

Percutaneous retrieval of patient-cut-of central venous catheter: Fishing with a pigtail and a goose-neck

Andrzej Kułach¹, Wojciech Walkowicz², Michał Kucio²,
Mariusz Bałys², Zbigniew Gąsior¹

¹Department of Cardiology, School of Health Sciences,
Medical University of Silesia in Katowice, Poland

²Second Department of Cardiology, Upper-Silesian Medical Center, Katowice, Poland

A 57-year-old patient was admitted for percutaneous retrieval of a fragment of a central venous catheter. The patient was originally treated in an intensive care unit for acute alcoholic pancreatitis with septic shock and had a central venous line placed into the right subclavian vein. In the course of delirium tremens, the patient cut off a piece of a catheter, while the remaining part migrated into the vascular system.

A chest X-ray and echocardiography revealed the presence of a foreign body within the right ventricle and inferior vena cava (IVC) (Fig. 1B). Computed tomography confirmed the location of the catheter (Fig. 1A). The distal fragment was wedged within the right ventricular trabeculation, while the proximal — in the bifurcation of IVC and hepatic vein.

Through the right femoral vein, Flexor Ansel Guiding Sheath 12 F was inserted up to IVC. After several attempts of repositioning the foreign body with a guidewire (Fig. 1C) and a snare (no free end to catch with a loop), it was relocated with a pigtail, looped and was pulled it back into IVC (Fig. 1D). Holding the catheter with the pigtail, a free end of the catheter was caught with an Amplatz GooseNeck Snare. The pigtail was then removed, the catheter trapped by a loop-snare was pulled into the sheath and entire system was removed.

Although percutaneous foreign body retrieval may have complications (perforation, tamponade) a loop-snare technique should be an approach of choice. Using large, long sheaths allows delivering the tools precisely to the site and ensures safe and easy withdrawal of a foreign body.

Conflict of interest: None declared

Address for correspondence: Dr. Andrzej Kułach, Department of Cardiology, School of Health Sciences, Medical University of Silesia in Katowice, ul. Ziołowa 47, 40–635 Katowice, Poland, tel: +48 505863793, e-mail: andrzejkulach@gmail.com

Received: 4.04.2020

Accepted: 5.05.2020

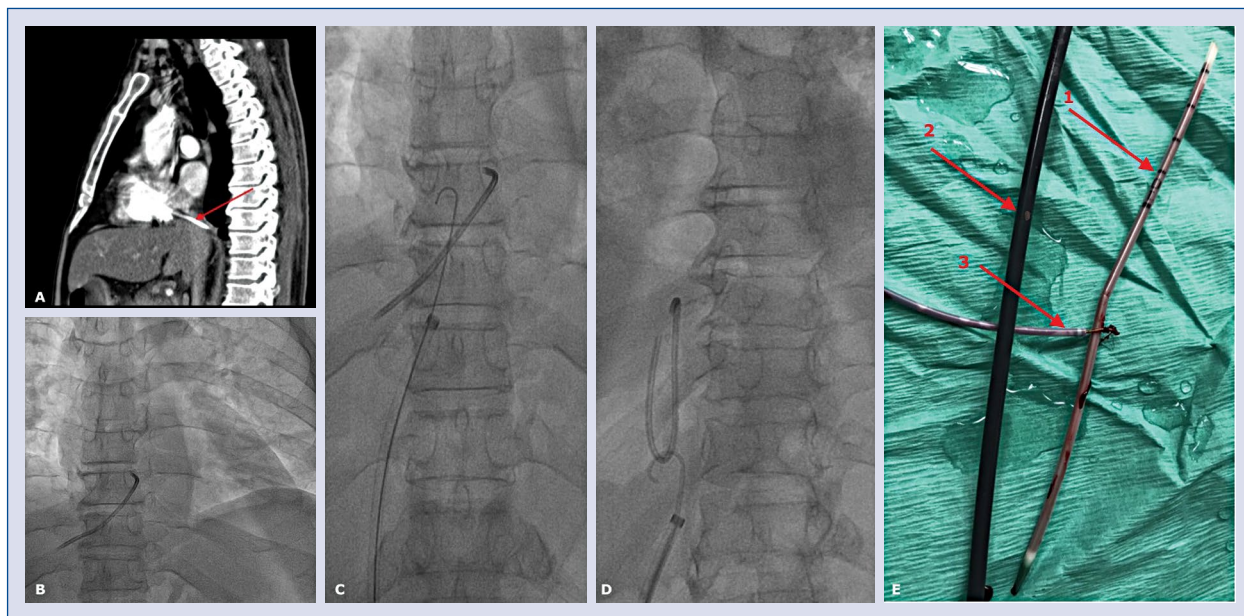


Figure 1. **A.** Computed tomography (sagittal plane) — red arrow pointing catheter in inferior vena cava (IVC); **B.** Chest X-ray (AP, section); a long radiopaque fragment of catheter from right heart to IVC; **C.** 12 F sheath inserted from femoral vein up to IVC; **D.** Catheter grasped by a pigtail catheter, folded and pulled into IVC; distal end inleashed; **E.** After procedure: removed 13 cm catheter fragment (1), trapped by Amplatz snare (3) next to 12 F sheath (2).