

# Hemorrhagic Shock Following Removal of a Migrated IVC Filter

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## Introduction

A female Jehovah's Witness with symptomatic complications related to a migrated nine-year-old retrievable IVC filter underwent removal complicated by pulmonary emboli, contained extravasation, and hemorrhagic shock while initially refusing blood transfusion.

## Case Presentation

A 57-year-old female presents nine years after retrievable Gunther Tulip IVC filter placement for left gastrocnemius deep venous thrombosis with concurrent right basal ganglia hemorrhagic stroke causing left hemiplegia. She was referred for IVC filter removal due to absent indication for anticoagulation, migrated filter with no protection of the initial presenting left lower extremity DVT, and persistent right pelvic pain.

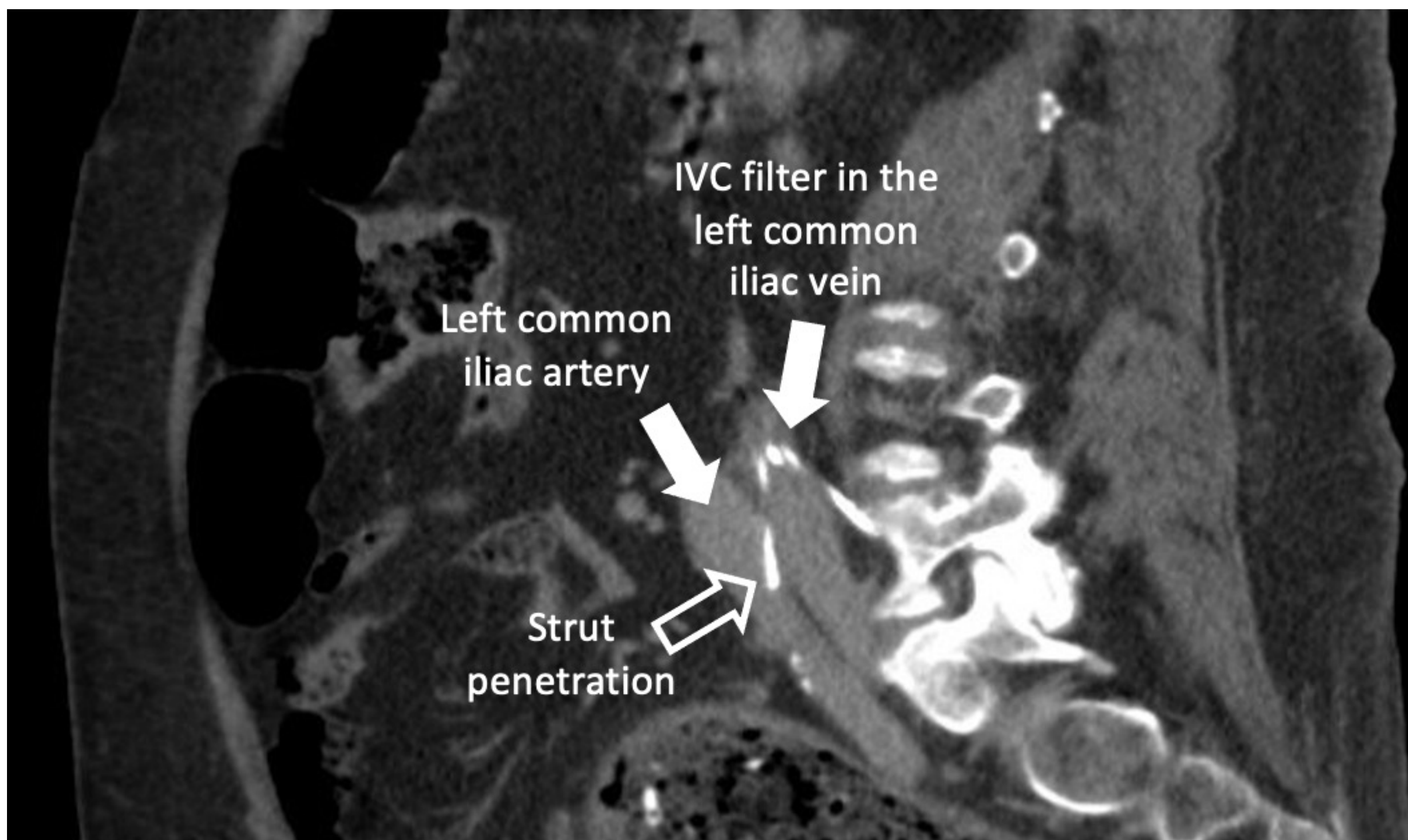


Figure 1: CT showing filter migration to right common iliac vein with apex embedded within IVC wall.

