Percutaneous Removal of a Displaced Inferior Vena Cava Filter Using a Loop-Wire Technique and Lead-Extraction Sheaths

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A 59-year-old woman who presented with an inferior vena cava (IVC) filter (TrapEase, Cordis, USA) that had displaced into the left common iliac vein during thrombectomy using a Fogarty catheter was referred after 2 failed retrieval procedures. 3D computed tomography demonstrated that the IVC filter was located at the bifurcation of the common iliac vein (**Figure A**). We decided to attempt a 3rd retrieval procedure. Because we could not catch the distal end of the filter that was embedded into the vessel wall, we used a loop-wire technique.¹ A guidewire inserted into a pig-tail catheter was advanced from the left groin and turned so that it went through the filter. A lasso-type snare (LASSOS, OSYPKA, Germany) was inserted from the same sheath as the guidewire to grasp its distal end (**Figure C**), and then both ends of the guidewire were exposed at the groin from the same sheath. A telescopic mechanical sheath set (Cook, USA) was advanced toward the filter through the twofold guidewire and was used to dissect the adhesion tissue by rotating the telescopic sheath (**Figure C, Supplementary Movie**). The loop-wire technique and specialized lead extraction tools are useful, even for a difficult retrieval of a displaced IVC filter, which might otherwise require open surgery.²

Disclosure

A.O. is affiliated with an endowed section sponsored by Medtronic, Biotronik, BostonScientific, Abbott, JLL. K.K. is a member of *Circulation Journal's* Editorial Team.

IRB Information

Shinshu University Ethics Committee (B0325).

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Supplementary Files

Supplementary Movie. Retrieval of displaced inferior vena cava filter using loop-wire technique and dissection of the filter by a telescopic mechanical sheath set.

Please find supplementary file(s);
<http://dx.doi.org/10.1253/circj.CJ-21-0164>

Received February 25, 2021; revised manuscript received March 26, 2021; accepted April 9, 2021; J-STAGE Advance Publication released online May 26, 2021 Time for primary review: 22 days

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ISSN-1346-9843

Figure. (A) 3D computed tomography of inferior vena cava filter displaced into the left common iliac vein. (B) The retrieved filter, looped wire, and specialized lead extraction sheaths. (C) The loop-wire technique (Left) and dissection of the filter by the telescopic mechanical sheath (Right).