

INTRODUCTION



Figure 1

Iliofemoral deep venous thrombosis (DVT)

Definition: Thrombus in the iliac vein and/or common femoral vein causing venous obstruction

Causes:

Virchow's Triad: endothelial injury, hypercoagulability, venous stasis

Symptoms:

Acute: lower extremity pain, swelling, etc.
Chronic: claudication, edema, ulceration, etc.

Diagnosis:

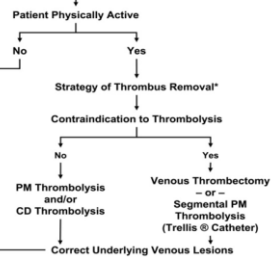
- Clinical: Wells' Criteria
- Laboratory: D-dimer
- Radiographic: Ultrasonography, Contrast enhanced cross-sectional imaging, venography

Treatments:

Immediate Anticoagulation → Rapid CT Scan with Contrast

- Leg elevation
- Long leg compression

- Chest
- Abdomen
- Pelvis



* Vena caval filter for free-floating vena caval thrombus

Figure 2

Differential Diagnosis/Mimickers of Iliofemoral DVT

- Pathologies extrinsic to the deep veins
- Similar symptoms that mimic venous obstruction
- May have similar imaging characteristics
- Examples: venous compression by ganglion cysts, perivascular tumor, perivascular post-treatment radiation changes, arterial pseudoaneurysm, inguinal ligament compression, etc.

CASE 1

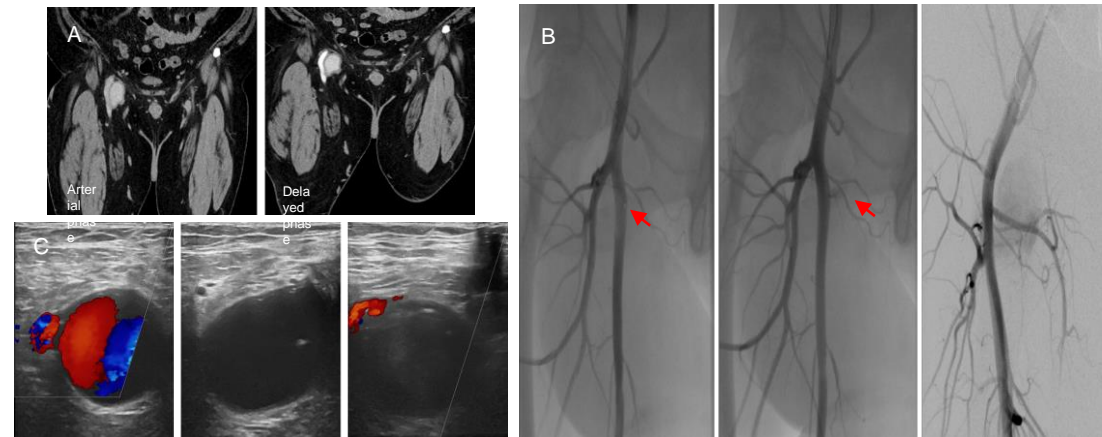


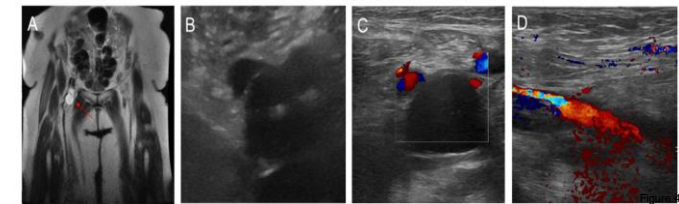
Figure 3

32-year-old man with history of severe COVID pneumonia requiring extracorporeal membrane oxygenation (ECMO) complicated by presumed ECMO cannula-associated DVT causing severe right lower extremity swelling and pain. Preprocedural imaging was suggestive of a right superficial femoral artery (SFA) aneurysm versus arterio-venous fistula causing local mass effect on the medial veins (A). Right iliofemoral arteriogram revealed a 5.2 cm SFA aneurysm with no communication to the venous system(B). Right great saphenous vein venogram revealed complete occlusion of the right common femoral vein (CFV) and caudal external iliac vein (reconstituted via drainage from a right inferior epigastric collateral). Under ultrasound guidance, 3,600 units of thrombin were slowly injected into the pseudoaneurysm until complete thrombolysis was achieved (C). The patient reported significant improvement of his symptoms on the 4-week follow-up visit. A subsequent duplex study revealed a 3.2 cm residual right SFA pseudoaneurysm which was stent occluded 5 months after the initial procedure.

References

- Liu, D., Peterson, E., Dooner, J., Baerlocher, M., Zypchen, L., Gagnon, J., . . . Yenson, P. (2015). Diagnosis and management of iliofemoral deep vein thrombosis: Clinical practice guideline. Canadian Medical Association Journal, 187(17), 1288-1296.
- Figure 1: UpToDate Graphic 131964 Version 2.0
- Figure 2: Comerota, A. J., & Gravett, M. H. (2007). Iliofemoral venous thrombosis. Journal of Vascular Surgery, 46(5), 1065-1076.

CASE 2



46-year-old woman with recurrent right lower extremity DVT despite anticoagulation status post multiple interventions including thrombectomy/inferior vena cava (IVC) filter placement and right common iliac vein (CIV) stenting. Magnetic resonance imaging (MRI) revealed a 4.5 cm multiloculated mass in the region of right iliopectus bursa compressing the right CFV, favored to represent a ganglion cyst (arrow in A). The patient underwent ultrasound guided aspiration of the cyst with removal of approximately 10 mL of straw-colored thick fluid (B). Improved patency of the right CFV was noted at the end of case by color Doppler imaging (C, D). The patient reported relief of her right lower extremity swelling on the 2-week follow-up visit. The procedure was repeated 3 months later due to refilling of the cyst.

Conclusion

In rare circumstances, pathologies extrinsic to the vein that have imaging characteristics similar to iliofemoral deep venous thrombosis may contribute to venous obstructive symptoms. Awareness of the differential diagnosis, and of treatment of these mimickers of thrombus, may aid in determining appropriate treatment strategies for venous obstructive symptoms and avoiding unnecessary interventions for DVT.