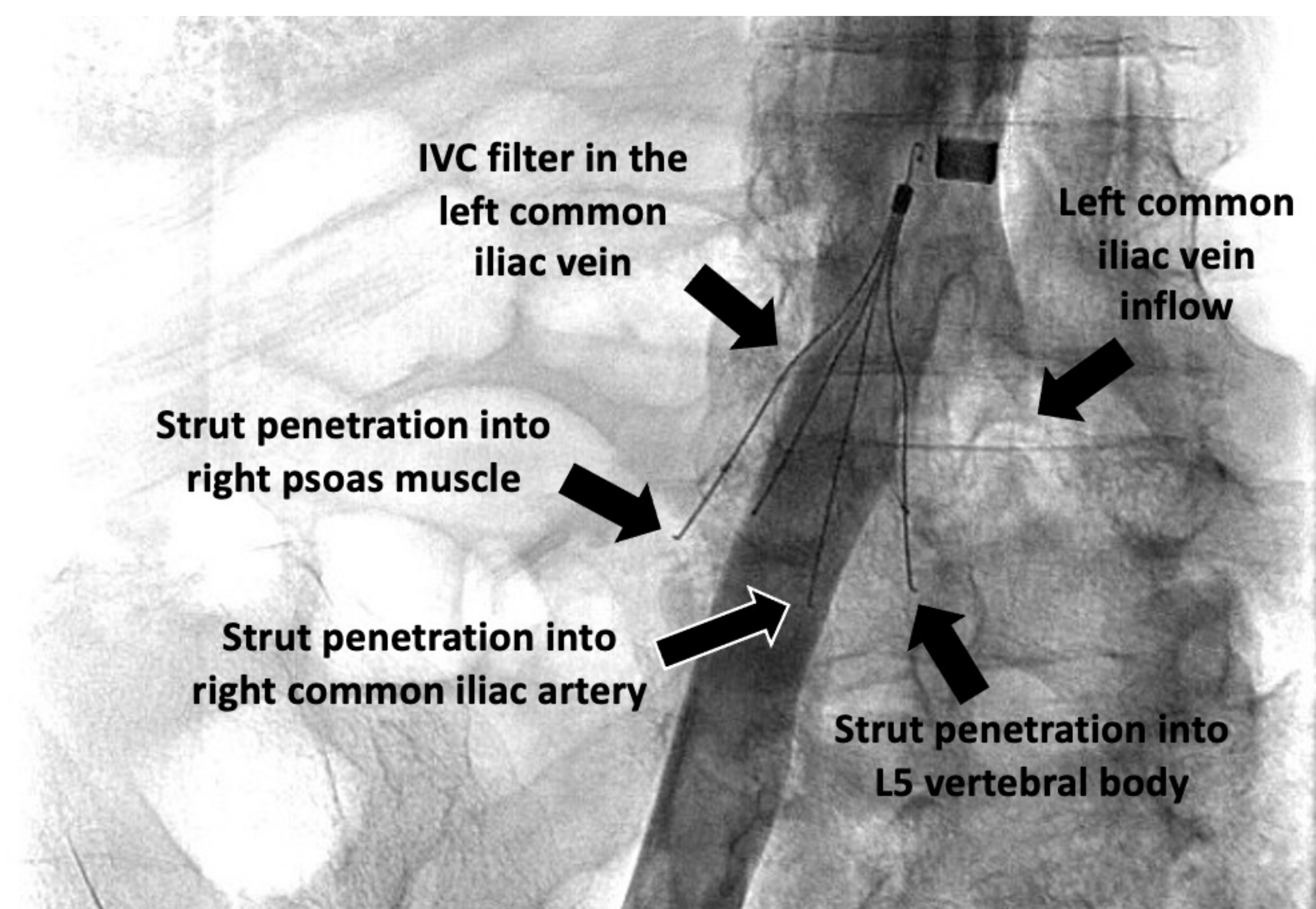


Figure 2: Venogram showing filter struts protruded extraluminally into the right psoas muscle, L5 vertebral body and right common iliac artery.

