

## Anticoagulation but not filter placement for large, solitary inferior vena cava thrombus

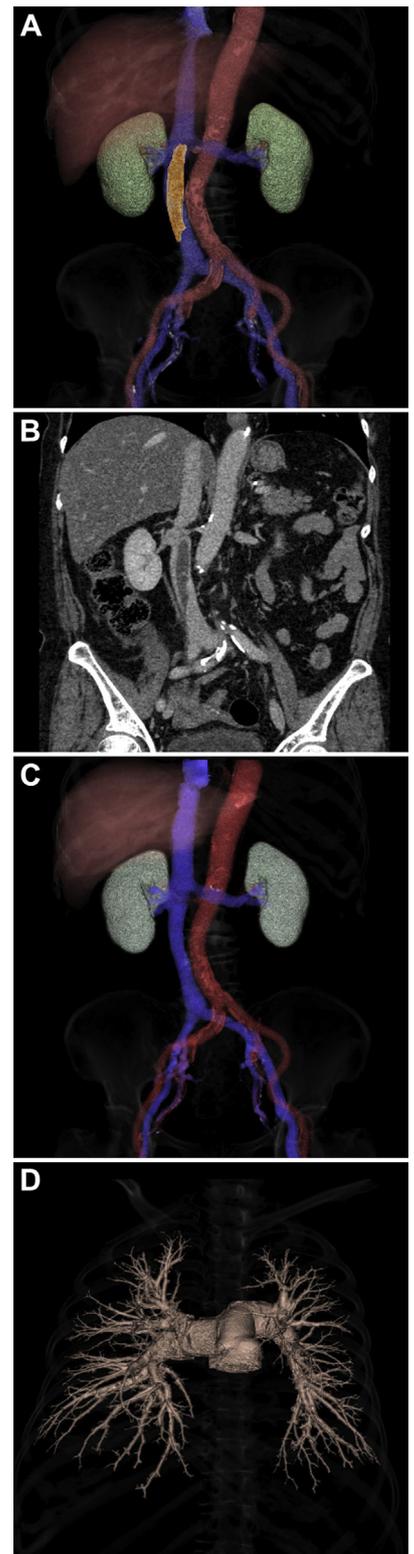


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A 78-year-old woman presented with ileocecal resection for ileocecal cancer. A 5-month follow-up computed tomography (CT) scan revealed a large, solitary inferior vena cava (IVC) thrombus extending from the terminal IVC to the renal veins (A/Cover and B; Video A, online only). She remained clinically asymptomatic, without chest pain or leg swelling, and all blood test results including coagulation parameters were standard. We immediately initiated continuous unfractionated heparin intravenously and maintained it until an oral anticoagulant, warfarin, attained the control level of the international normalized ratio (2.0-3.0). A 6-week follow-up, CT angiography revealed the noteworthy disappearance of the IVC thrombus (C). Clinically, she did not have any chest symptoms associated with pulmonary embolism. In addition, there was no pulmonary thrombus detected by pulmonary CT angiography (D; Videos B and C, online only). At present, she is undergoing an anticoagulation course of 4 months. The patient gave her consent for publication of this case report.

### DISCUSSION

Compared with deep venous thrombosis of the extremities, solitary IVC thrombosis is rare. Although congenital abnormal IVC anatomy accounts for 60% to 80% of solitary IVC thrombosis causes, prothrombotic factors, including coagulopathy, obesity, pregnancy, hormonal replacement therapy, abdominal disease (abdominal trauma or surgery), and renal cell carcinoma, should not be overlooked.<sup>1</sup> Currently, most guidelines recommend anticoagulation therapy as the first-line therapy. Conversely, an alarm has been raised about the blind use of IVC filters because of filter-associated complications, including thrombosis resulting in insufficient venous return, filter migration or fracture causing inefficient protection, and IVC perforation or penetration leading to bleeding.<sup>2</sup> However, some clinicians are more concerned about pulmonary embolism secondary to IVC thrombosis, resulting in the use of permanent or retrievable IVC filters. In this case, the IVC filter needed to be placed in the suprarenal position. Suprarenal IVC filter placement poses several risks, including filter size mismatch and subsequent inadequate protection, renal failure secondary to renal vein thrombosis, liver injury associated with filter perforation or penetration, and those risks associated with a standard “infrarenal” filter position.<sup>3</sup> Therefore, our final decision was to use only anticoagulation therapy, without additional filter deployment. Although the use of IVC filters is always controversial, we observed a successful anticoagulation-alone therapy for a very large, solitary IVC thrombus.



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