

IMAGES IN INTERVENTION

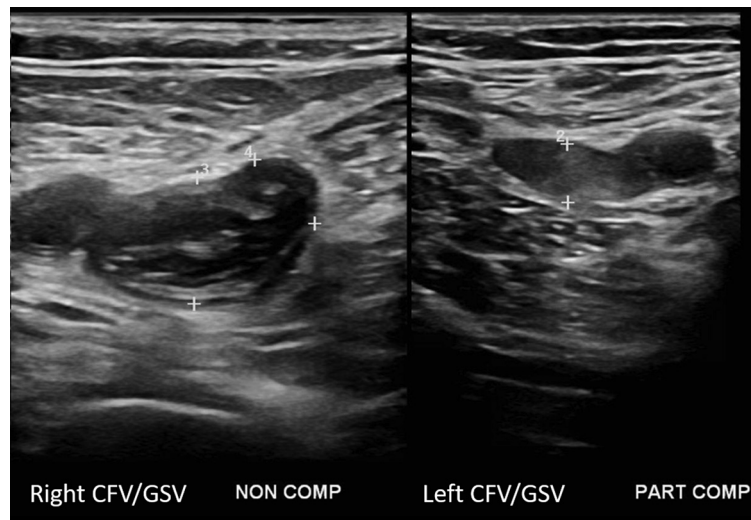
Treatment of an Acute Limb due to Inferior Vena Cava Filter Thrombosis



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A 55-year-old man presented with profound unilateral right leg swelling. Approximately 1 month before, he had suffered a pulmonary embolism complicated by bleeding on anticoagulation, prompting placement of a retrievable inferior vena cava (IVC) filter. On this admission, ultrasound evaluation revealed extensive bilateral deep venous thromboses (Figure 1). On examination,

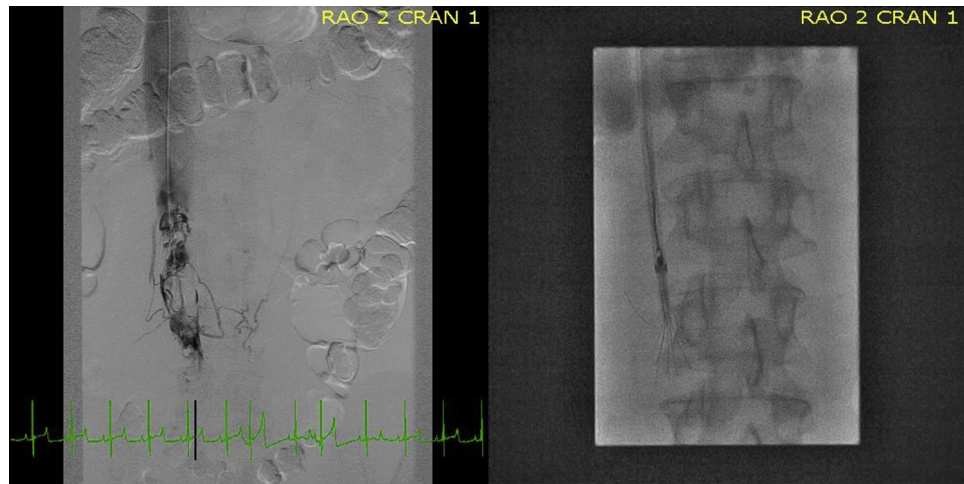
FIGURE 1 Bilateral Proximal Deep Venous Thromboses



Venous duplex ultrasound on hospital admission revealed right greater than left deep venous thromboses in the proximal iliofemoral venous systems. + signs indicate vein measurements with external transducer compression. 2 = 0.78 cm (left common femoral vein). 3 = 1.41 cm (right common femoral vein). 4 = 0.98 cm (right greater saphenous vein). CFV = common femoral vein; GSV = greater saphenous vein; non comp = non-compressible; part comp = partially compressible. See [Online Video 1](#).

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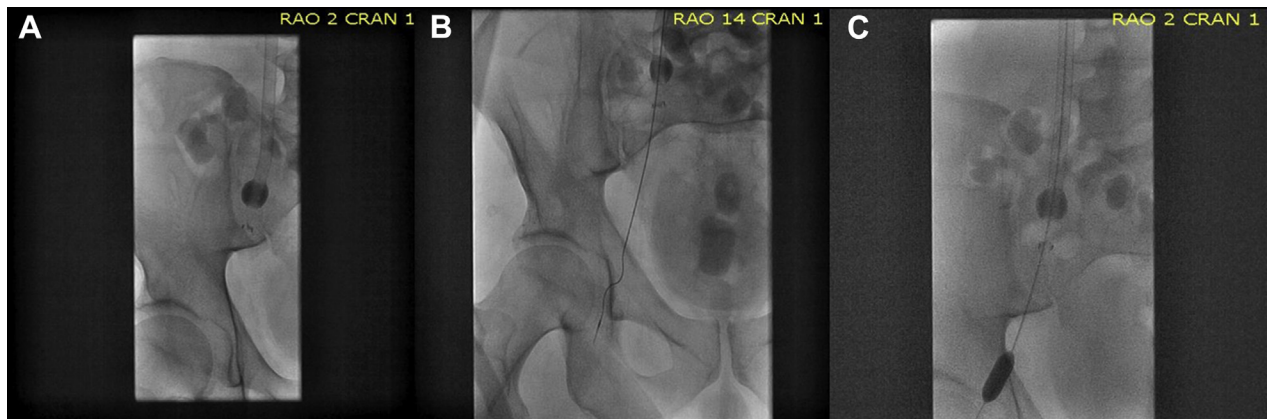
FIGURE 2 Initial Percutaneous Approach to Inferior Vena Cava Filter Thrombosis

Diagnostic venogram showed a completely thrombosed filter device in the inferior vena cava (**left**). Vacuum-assisted thrombectomy was initially performed above the filter, followed by device retrieval using a 10-mm gooseneck snare (**right**). See [Online Video 2](#).

the patient exhibited diminished sensation and absent pedal pulses of the right foot consistent with phlegmasia. Following an emergent multidisciplinary evaluation by vascular surgery and medicine, we proceeded with IVC filter removal and catheter-based thrombectomy.

First, we placed 26-F and 15-F sheaths in the right and left internal jugular veins, respectively, through which we initiated a venovenous bypass

circuit. Venography confirmed complete IVC filter thrombosis ([Online Video 1](#)) extending inferiorly into the bilateral iliofemoral venous systems. We performed vacuum-assisted thrombectomy ([Online Video 2](#)) above the filter using an AngioVac Canula (AngioDynamics, Latham, New York). The filter was subsequently extracted using a 4-F 10-mm gooseneck snare in tandem with a 5-F AL1 catheter ([Figure 2](#)).

FIGURE 3 Treatment of the Right Iliofemoral Venous System

Catheter techniques used for venous thromboembolism: (**A**) vacuum-assisted filtration of the right iliofemoral veins; (**B**) maceration of recalcitrant thrombus using an oscillating wire under active suction; and (**C**) balloon venoplasty followed by pullback under active suction. See [Online Video 3](#).

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