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Best Practices

Evidence-Based Standards of Care

Therapy for Venous Insufficiency

The mainstay in treatment of venous insufficiency be it varicose veins, spider veins or advanced skin changes-ulcers, is elastic compression. The elastic compression should be graduated- greater pressure at the ankle, than the upper leg. Adequate compression does not include support hose or TED stockings. TED's give 15mm Hg compression which is adequate while a patient is lying (thus the name anti-embolic stockings) but is inadequate with the leg in the dependent position. They really have no place other than the hospital setting. Medical grade stockings include compressions over 20mm Hg. The most commonly prescribed compression is 20-30 mm Hg. For preventative purposes in those who have jobs that entail a lot of standing- beauticians, nurses, cooks, surgeons, teachers and others 15-20 mm Hg is adequate. The stockings only need to extend over the calf. Compression in the thigh is only useful for those with large varicosities which ache. Patients under treatment and for considerations of comfort or dress would expose the top of a knee high.

We must persist when patients say that they are hot or difficult to put on. Once the patient has worn compression hose they acknowledge that their legs feel better. I tell patients that we wear them when others can't see our legs so we look good when the legs are exposed.

Use of rubber gloves or a frame facilitates putting the stockings on.

To eliminate varicose veins there have been significant advances in the last 10 years. Previously surgery was the mainstay for therapy. Sclerotherapy with liquid, although frequently successful in the short term had a high rate of recurrence in 20 to greater than 50% of patients. Surgery, in most hands, entailed general anesthesia and multiple incisions with the attendant problems of wound healing in the obese and when incisions were placed in areas of advanced stasis changes. Dealing with perforator veins-often the underlying culprit in patients with ulcers was often challenging, especially when located under an ulcer or in an area of significant lipodermatosclerosis. Even in the best of hands there was a significant recurrence rate, especially if there was a subsequent pregnancy or the patient had a job that entails significant standing.

With the new millennium there has been a significant paradigm shift with the advent of endovenous therapy. The two modalities available are radiofrequency closure and laser ablation with multiple devices using different wavelengths. In essence both modalities use heat to denature the proteins in the vein wall causing the vein to fibrosis. Because the target vein isn't actually removed there is much less discomfort and recovery is much shorter. Importantly, the long term



results are comparable to surgery.

Another modality which shows great promise is transcatheter chemical ablation. A solution of sclerosant is converted to a foam and then injected into the vein while pulling back on a catheter. The results have been nearly as good as radiofrequency and laser and the procedure is very well tolerated.

After the initial procedure on the great or short saphenous vein follow up for the varicosities can be performed using ambulatory phlebectomy or ultrasound guided sclerotherapy. Ambulatory phlebectomy consists of small stab incisions over varicosities with a #11 scalpel or #18 gage needle and then removing vein segments with a small hook after injecting local anesthesia. Ultrasound sclerotherapy consists of identifying the target vein using ultrasound and then injecting foam scleroant. This is my preference.

The keystone to all these procedures is a complete detailed ultrasound using compression maneuvers with careful attention to the perforators. Nothing can replace experience with venous and arterial disease and an understanding of venous physiology. Patients with significant arterial disease or lack mobility should generally not be treated. Treatment of patient's with ulcers can be very gratifying, but should be coordinated with a wound care center. Not only can wound healing be accelerated but recurrence rates are lowered.

Treatment of spider veins is generally accomplished using sclerotherapy. This is accomplished using a very small 31g needle. Some spider veins, especially those which are very small or those on the face are best treated with the appropriate laser. Again, experience and appreciation for underlying venous insufficiency is invaluable. Spider patterns in certain locations on the legs often indicate underlying disease which will compromise results if not addressed.

New developments in therapy, have made treatment available to many who, in the past, would not be considered because of the risks of general anesthesia. There is still a need for experience that comes from years of training and practice in matching the right modality to the patient

Dr. Samuel P. Martin one of the leaders in venous diagnosis and treatment. Since their inception, the Vascular Vein Centers have served the Central Florida community as a recognized, educated resource with more than 25 years experience treating venous disease.



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