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Anatomic description of the distal great saphenous vein-a cadaveric study with clinical correlation

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We use this protocol and it's working

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Abstract

This study is useful in stripping surgeries of varicose veins to know the accurate location of the perforators, the relationship of the saphenous nerve to the great saphenous vein, to find out exact location of great saphenous vein in relations to the landmark, medial malleolus in precise in case of venesection or a canalization in acute emergency.

Attachments



[GSV_Protocol.pdf](#)

367KB

Guidelines

This protocol is already approved by the Ethics Committee of Kasturba Medical College, Mangalore, India, Reg. No.

ECR/541/IND/KA/2014/RR-20

The approval number IEC KMC MLR 09/2024/568, dated 19/09/2024

Materials

Digital Vernier Caliper (Mitutoyo, Japan)

1. Introduction

1 The great saphenous vein is the longest vein in the body, which originates as a continuation of the medial marginal vein in the medial aspect of the dorsal venous arch of the foot [1]. It ascends anterior to the medial malleolus obliquely in the medial aspect of the leg and thigh and ends by draining into the femoral vein at the saphenofemoral junction after piercing the cribriform fascia [2]. Getting vascular access is of paramount importance for the resuscitation of an acutely ill patient [3]. Even though the upper limb veins are targeted first in gaining venous access, the distal great saphenous vein becomes a popular site in hemodynamically unstable patients with visually indiscernible veins, especially in a resource-poor setting [3]. Vascular access to the distal great saphenous vein can be achieved by percutaneous venous cannulation and distal saphenous venous cut-down, while the constant location of the vessel, its large caliber, having located on tough periosteum and thick wall of the vein facilitate these procedures [4]. The establishment of venous access is essential to the treatment and resuscitation of both the medically and traumatically ill patient. Adequate venous access allows the delivery of fluids, blood products, medications, and repeated blood sampling. [5]

The venous cutdown technique is a surgical procedure to gain venous access when relatively less invasive percutaneous procedures such as the Seldinger technique (percutaneous access), ultrasound-guided venous access, and intraosseous vascular access have failed. Percutaneous access can be difficult to achieve in certain patient populations (pediatric patients with small and nonpalpable veins, patients in hypovolemic shock with collapsed veins, patients with peripheral vascular disease with altered vascular anatomy) making venous cutdown a life-saving alternative.[6][7][8]

Venous disease is the most common cause of leg ulceration, and compression therapy improves venous ulcer healing. (9,10) Superficial venous reflux (varicose veins) is usually present in patients with venous leg ulcers. (11)

2 Knowledge

gap identified: The studies are scarce regarding the morphology of great saphenous vein as this is essential for the clinical practice. The implications include accurate cannulation of GSV, the saphenous nerve involvement during stripping surgery, the role of both GSV and SN in ulcer formation at medial malleolus and on dorsum of foot, ligation of perforators at ankle, summons more anatomical studies in this region.

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