

IMAGE FOCUS

Superficial Vein Thrombophlebitis of Lower Limb Caused by an Intra-vascular Foreign Metallic Body

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Superficial thrombophlebitis of the lower limb is a common, frequent pathology, which most of the time does not require anticoagulant treatment. However, the condition can evolve unfavorably, with the progression of the thrombus to the level of the deep venous system, causing deep vein thrombosis and pulmonary embolism.¹⁻⁴

We present the case of a 31-year-old male patient who presented to the emergency room for pain and inflammation in the lower right infragenicular limb, symptoms that appeared 6 days prior. Blood tests showed no significant modification. At the clinical infragenicular examination, an area of inflammation and induration was highlighted on the path of the great saphenous vein. The ultrasound examination revealed local thrombosis of the great saphenous vein as well as the presence of an intravenous body with a posterior acoustic shadowing of approximately 5 mm in diameter (Figure 1).

According to the anamnesis, the patient had a minor accident a week earlier in which a metallic body flew and hit the patient at the level of the distal third of the medial face of the right thigh, with no signs of local bleeding, therefore he did not present to the hospital. Due to these findings, to better characterize the type and localization of the foreign body, a computed tomography angiography (CTA) of the lower limbs was performed. The radiological results of the CT were strongly indicative of the presence of a metallic body at the level of the great saphenous vein (Figure 2).

Under local anesthesia, exploration of the thrombosed venous segment was performed, with ligation and extraction of the portion of the great saphenous vein that contained the foreign body (Figure 3). During follow-up, the patient was examined at 1 week, 1 month, 3 months, and 6 months after surgery. There were no signs of inflammation or local infection, and the surgical wound had healed.

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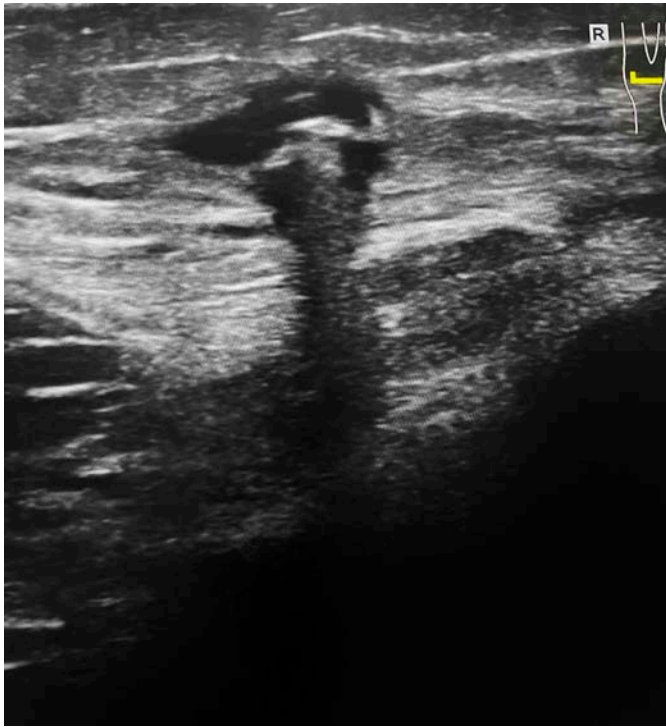


FIGURE 1. Ultrasound examination revealing the foreign body with local thrombosis of the great saphenous vein and posterior acoustic shadowing

Very few cases of superficial thrombophlebitis caused by an intravascular foreign body have been reported in the literature. Iatrogenic foreign bodies, such as an intravenous cannula or venous catheter fragments, are the most common causes of intravascular foreign bodies.^{2,5–10} Moreover, embolization that occurs as a result of penetrating injuries, such as gunshot wounds or industrial accidents, have been reported.¹⁰ Bypareddy *et al.* reported a metallic foreign body-induced post-traumatic occlusion of the superotemporal branch of the retinal blood vessel.¹¹ Another intriguing case was reported by Ciarrocchi *et al.*, in which they discovered a 7-cm-long wooden body in the right lower pulmonary artery without any subsequential lung injury.⁶

The unexplainable migration of the metallic foreign body from the distal third of the right thigh to infragenicular level and its intravascular presence distinguish our case. Furthermore, as shown in Figure 2, the patency of the great saphenous vein was preserved, except for the collateral branches where the foreign body was discovered. The site of intravascular penetration from the foreign body in the vicinity of the integumentary lesion was not visible on ultrasound or CTA.

