheter was advanced over a guide-wire to the right pulmonary artery, and, through fluoroscopy, selective injection of contrast revealed an intravascular portion of central venous catheter placed between the two branches of right pulmonary artery with inaccessible edges (Video 1). For this reason, the 7-F Swan-Ganz catheter was replaced by a 5-F pigtail catheter and one of the edges of the catheter fragment was successfully grabbed using the “twist manoeuvre” (Figure 1C). The 5-F pigtail catheter was withdrawn and replaced by a 6-F EN-Snare® catheter, which with another twist manoeuvre (Figure 1D), successfully collected and pulled back the catheter fragment (Figure 2).

In summary, endovascular devices have been increasingly used in clinical practice but are not harmless. The authors presented a rare case of catheter fragmentation and embolization, which is an uncommon (0.3% to 0.9%) and potentially dangerous complication of endovascular devices.

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CONFLICTS OF INTEREST

The authors declare there are no conflicts of interest.

CONTRIBUTION OF AUTHORS

Conception and design of the study: CMP; data collection: CMP; data interpretation: CMP; CGB; CQR; JC; NA and JM; text writing: CMP; approval of the final version to be published: CMP; CGB; CQR; JC; NA and JM.