An inferior vena cava filter causing perforation with all six legs

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A 52-year-old male patient with past medical history most significant for recurrent unprovoked bilateral lower limb deep vein thrombosis in 2010 as well as diabetes, hypertension, and smoking. Although the patient was appropriately anticoagulated, on warfarin, he presented with submassive pulmonary embolism in 2011, hence a Greenfield inferior vena cava (IVC) filter was inserted.

In 2013, he presented again complaining of exertional chest pain. Physical exam, electrocardiographic, and echocardiographic studies were unremarkable. Coronary angiography revealed non-obstructive coronary artery disease. During the study, an abnormally deployed IVC filter was incidentally noted. Subsequently, a computed tomographic venography revealed that the filter had perforated the IVC. Two legs were located in the prevertebral space, one abutted the anterior aortic wall, one leg was deeply invading the right psoas muscle, and two legs arose very close to the duodenum ending up in close proximity to the small bowel loops.

The patient had regular follow-up visits during which no abdominal symptoms have been reported and, to the date of submission of this case, no complications have been developed.

Inferior vena cava filter perforation is a complication that occurs in \( \approx 5\% \) of patients. Incidental diagnosis is the most common presentation, but perforation of the surrounding structures (duodenum, ureters, and aorta) has been reported. Since the risk of developing complications is low in asymptomatic patients with no perforation of the surrounding structures, these patients are usually managed conservatively.

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