



## Guidelines for Varicose Vein Surgery July 2008

With the advent of minimally invasive techniques for the treatment of varicose veins and venous reflux, the decision-making process for determination of medical necessity has changed. When the only option for treatment was surgical high ligation and stripping, it was reasonable to consider all available alternatives prior to this type of invasive procedure. Patients undergoing vein stripping typically experience significant post-operative pain and require a prolonged recovery period of two to four weeks of lost work time. Recent studies have shown that the five year recurrence rate after vein stripping is 50 to 65% often due to neovascularization that can occur after ligation and division of the saphenofemoral junction. Surgical stripping also carries the risk of side effects related to general anesthesia and prolonged immobility that is not present with newer, endovenous methods.

In comparison, endovenous techniques (endovenous thermal ablation and endovenous chemical ablation) do not require hospitalization, general anesthesia, or a prolonged recovery period. Patients typically experience minimal pain and return to work within a day or two. The five-year recurrence rate has been reported to be only 8 to 10%.

While use of graduated compression stockings may be useful for amelioration of symptoms, they are poorly tolerated by most patients, especially in warmer climates and summer. Compression stockings are impossible for those who work in hot environments, and are only palliative in all cases. Elderly patients and those with arthritis and other neuromuscular diseases have great difficulty donning the hose. If the stockings do not fit properly they may cause pressure sores, venous or lymphatic outflow obstruction, and even vascular compromise in patients with arterial insufficiency. The bottom line is that they do not eliminate venous reflux which is the root cause of progressive chronic venous disease.

When high ligation and stripping was the principle option for definitive treatment, long term use of graduated compression hose was a more reasonable alternative to venous surgery when considering the poor long-term success rate and risk of complications associated with surgical procedures. However, now that minimally invasive treatments are widely available, long-term use of compression hose is no longer a viable option as definitive treatment. Patients wearing compression hose have lower quality of life scores compared to untreated controls. Patients undergoing definitive treatment of venous reflux with endovenous techniques typically experience rapid resolution of their pain and swelling and return to normal activity almost immediately.

Insurance company requirements for 2, 3 or 6 months of conservative compression hose use prior to being eligible for definitive varicose vein treatment serves only as a barrier to patient treatment, prolonging their diminished quality of life, while delaying their return to a full functioning daily life. In the practice of phlebology, use of compression hose is useful for 1) post-treatment compression; 2) symptomatic treatment in patients in whom surgical or endovenous treatment is contraindicated due to other medical problems; 3) to assist in determining whether pain is related to venous reflux (2 weeks is usually ample); 4) for control of dependent edema; 5) for treatment of deep venous insufficiency; and

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6) for treatment of lymphedema; 7) prevention of post-thrombotic syndrome in patients with proximal DVT. A requirement for prolonged use of compression hose prior to any treatment (endovenous thermal or chemical ablation) is not supported by any evidence based medicine, is of questionable medical benefit for this correctable problem and does not represent the standard of care. In cases where the source of venous reflux can be treated effectively using endovenous methods, the patient is best served by proceeding directly to definitive treatment which is supported by evidence medicine with improved quality of life, decrease of symptoms and return to normal function with activities and work. This represents the current standard of care.

Endovenous thermal ablation is the new standard of care for treating junctional and truncal reflux. High ligation and stripping may be preferred for only a small number of patients presenting with specific problems involving the saphenous junctions. Endovenous (image guided) chemical ablation is the standard of care for treating non-junctional reflux and severely tortuous veins. Refluxing perforator veins may be effectively treated using either endovenous thermal ablation or endovenous chemical ablation. Endovenous chemical ablation involves injection of a sclerosant (liquid or foamed) into a refluxing tributary vein not visible with the use of transillumination or direct vision. Use of image guided techniques such as ultrasound is essential for the safe and effective performance of endovenous chemical ablation and reflects the current standard of care.

All patients with CEAP class C3, C4, C5, and C6 should be considered to meet medical necessity criteria for treatment for this progressive deteriorating problem. Patients with CEAP class C2 disease should be considered medically necessary if there is a demonstrable perforator or junctional reflux (saphenofemoral or saphenopopliteal) in order to prevent disease progression.

#### Treatment of Varicose Tributaries

The elimination of varicosities that are a consequence of truncal reflux is often needed to adequately treat the affected patient. These varicosities are often responsible for many of the patient's symptoms, particularly when the reflux source is short and a long chain of superficial varicosities are present. Endovenous treatment of the reflux source will decompress these varicosities but will not eliminate them. The elimination of these symptomatic varicosities may be accomplished by phlebectomy or sclerotherapy. In general phlebectomy is better suited to larger varicosities but sclerotherapy can be used effectively. The decision as to when to perform these adjunctive procedures is dependent on the patient's specific clinical situation. As an example, large varicosities which extend from a refluxing segment of the upper great saphenous vein (GSV) to a refluxing segment of the lower GSV may thrombose if endovenous ablation (EVA) of the entire GSV is performed because all blood flow to this isolated group of varicosities is halted. If thrombosis occurs the resulting phlebitis can be very painful and this pain can last for weeks to months. In this scenario eradication of these varicosities at the same time EVA is performed would prevent this from occurring. There are many other clinical and anatomical situations where the simultaneous eradication of the truncal reflux source and the varicosities are in the best clinical interest of the patient. Therefore it is our recommendation that adjunctive varicosity treatment at the time of EVA be left to the clinical judgment of the treating physician.

The American College of Phlebology guidelines are based on consensus documents and research on the treatment of varicose veins. These consensus documents, as well as other materials reviewed in forming the ACP guidelines included but were not limited to:





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#### Disclaimer

Adherence to these guidelines will not ensure successful performance. Furthermore these guidelines should not be deemed inclusive of all proper methods of treatment or exclusive of other protocols reasonably directed to obtain the same results. The physician and patient must make the ultimate judgment regarding the propriety of any performance and interpretation of studies in light of all the circumstances presented by the individual patient.

These guidelines reflect the best available data at the time it was prepared; the results of future research or technology may require alteration of the minimum standards and reporting as set forth in this guideline.