Ablation of Superficial Veins of the Lower Extremities

The March issue of Vascular Disease Management offers an interview with Kathleen Gibson, MD, on the use of a new cyanoacrylate adhesive to ablate symptomatic insufficient superficial veins of the lower extremities. Although venous disorders are more common than arterial disorders, far more attention has been given to the arterial system. The term “circulation” has at its core the word “circle,” meaning that blood travels via an efferent limb (arteries) and afferent limb (veins). Disorders that affect either of these are problematic.

All physicians understand the risk of pulmonary embolism. Recently, much more attention has been paid to understanding obstruction to venous flow secondary to venocompressive syndromes with associated risk of deep venous thrombosis (DVT), pulmonary emboli, chronic edema, and occasionally venous ulceration. Unfortunately many physicians do not routinely think of superficial venous insufficiency as a cause of chronic edema, pain, and even ulceration. Often these patients are treated with diuretics as first line therapy. Daily weights, used as therapy for congestive heart failure, are not a reliable indicator of hydration status when there is significant venous insufficiency with large amounts of fluid “third-spaced” in the legs.

Historically, superficial venous insufficiency was typically considered a cosmetic problem unless there were active venous ulcers. It is now apparent that venous insufficiency causes leg swelling, pain, restless leg syndrome, night cramps, spontaneous bleeding, and diminished exercise capacity. Medical therapy consisting of leg elevation and compression hose often improves the symptoms. However, these treatments are often not tolerated. When medical therapy is inadequate, removal or ablation of the insufficient vein may result in dramatic symptomatic relief and cosmetic improvement. Initially, treatment was surgical vein removal. In more recent times this has been largely replaced by thermal ablation (utilizing laser or radiofrequency catheters).

There has been rapid growth over the past decade of venous ablative procedures. These have been performed for cosmetic and symptomatic relief indications. Therapy aimed at specific perforator veins has shown great promise in healing chronic venous ulcerations that have often been present for years. These percutaneous treatments can be performed in an office with excellent results and minimal pain. Thermal treatments do require tumescent anesthesia to limit pain and thermal injury of adjacent structures such as skin and nerves. Alternatives to thermal ablation that do not require tumescent administration and have no risk of thermal injury now include foam sclerosing agents, mechanical injury, and now cyanoacrylate adhesives, often referred to as “glue.” Early results with these new products are showing great promise. These therapies may also be adjunctive.

Critics of venous ablative procedures often cite that this takes away future potential surgical conduits, but most surgeons agree that varicose veins often are not adequate conduits. Others cite that superficial venous insufficiency is simply a cosmetic issue, but patients that receive treatment often describe dramatic symptomatic relief that has been well documented.

Superficial venous insufficiency is highly prevalent and is associated with symptoms, cosmetic abnormality, and major medical problems such as venous ulceration. It interferes with effective therapy for recurrent bouts of congestive heart failure. There are effective therapies and emerging new therapies to address this important disease process. Moreover, it appears that the treatment of venous disorders in general is finally starting to receive the attention that it truly deserves.