

Technical Note: Ligation And Stripping Of Short Saphenous Vein In Supine Position

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Citation

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Abstract

BACKGROUND

Ligation and stripping of short saphenous vein (SSV) is commonly performed in the prone position under general anaesthesia. To perform ligation of combined long (LSV) and short saphenous vein, the patient needs to be turned from prone or supine position. This has the disadvantage of respiratory complications whilst in prone anaesthesia, an increase in the operation time and extra staff in theatres to turn the patient.

In our technique, we describe stripping the LSV and SSV in the supine position. Our aim is to reduce anaesthetic complications, reduce operation time and free theatre staff.

THE TECHNIQUE

In patients with symptomatic SSV, preoperative venous duplex scan marking is needed in order to identify the sapheno-popliteal junction (SPJ) and proximal 15 cm of SSV from the SPJ

Under general anaesthesia and supine, patients underwent SPJ division and stripping of the SSV first. The knee joint needs to be flexed at a 45-degree angle and stabilised in this position by a towel at the ankle joint. Adduct the leg to 15 degrees at the level of the hip joint and ask the assistant to help stabilise the leg in this position whilst operating. Use a stool to sit on, lift the table up to a convenient position so that the knee joint will be at the level of the face (eyes) of the surgeon.

Make a transverse incision approximately 3cm at 2 cm below the SPJ duplex marking. Incise through the skin, subcutaneous tissue and fat, use the West retractor to retract the skin and subcutaneous tissue, control the bleeding by diathermy and swab.

You are now at the level of the deep fascia, in most cases

you will be able to spot a bulge through the fascia indicating the course of the SSV fig 2. Make a careful incision on the fascia and pick the SSV by small artery forceps, clear the way through to the SPJ upwards and use diathermy to control all the branches of SSV. Disconnect the SSV at the SPJ level then transfix it by a 3/0 prolene suture. Feed the pin stripper through the tip of the SSV, ask the assistant to let go from adduction position then extend the leg at the level of the knee joint. Proceed by pushing the stripper through the SSV (with out resistance) down towards the ankle joint. make a small skin incision to exit the stripper through the skin then strip the vein with the leg at full extension.

Close the skin incision at the top by 3/0 prolene stitches.

At standing position, level the table down and abduct the leg to perform the LSV stripping in the usual way.

DISCUSSION

Over the last two years we have used this technique to perform over 150 procedures of stripping combined long and short saphenous vein at the ACAD centre in Central Middlesex Hospital in London. It has proved to be very successful in reducing the operating time (by 35-40 minutes) through avoiding turning the patient to the prone position. This enabled us to increase the number of cases in each list by adding one extra varicose vein operation.

In addition using this technique enabled us to avoid the anaesthetic complications of the prone position, such as tube obstruction, injury to the cervical spine and injury to the peripheral nerves through nerve entrapments by the side of the table. It also permit an easy monitoring the patient at the end of the operation whilst still under anaesthesia.

Furthermore we were able to free more theatres staff through not moving patients on the table in the middle of the

procedure.

However this procedure is only successful if the SPJ within 2cm distance from the popliteal crease (marked by duplex) and it would be technically difficult at the higher sapheno-popliteal junction.

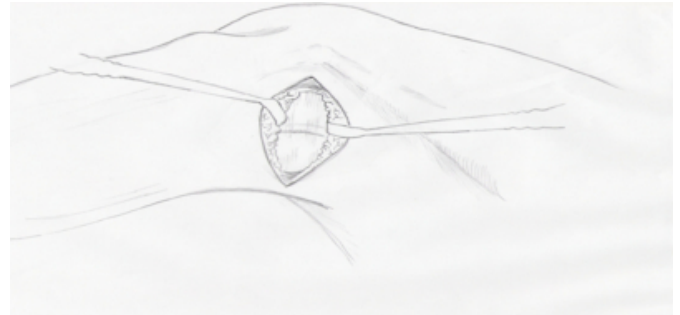
Figure 1

Illustration 1: Position of the patient on the table (adduction and internal rotation at the hip level , flexion at the knee level)



Figure 2

Illustration 2: Short saphenous vein bulge through the deep fascia



References

1. Machenzie RK , Bradbury AW , Journal of Vascular surgery Nov.2002 ,36(5):896-902
2. Winterorn RJ ,Campbell WB ,Heather BP , Earnshaw JJ, EUR JOURNAL VASCULAR SURGERY , OCT 2005 , 30 (4): 452
3. Lees T, Singh S, Beard J , Spencer P, Rigby C, British journal of surgery , Aug 1997 , 84(8) 1178-9

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