

Symptomatic Failure in Endovenous Thermal Ablation Caused by the Existence of Type-B Saphenopopliteal Junction: Original Image

Endovenöz Termal Ablasyonda Tip-B Safenopopliteal Bileşke Varlığının Neden Olduğu Semptomatik Başarısızlık

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Endovenous thermal ablations (laser or radiofrequency), are the current treatment modalities of the incompetent superficial veins of the lower extremity. The indications of these procedures are identical to those of the sclerotherapy and open surgery.¹ Axial veins, namely the great saphenous vein (GSV), small saphenous vein (SSV), and the accessory saphenous veins (ASVs) are the primary targets of this therapy. However, anatomic variations in the venous system are numerous, and they all require different strategies according to their diversity for the proper treatment. As the knowledge about the venous system is steadily increasing with the use of ultrasonography, clinical vascular anatomy is now in a period of detailed reconsideration.² In this paper, an uncommon anatomic variation of the Saphenopopliteal Junction (SPJ) (Type-B) with the cranial continuation of the insufficient SSV and its endovenous treatment that complemented the previous ablation of the GSV was reported.

A 42-year-old female referred to our outpatient clinic with the persistent symptoms of venous insufficiency despite she had been treated with the endovenous thermal ablation three months ago. She was complaining about the ineffectiveness of the procedure she had been applied. She had been treated with endovenous laser ab-

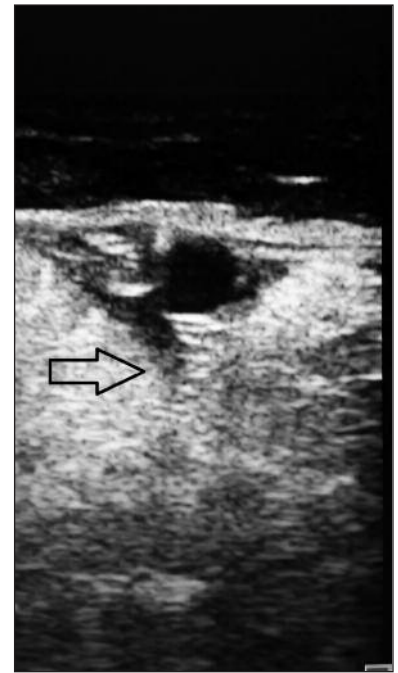


FIGURE 1: Arrow is indicating the type-B saphenopopliteal junction. Partial endothelial changes due to the previous incomplete ablation are seen inside the small saphenous vein.

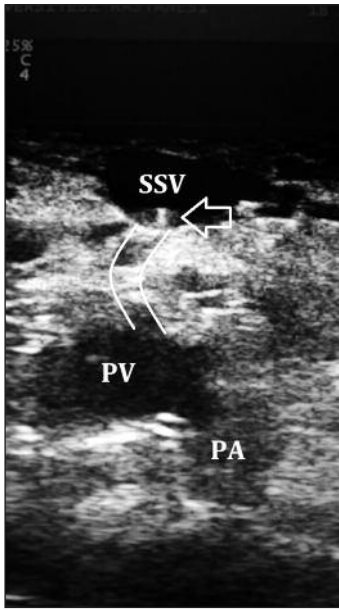


FIGURE 2: Transverse view of the saphenopopliteal junction (SFJ) at the level popliteal fossa. The arrow is showing the radiofrequency ablation catheter. The parabolic lines are showing the Type-B SFJ. Note the diameter of the small saphenous vein above the level of SFJ that should normally be smaller.

SSV: Small saphenous vein; PV: Popliteal vein; PA: Popliteal artery.

lation to her SSV in a vascular surgery clinic. Color Doppler ultrasound examination revealed a persistent insufficiency in the SSV and the presence of an anatomical variation of SPJ (Figure 1). She had a type-B SPJ and the SSV having endothelial signs of previous incomplete endovascular thermal ablation (Figure 2). It was thought that the endovenous ablation had probably been done until the SPJ, and the cranial extension of the SSV had been ignored and left untreated. We performed an additional endovenous radiofrequency ablation again to the SSV to complete the treatment. SSV was accessed at the mid-calf level that is the divergence point from the sural nerve. The RF catheter was advanced until it can no further be progressed anymore (Figure 3). SSV

was ablated from this segment backwards. After the procedure, the leg was wrapped with a compression bandage and kept elevated for six hours. The patient was discharged on the same day and advised to rest for the next two days.

In contrary to the GSV, which has less anatomic variations, the anatomy of the SSV demonstrates significant variability concerning the connection with the popliteal vein (PV).³ Therefore, a classification system for the saphenopopliteal junction (SPJ) was established by the International Union of Phlebology (IUP). This system concentrates on the type of the junction (SPJ) and its interaction with the cranial (thigh) extension rather than the junctional (SPJ) level.⁴ Type-B SPJ is a rare variation and seen only in 15.1% of the studied population.³

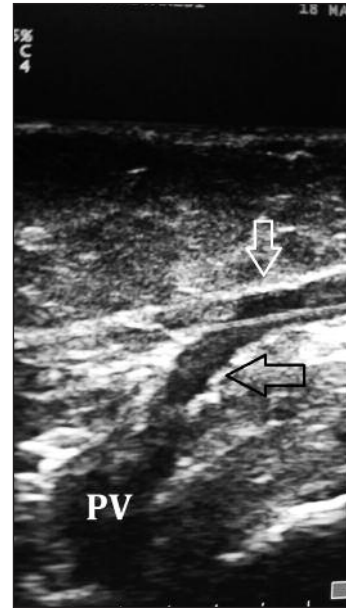


FIGURE 3: The white arrow is showing the small saphenous vein and the radiofrequency ablation catheter inside the SSV. The black arrow is showing the Type-B saphenopopliteal junction.

PV: Popliteal vein.

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