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Multiple embolic events and ruption of the central venous catheter in a patient with atrial fibrillation

Tomasz Ostrowski[1], Karolina Semczuk-Kaczmarek[2], Rafał Maciąg[3], Anna E. Płatek[2, 4], Zbigniew Gałązka[1], Filip M. Szymański[2]

[1]Department of General, Endocrine and Vascular Surgery, Medical University of Warsaw, Poland
[2]1st Department of Cardiology, Medical University of Warsaw, Poland
[3]2nd Department of Clinical Radiology, Medical University of Warsaw, Poland
[4]Department of General and Experimental Pathology with Center for Preclinical Research and Technology (CEPT), Medical University of Warsaw, Poland

A 46-year-old male with a previous history of persistent atrial fibrillation was hospitalized due to signs of intestinal occlusion. An urgent computed tomography (CT) angiography demonstrated superior mesenteric artery occlusion. Due to signs of intestine gangrenous subtotal a small intestine resection was made. On account of short bowel syndrome, a central venous catheter for parenteral nutrition was placed. After discharge the patient decided to discontinue antithrombotic treatment and after a few weeks presented with ischemic stroke with left-sided hemiplegia.

After 2 months the patient was admitted to hospital due to symptoms of acute lower left limb ischemia. An extremity CT angiography revealed complete occlusion of the left superficial femoral artery and popliteal artery (Fig. 1A). A chest X-ray and CT performed during qualification for surgery revealed the presence of a fractured fragment of a central venous catheter in the right atrium (Fig. 1C, D). Using the right femoral vein approach, a fragment of the catheter was removed from the right atrium (Fig. 1E, F). Subsequently, percutaneous tromboaspiration of the thrombus from the left femoral artery, intraarterial fibrinolysis, and percutaneous transluminal angioplasty of the left popliteal artery were performed (Fig. 1B).

The incidence of cerebral embolism among patients with atrial fibrillation is 1.92/100 person-years and the incidence of systemic embolic events is 0.23/100 person-years (58% in the lower extremities, 31% in the visceral-mesenteric system, 11% in the upper extremities). Reported herein, is a rare case of 3 subsequent embolic events (cerebral, mesenteric and lower extremities arteries) during 3 months.

Conflict of interest: None declared

Address for correspondence: Karolina Semczuk-Kaczmarek, MD, 1st Department of Cardiology, Medical University of Warsaw, ul. Banacha 1A, 02–097 Warszawa, Poland, tel: +48 22 599 2655, e-mail: karolina.semczuk-kaczmarek@wum.edu.pl

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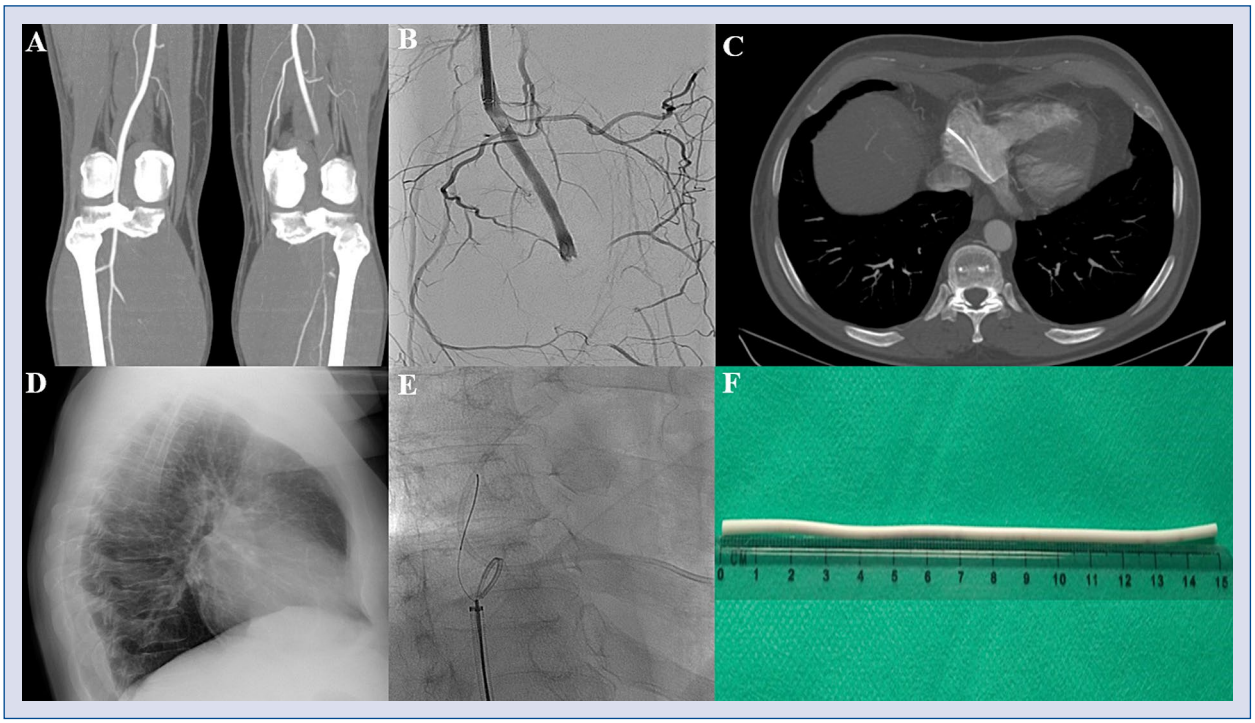

Figure 1. A. Computed tomography angiography — complete occlusion of the left popliteal artery; **B.** Angiography--complete occlusion of the left popliteal artery; **C.** Chest computed tomography-fractured fragment of a central venous catheter in the right atrium; **D.** Chest X-ray-fractured fragment of a central venous catheter in the right atrium; **E.** Removal of the fragment of the central venous catheter; **F.** Removed fragment of the central venous catheter.