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RESEARCH ARTICLE

AN ALTERNATE MODALITY OF STRIPPING OF VARICOSE VEINS

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Abstract

Varicose veins are very common clinical condition characterised by permanently dilated torturous elongated veins in the leg which is due to incompetence of valves. Risk factors being heredity, occupations of prolong standing, immobility, raised intra abdominal pressure, raised progesterone level, altered oestrogen-progesterone ratio etc. A 27 years old patient with no h/o any systemic disease or co morbidities came with complaints of dilated, tortuous veins in the left lower limb extending from mid-thigh to ankle region since 2 months. Since 1 month the patient was having dull aching pain over the left lower limb on walking and prolonged standing. A thorough clinical examination was done with findings of incompetent Sapheno-femoral junction(SFJ) and perforator incompetence of the left lower limb. A venous Doppler of the left lower limb revealed SFJ dilated and incompetent and Incompetent perforators along the GSV 5 cm below the knee. Following all routine preoperative work-ups, patient was posted for surgery. After ligating all the tributaries of GSV, while checking the metallic stripper, it snapped in between and was not in a useable condition and there was no other metallic stripper in the OT. Decision had to be taken for an alternative the GSV was successfully stripped using a 14F Nelton's catheter. Thus as an alternative to metallic stripper, a Nelton's catheter can also be used for stripping varicose veins.

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Introduction:-

Case Report:

A 27 years old patient with no h/o any systemic disease or comorbidities came with complaints of dilated, tortuous veins in the left lower limb extending from mid-thigh to ankle region since 2 months. Since 1 month the patient was having dull aching pain over the left lower limb on walking and prolonged standing.

A thorough clinical examination was done with findings of incompetent Sapheno-femoral junction(SFJ) and perforator incompetence of the left lower limb.

A venous Doppler of the left lower limb was done, suggestive of incompetent and dilated SFJ. Incompetent perforators along the GSV 5 cm below the knee. No evidence of DVT.

After the routine pre-operative workup patient was posted for Trendelenburg's surgery. Preoperatively the SF Junction and the perforators marked with doppler. Intraoperatively a subinguinal transverse skin-crease incision was

taken extending over the SFJ. The GSV identified and traced upto SF junction. All the tributaries of the GSV were identified and ligated. The SFJ ligated flush to the femoral vein and decision was taken to strip the GSV upto the knee.

As the preparation for stripping the GSV was going on while checking the metallic stripper, it snapped in between and was not in a useable condition and there was no other metallic stripper in the OT. Decision had to be taken for an alternative. A 14F Nelton's catheter was inserted into the distal GSV at the SFJ and withdrawn at the level of knee.

At the tip of the catheter a knot was made and was also tied with Ethilon suture, leaving the loose suture at the distal end that can be used to trace back the catheter if in case the catheter disintegrates. This catheter pulled in the vein and ligature tied over it. Then with steady traction from above the segment of GSV was stripped along with the Nelton's catheter successfully. This was done on the basis of same principle of Myers endoluminal stripper causing invagination of the vein. Then subfascial ligation of below knee perforator was done at the site marked preoperatively.



Fig (1):- Introducing Nelton's Catheter along GSV and Knot made at the tip on which distal end of GSV is tied using 2-0 ethilon suture material.



Fig (2):- Stripping of GSV using Nelaton's Catheter.



Fig (3):- Stripped GSV along with Nelaton's Catheter.

Discussion:-

A combination of ligation, stripping and stab phlebectomy may be applied as needed to the GSV, SSV, tributary veins and perforating veins. With the advent of duplex mapping of incompetent veins preoperatively, the surgeon will have a much better idea of whether stripping of the GSV is necessary⁽¹⁾.

To perform the stripping of the GSV, a venous stripper is used which can be intraluminal or external:

- is either inserted into the lumen of the vein-this is referred to as an endoluminal stripper(Myers),
- or is placed around the vein-this is referred to as an external stripper.(Mayo)

In 1905, W.L Keller described stripping by invagination which was revived in 1963 by Van der Stricht under the name of wire invagination. In 1906, C.H. Mayo reported his technique of external stripping. In 1903, W. Babcock popularized endoluminal stripping by using a rigid stripper which remained in favour for several decades. Myers in 1947 used the flexible endoluminal stripper⁽²⁾

During the last decade(1945-54) various remedies for varicosities have proved to be often of Temporary benefit, stripping has been revived by surgeons in America (Barrow,1948), Britain (Foote,1954) and Canada (FratkinandJackes)⁽³⁾. Stripping by Mayo's Ring Stripper In 1906 Mayo started stripping varicose veins by threading the saphenous trunk through a ring on steel shaft and moving this subcutaneously along the outside of the vein, thereby freeing it from the fat and tearing off its tributaries. Myers stripper removes the vein by invaginating the vein.

Long saphenous stripping from ankle to groin is followed by an unacceptably high (23-58%) instance of neurological complications resulting from saphenous nerve trauma. SF ligation without stripping avoids this complication, but with a reported varicose vein recurrence rate of 60%. Stripping the incompetent long saphenous vein from groin to upper calf has reported to cause less neurological complication and recurrence rate of 12.5%, half of which were suitable for injection sclerotherapy

In our case plan was to strip the vein upto upper calf to reduce the recurrence .Since the stripper snapped we thought of alternative means and thus used the Nelton's catheter as it is stiff but nontraumatic as an endoluminal stripper. Thus our stripper was non traumatic and served the purpose of stripping the vein. This can be an alternative to already available metallic stripper and in future there is scope for disposable strippers.

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