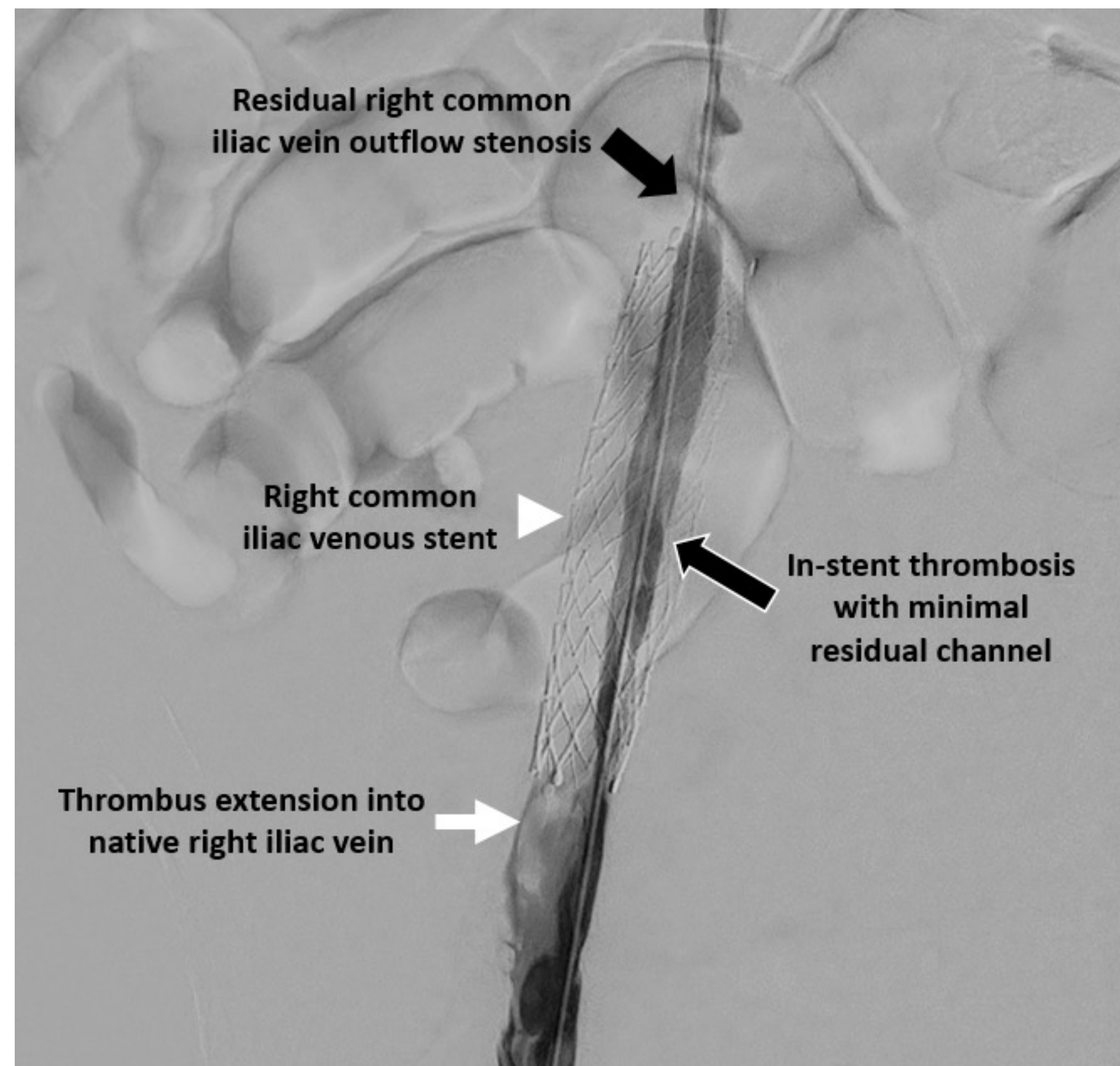


Figure 3: Venogram showing in-stent thrombus extending into the caudal end of the right common iliac vein.

