

Varicose vein examination

Start with the patient standing

Inspection – both standing and lying

- Adequately expose the patient
- Look at the lower limbs for obvious varicose veins
- Look specifically in the distribution of the short saphenous vein (posterior to the lateral malleolus passing posteriorly over the lateral calf to the popliteal fossa) and the long saphenous vein (anterior to the medial malleolus, passing hand breadth medial to the knee and then passing up medial calf to the sapheno-femoral junction)
- Comment on this distribution
- Look for superficial thrombophlebitis
- Inspect for signs of venous changes in the limb – ie, chronic venous hypertension
 - o Haemosiderosis over medial gaiter region
 - o Oedema
 - o Lipodermatosclerosis – fibrous reaction due to vascular cuffing
 - o Inverted champagne bottle leg due to oedema proximally – distally lipodermatosclerosis prevents swelling
 - o Venous ulceration (commonest form of ulceration, over medial malleolus commonly. Sloped edge, painless, warm limb, pulses palpable, granulation covered by slough)
 - o Atrophe blanche – paler areas commonly over healed ulcers
- Inspect for signs of peripheral vascular disease – ie pale, atrophic, hairless, cool limb with absent pedal pulses.

Palpation

- Palpate the varicose veins, attempting to identify distribution
- Exclude the presence of a saphena varix at the sapheno-femoral junction (compressible, reduces on lying and has a cough ‘thrill’)
- Offer to palpate pedal pulses
- Offer to palpate abdomen as there could be mass compressing IVC or iliac veins precipitating venous hypertension.

Special tests

- Tapping test
 - o Test of valvular insufficiency along course of long saphenous vein. Palpate over the sapheno-femoral junction and tap at a point of varicosity more distally and if a thrill is palpated then there is continuity and thus valvular insufficiency.
- Trendelenburg test
 - o Test for sapheno-femoral incompetence ONLY. This test involves the patient lying down. Their leg is raised to empty the veins. The sapheno-femoral junction is identified (identify femoral artery at the

mid-inguinal point, and palpate medially for the vein. The junction is said to be ~2 inches below this) Exerting pressure with fingers over this point, the patient is asked to stand and the leg is observed. If the veins do not fill immediately, this suggests that the sapheno-femoral junction is the sole site of venous incompetence. Release of pressure confirms this.

- Tourniquet test
 - o This test is to identify the site of venous incompetence and is similar to the above. When raising the leg to empty the veins, rather than placing finger over junction, a tourniquet is tightened around the upper thigh to prevent sapheno-femoral reflux. Again, if veins don't fill. This suggests that the sapheno-femoral junction is the site of incompetence. If the veins do fill it suggests that this junction is competent and the site of incompetence is more distal. Thus the test is repeated with the tourniquet being placed just above the knee (mid-thigh perforator), below the knee (short sapheno-popliteal) and if still veins fill, suggests incompetence is at the level of the mid-calf perforators

- Doppler examination
 - o Another test of sapheno-femoral competence is with a Doppler probe that is placed over the sapheno-femoral junction and the calf is squeezed. This increases venous return and accompanying 'whoosh' on the Doppler. If this is followed by a 'plop' this suggests that the junction is patent and the valve prevents regurgitant flow. If there is a 'whoosh' this suggests regurgitation and thus incompetence.

There are various other tests that are less important and will not be necessary, but could be mentioned such as Perthes test.

With regard to management varicose veins can be characterised by 2D ultrasound examination more precisely.

Management is conservative unless the patient is symptomatic – aching, pain, bleeding, DVT etc.

This will involve compression stockings which also help prevent DVT. You MUST measure ABPI's before giving stockings, as if there is reduced ABPI, then compression can precipitate ischaemia or claudication.

Surgical management of varicose veins includes:

- Sclerotherapy – injection of a sclerosing substance to thrombose vessels and prevent recanalisation
 - Tying of the sapheno-femoral junction if source of incompetence
 - Vein stripping – to remove varicose veins
 - Avulsion – tying off points of incompetence along vein identified by USS
 - Ablation – intraluminal ablation of veins for example by laser
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