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Medical Article

Spider Veins and Varicose Veins

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Spider veins are small red or purple thread veins that spread over the surface of our skin. Varicose veins are gnarled veins that bulge out and are located somewhat deeper than spider veins and commonly found on lower limbs. Apart from their non-appealing appearance, they may cause aching pain and swelling legs; and may result in serious complications such as skin discoloration, non-healing leg ulcers and blood clots.

Blood flows down our legs through arteries, and back up to the legs via veins. There are two main systems of veins: deep veins which are embedded inside muscles and superficial veins which are underneath our skin. Blood drains from superficial veins through perforating veins into our deep venous system which then provides pathways to the heart. Valves inside the veins open as blood flows towards the heart and close when it flows back to the feet. When wall of the veins are weak, the leaflets of the valves can no longer meet properly to stop back flow of blood. As a result, blood pools and superficial veins puff up as varicose veins or spider veins. The increased pressure inside the veins may cause swelling and dragging pain to our legs. Venous under duress also elicits a cascade of inflammatory events and leads to darkening of skin, eczema and even non-healing ulcer.

Duplex scan is a special type of ultrasound scan with the additional ability to measure blood flow direction. Duplex is the non-invasive test of choice to locate the source and channel of backflow of blood. It is indispensable in tailoring treatment to each individual.

Current treatments are highly successful in relieving agony and preventing complication of varicose veins. Treatment options to close or remove abnormal veins includes sclerotherapy (injecting medicine into veins to make them shrink), the minimally invasive endovenous ablation (using laser or radiofrequency to burn and close abnormally enlarged veins), surgical vein stripping and phlebectomy (removal of veins through small incisions).

Sclerotherapy

Sclerotherapy is a friendly procedure which can be performed in a clinic. Medicine is injected into the spider veins or small varicose veins to close the veins and forces blood to re-route through normal veins.

Endovenous ablation

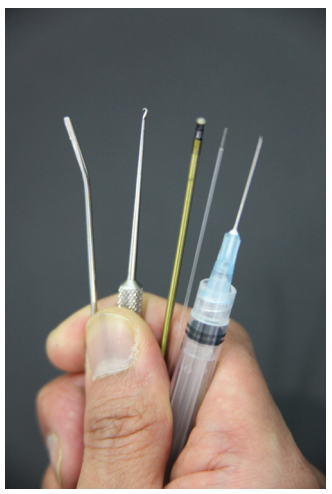
Endovenous ablation can be achieved either by chemical drugs or by heat technology. These through the lumen procedures are performed under local anaesthesia. A very thin tube (catheter) is inserted into the main trunk of the superficial venous system under ultrasound image control. Through the catheter sclerosing agent, radiofrequency energy or laser energy is delivered. As the catheter is withdrawn the inner tissue of the vein is destroyed. The healing process of the body then seals off the abnormal veins and re-routes blood flow to normal functioning veins. Patients are able to go home right after the procedure and resume daily activities within a day.

Open Surgery

High ligation and vein stripping of the main trunk
This involves a small incision in the groin to tie off the origin of backflow at the junction between the superficial vein and the deep vein. The main trunk of the superficial vein is then stripped inside-out through a puncture wound just below the knee level. Patients are typically able to resume normal activities within a few days.

Hook phlebectomy to remove the branch varicose veins
Through multiple skin punctures, branches of varicose veins are fished out by using a hook and avulsed. Scarring is generally minimal.

Patients are attracted to the simplicity of endovenous ablation, its post surgery's immediate mobilisation and short recuperation period. Though endovenous procedures are prevalent in treating varicose veins patients, yet it still cannot replace open surgical procedures. Treatment methods are not mutually exclusive. Depending on the distribution and extent of the varicose veins, treatment methods are often combined to achieve optimal results.



From left to right:
Vein stripper, Phlebectomy hook, radiofrequency fibre, Laser fibre, sclerotherapy needle