

Progressive Loss of Central Venous Access Due to Extensive Catheter-Related Deep Vein Thrombosis: A Case Report



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Background

Central venous catheter–related deep vein thrombosis (DVT) is a common complication, with an incidence of nearly 3 per 1,000 catheter-days. It can lead to **venous stenosis, occlusion, and loss of access sites**.

Management is challenging in patients with high bleeding risk, requires balancing between anticoagulation and hemorrhage risk.

Case Report

49-year-old patient with:

- Acute toxic pancreatitis
- Acute renal failure
- Walled-off pancreatic necrosis

Comorbidities: asthma, hypertension, obesity

Prolonged ICU stay (46 + 58 days):

- 12 laparotomies
- Recurrent intra-abdominal hemorrhage
- Packing for bleeding control

Vascular Access Challenges

CVVHD access replaced 8 times
3 due to thrombosis
CVC replaced 4 times
Mainly due to infection

Progressive difficulty obtaining vascular access

Access sites:

- Bilateral femoral veins
- Internal jugular veins
- Left subclavian vein

Imaging findings

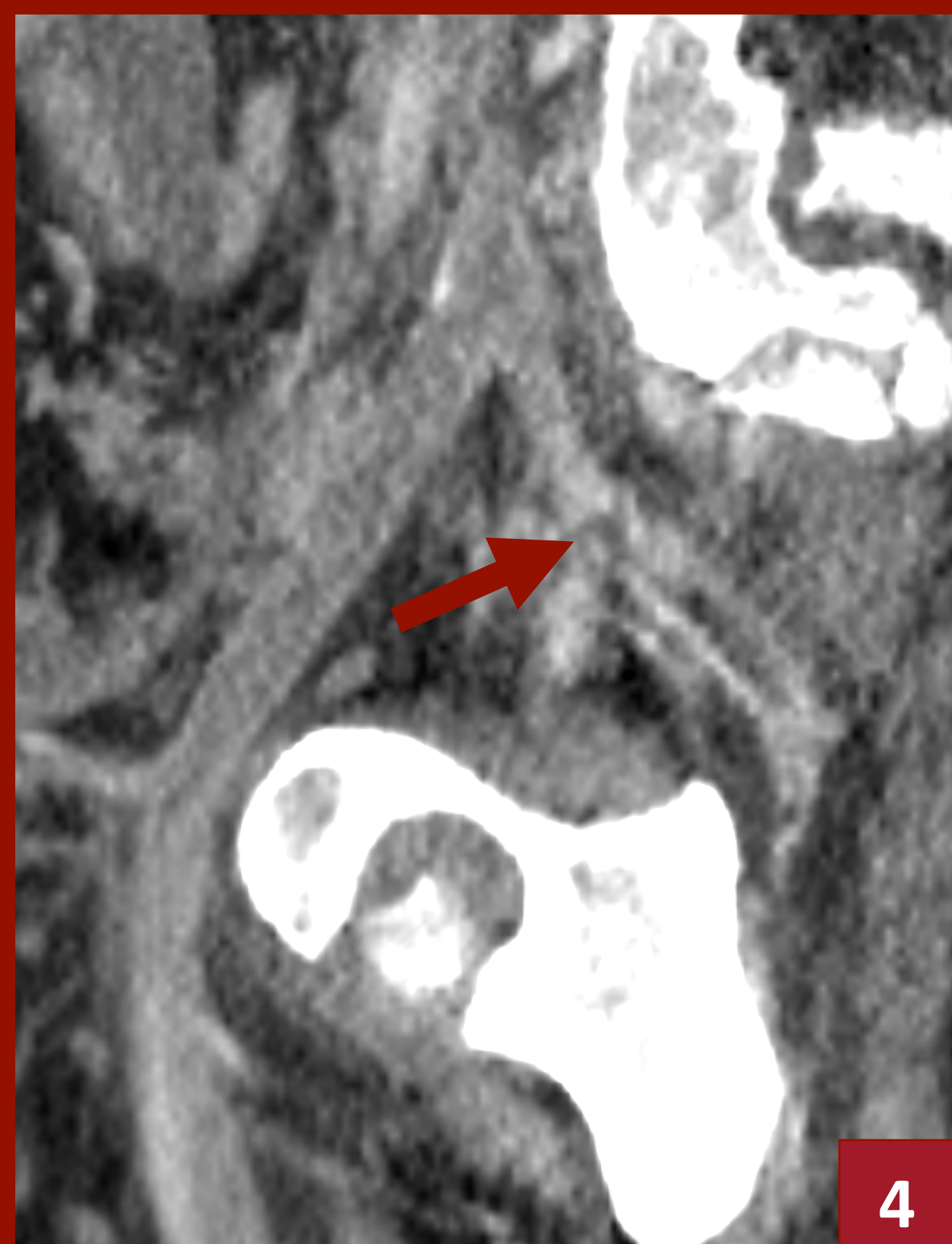
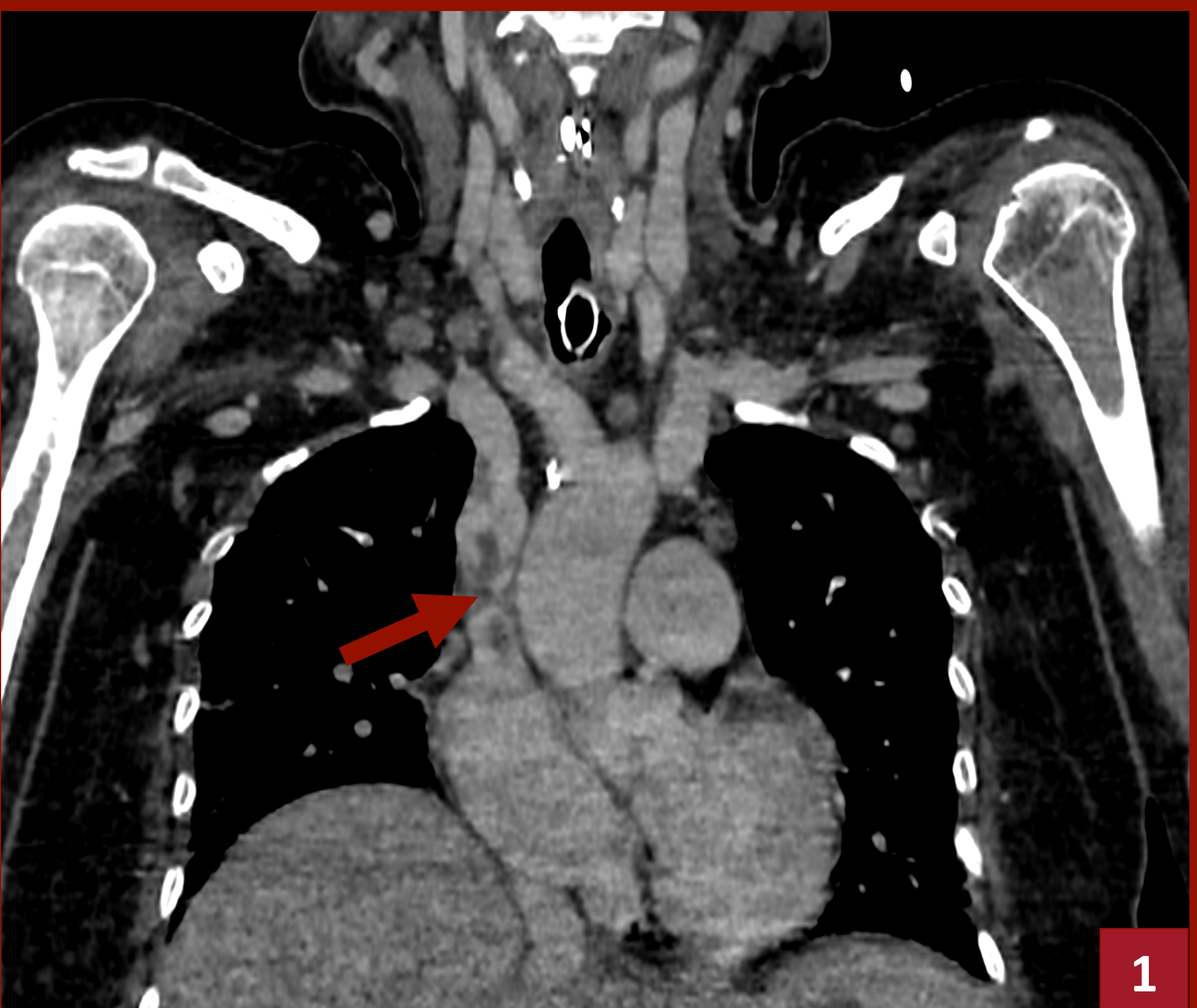


Fig. 1. Coronal CT: Thrombosis of the bilateral internal jugular and brachiocephalic veins with extension into the superior vena cava.
Fig. 2. Axial CT: Intraluminal filling defect within the superior vena cava, consistent with thrombosis.
Fig. 3. Coronal CT (pelvis): Bilateral femoral and external iliac vein thrombosis.
Fig. 4. Axial CT (pelvis): Thrombosis of the iliac veins.

Management

- Regional citrate anticoagulation (CVVHD)
- Persistent thrombosis despite regional anticoagulation
- Systemic anticoagulation (LMWH) initiated
- Dosing individualized due to high bleeding risk

Conclusion

- Extensive catheter-related DVT is challenging to manage in critically ill patients
- Management is complicated by **competing risks** of thrombosis and bleeding
- Standard anticoagulation strategies may be insufficient
- An individualized, multidisciplinary approach is essential
- Clearer evidence-based guidelines are needed

References

Teja B et al. *JAMA Intern Med.* 2024;184:474–482.
Girardi L et al. *Eur J Clin Invest.* 2025;55:e14311.