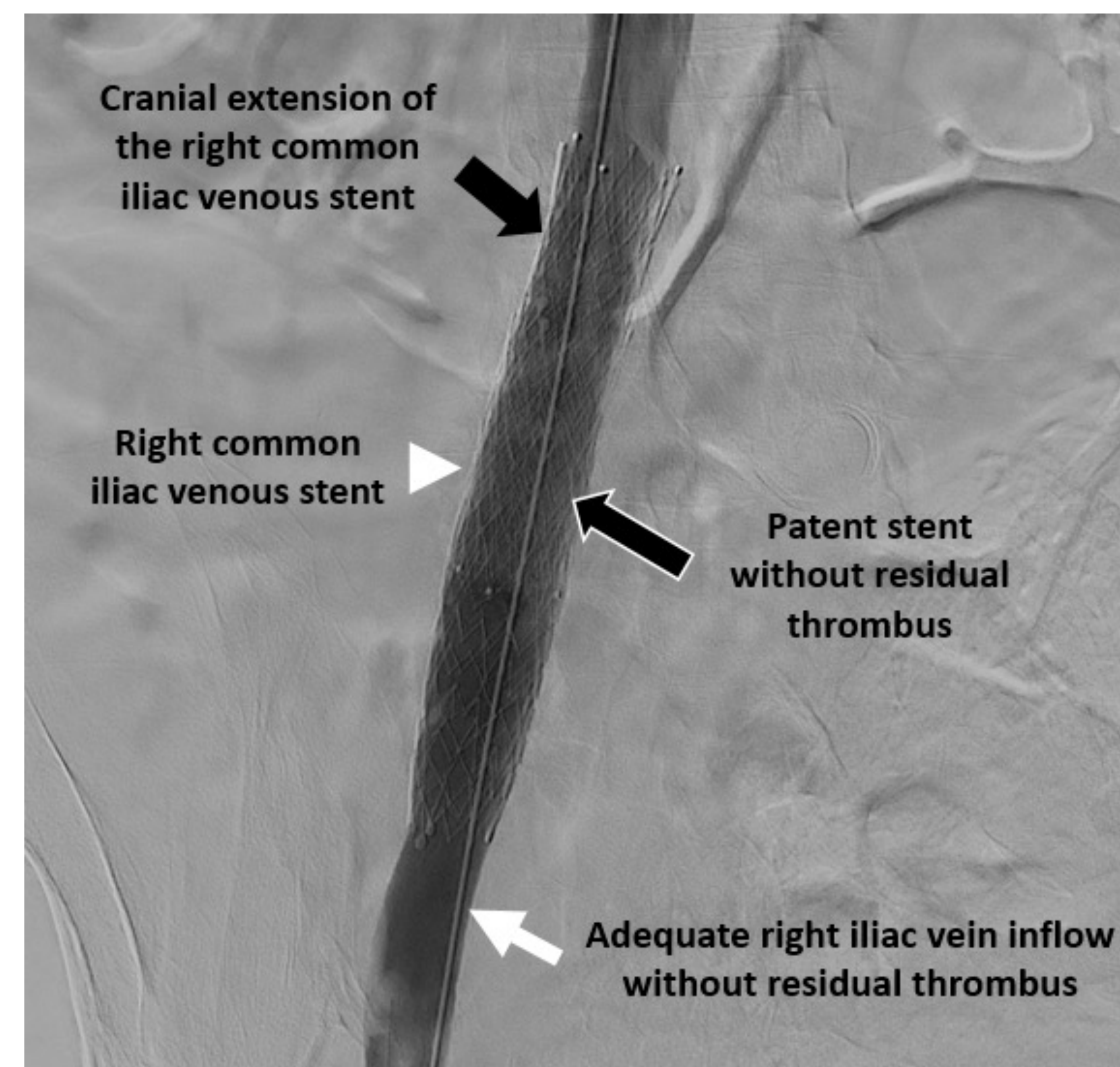


Figure 4: Venogram showing extended stent in place with patent flow through the right common iliac vein, the stent and the IVC.

She underwent complex filter removal, complicated by severe venous stenosis and contained extravasation (Grade 3B) treated with prolonged balloon tamponade and right iliac vein stent placement.

Post-procedurally, therapeutic heparin was initiated for stent patency but complicated by refusal of all blood components due to religious beliefs.

Vasopressor support and albumin infusion provided only minor benefit for shock.

CT angiogram showed stent occlusion, compression from the perivenous hematoma and right middle lobe pulmonary embolism.

After extensive discussions, patient was amenable to transfusion of packed red blood cell components

Mechanical stent thrombectomy and stent extension were performed.

Vasopressors subsequently weaned off following transfusion.

She was kept on aspirin alone while heparin was transitioned to apixaban.

Patient was discharged home 12 days after the initial procedure.

## Conclusion

Complexities associated with extended retrievable IVC filter dwelling include filter migration, filter fracture, filter strut penetration, venous stenosis and occlusion, pain and pulmonary embolism.

Prompt IVC filter retrieval is endorsed by multiple societies and the FDA but fewer than 35% of these filters are removed.

Patient refusal of blood products and her hypercoagulable state further complicated her management.