The study was conducted in accordance with the Declaration of Helsinki and approved by the Ethics Committee of Mureş County Emergency Hospital of Târgu Mureş, Ro-

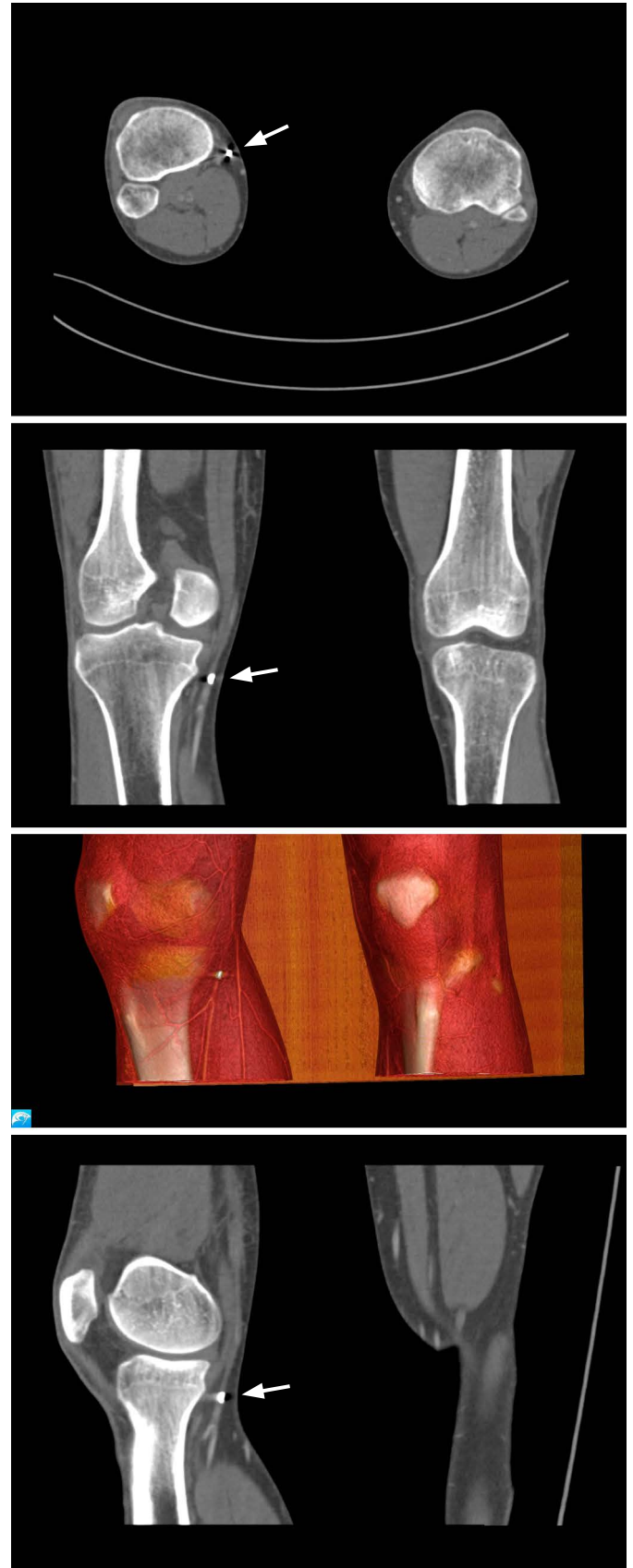


FIGURE 2. The radiological results of the CTA showing the foreign metallic body (arrows). **A** – transverse section; **B** – coronal section; **C** – 3D reconstruction; **D** – sagittal section



FIGURE 3. The portion of the great saphenous vein that contained the foreign metallic body

mania. Written informed consent had been obtained from the patient to publish this paper.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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