

Case Report

A CASE REPORT ON ABNORMAL COURSE OF VENA SAPHENA PARVA

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ABSTRACT

Background: Great saphenous vein and short saphenous veins are the superficial veins of the lower limb. Variations in the superficial veins of the lower limb are uncommon. Our case report discusses anomalous course and its abnormal termination of short/small saphenous vein/Vena saphena parva.

Materials and Methods: 80 Cadavers, Blade scalpel, Scissors, Forceps, Cotton, Other stationeries.

Results: The short saphenous vein deviates the anatomical course without draining into popliteal vein, instead drains into deep femoral vein, femoral vein and Great saphenous vein.

Discussion: During a routine dissection with 80 cadavers, an abnormal short saphenous vein was observed in the left lower limb of an aged male cadaver. The origin of small saphenous vein from the dorsum of the foot at the lateral end of the dorsal venous arch and continues behind the lateral malleolus and courses upward along the posterior side of the leg and has to end in popliteal vein but in our continuity of dissection the short saphenous vein has bifurcated into proper short saphenous vein and accessory saphenous vein at the junction of back of leg which drains into great saphenous vein.

Conclusion: The knowledge of superficial veins of the lower limb is useful for clinicians during coronary bypass procedures, as these vessels are commonly used in such surgeries. It is therefore, essential for surgeons before harvesting the great saphenous vein to look for the abnormal drainage pattern of the short saphenous vein into the great saphenous vein either directly or through communication veins or with the presence of the Giacomini vein, Accessory saphenous vein.

KEY WORDS: Great Saphenous vein, Short Saphenous vein, Thigh, Malleolus.

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INTRODUCTION

Vena saphena parva or Small saphenous vein, is where the dorsal vein from the fifth digit which merges with the dorsal venous arch of the foot, which attaches to the great saphenous vein. Short saphenous vein is a superficial vein being subcutaneous beneath the skin. Vein courses around the lateral aspect of the foot, inferior and posterior to the lateral malleolus and runs

along the posterior aspect of the leg along with the sural nerve, and it passes between the medial head and lateral head of the gastrocnemius muscle [1], Or It ascends lateral to the calcaneal tendon, inclining medially to reach the midline of calf, emerges at the lower limit of popliteal fossa before terminating into the popliteal vein about 3-7.5 cm above the knee joint [2].

The great saphenous vein is the bigger and major superficial vein of the medial leg and thigh. Great saphenous vein is the longest vein in the human body, extending from the top of the foot to the upper thigh and groin. Great saphenous vein is accompanied by saphenous nerve and finally opens into the femoral vein after passing through the saphenous opening [1]. The great saphenous vein plays an important role in returning blood from the superficial tissues of the leg to the heart and is also used in several medical procedures due to its size and superficial location [3].

MATERIALS AND OBSERVATIONS

Present Study conducted with 80 Cadavers, Blade scalpel, Scissors, Forceps, Cotton, Other stationeries, to find out the course of vena saphena parva. Among those observations we found that the short saphenous vein deviates the anatomical course without draining into popliteal vein, instead drains into deep femoral vein, femoral vein and great saphenous vein.

Fig. 1: Showing great saphenous vein.



Fig. 2: Showing Deviating short saphenous vein - level of popliteal fossa.



Fig. 3: Showing short saphenous vein deviating towards biceps femoris.



Fig. 4: Showing short saphenous vein running in the back of thigh.



Fig. 5: Showing short saphenous vein piercing from back to front of thigh.



Fig. 6: Showing short saphenous vein draining into great saphenous vein.



DISCUSSION

Great saphenous vein and short saphenous veins are the superficial veins of the lower limb. Small saphenous vein, is where the dorsal vein from the fifth digit which merges with the dorsal venous arch of the foot, which attaches to the great saphenous vein. Short saphenous vein is a superficial vein being subcutaneous beneath the skin. Vein courses around the lateral aspect of the foot, inferior and posterior to the lateral malleolus and runs along the posterior aspect of the leg along with the sural nerve, and it passes between the medial head and lateral head of the gastrocnemius muscle [1,4]. Variations in the superficial veins of the lower limb are uncommon. Our case report discusses anomalous course and its abnormal termination of short/small saphenous vein. During a routine dissection with 80 cadavers, an abnormal short saphenous vein was observed in the left lower limb of an aged male cadaver. The origin of small saphenous vein from the dorsum of the foot at the lateral end of the dorsal venous arch and continues behind the lateral malleolus and courses upward along the posterior side of the leg [5], which is the continuation of lateral marginal vein [6] and has to end in popliteal vein but in our continuity of dissection the short saphenous vein has bifurcated into Letter – Y shaped unnamed vein as proper short saphenous vein and accessory saphenous vein at the junction of back of leg which drains into great saphenous vein.

Generally, Short saphenous vein perforates the deep fascia and drain into the popliteal vein in the popliteal fossa [7] but the Proper short saphenous vein ascended upwards and deviates the normal course of anatomy and runs laterally at the junction between biceps femoris and common peroneal nerve and courses deep into the back of thigh and runs between biceps femoris and semitendinosus in the middle of thigh and therefore again the vein bifurcates and deviates deep into the thigh and drains into deep femoral vein (profunda femoris vein). It proceeds superiorly and medially running along side with profunda femoris vein as a separate vein which is unnamed to join with femoral vein as Daniel's et al's vein at the level of ischial tuberosity which is shown in figure 6 instead of

Popliteal vein. The Giacomini vein is a communicant vein between the great saphenous vein and the small saphenous vein. The Giacomini vein courses the posterior thigh as either a trunk projection, or the tributary of the Short Saphenous Vein [8,9]. In our study we didn't found giacomini vein but in our dissection the vein is purely deviating into the substance of back of thigh.

During the dilatation of veins or varicose veins it is very important to know the course of veins. In the lower limbs, venous blood flows from the skin to superficial veins, which drain into the deep veins. With the veins there are valves that prevent back flow of blood. If these valves become incompetent, blood can flow back into the superficial veins. This results in an increased intra-luminal pressure, which the veins cannot withstand, causing them to become dilated and torturous. This condition is known as varicose veins. There are various soft tissue changes that can occur with chronic varicose veins. Due to the incompetence of the valves, the pressure in the venous system rises. This damages the cells, causing blood to extrude into skin. Further complications can produce a brown pigmentation and ulceration of the surrounding tissue. Varicose veins can be treated by; Surgical movement of the saphenous systems. Reconstruction of valves, Tying off the affected valves [10]. The knowledge of superficial veins of the lower limb is useful for clinicians during coronary bypass procedures, as these vessels are commonly used in such surgeries [11], and important to know during the ultrasound scanning studies [12].

CONCLUSION

The knowledge of superficial veins of the lower limb is useful for clinicians during coronary bypass procedures, as these vessels are commonly used in such surgeries. It is therefore, essential for surgeons before harvesting the great saphenous vein to look for the abnormal drainage pattern of the short saphenous vein into the great saphenous vein either directly or through communication veins or with the presence of the Giacomini vein, Accessory saphenous vein.

Conflicts of Interests: None

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