Editorial

Strategy and changes in the treatment of varicose veins

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There have been significant advances in the understanding, diagnosis and management of venous insufficiency over the last decade or so, mostly owing to the use of duplex ultrasound technology. Duplex ultrasound is essential prior to treatment in all patients with CEAP C2 or higher venous disease in order to

- identify reflux and
- establish the pattern of disease.

The Union Internationale de Phlebologie (UIP) has reviewed the objectives and technique of duplex ultrasound for venous insufficiency (1). An individualized treatment plan is developed based on the history and physical, findings of the evaluation, and the goals of the patient.

Saphenous vein reflux is the underlying primary abnormality in many of the cases of superficial venous insufficiency. It has been widely agreed that stripping of the great saphenous vein (GSV) was essential to minimizing recurrence due to redevelopment of incompetent communication with the saphenofemoral confluence and/or thigh perforator incompetence. Formerly, stripping of the entire saphenous from ankle-groin, along with stab avulsion of varices, had been practiced because it was assumed that reflux extended to the ankle in most patients. However, it was recognized that stripping from groin to the knee would detach thigh perforators. This fact, along with the high incidence of saphenous neuralgia associated with groin to ankle stripping, explains recommendations for *short* stripping of the GSV from groin to just below the knee that began in the 1980s. A recent duplex study on over 500 legs found the most common pattern was saphenous reflux from the groin to the knee (43.4%), with reflux reaching the ankle in only 1% (2).

Still controversial

Treatment of incompetent perforator veins, another source of varices, is controversial. While ablation of the GSV may address thigh perforator incompetence, it doesn't address lower leg perforator incompetence directly as most of these perforators don't drain into the GSV itself. Nonetheless, patients with superficial and perforator vein incompetence and with a normal deep venous system experienced significant improvement in haemodynamic parameters and clinical symptom score after superficial ablative surgery alone (3). The authors suggested that treatment of perforator veins can be reserved for patients with persistent incompetent perforator vessels, abnormal haemodynamic parameters or continued symptoms after superficial ablative surgery.

Another study corroborated these results, but found that saphenous surgery alone failed to correct perforator reflux when there was coexistent deep venous reflux or if superficial reflux persisted postoperatively (4).

Modern alternatives to surgery

Endovenous thermal (EVTA; laser and radiofrequency) and chemical (foam sclerotherapy) ablation techniques are recently developed less invasive alternatives to surgery. These procedures, routinely performed in an office setting using dilute local anaesthesia, are increasingly being used instead of surgery to treat incompetent segments of the

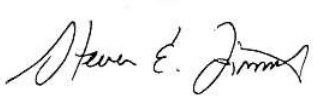
- great saphenous vein,
- small saphenous vein,
- anterior accessory saphenous vein and
- perforators.

Proof of concept studies, using vein occlusion or ablation as the main surrogate outcome measure, exist for these techniques (5–7). A recent fundamental advance in medicine is the recognition of the importance of patient-reported measures of quality of life (QoL) (8). Several studies have documented significant improvements in QoL (9–11), as well as physician-measured out-

comes such as VCSS scores (9, 11, 12) and APG following endovenous ablation techniques (12, 13).

Several small comparisons of radiofrequency ablation and stripping (11, 14, 15) and laser and surgery (10, 13, 16, 17) of the great saphenous vein suggest equivalent outcomes with easier/shorter recovery periods for the EVTA patients.

Treatment for venous disease has undergone rapid innovation over the last decade. The application of the principles of tumescent anaesthesia to venous treatments, along with the development of endovenous treatments, offers the possibility of treating the vast majority of patients with superficial venous insufficiency in-office without general anaesthesia or surgical incisions. Regardless of how underlying saphenous and/or perforator incompetence is treated, ancillary treatments such as sclerotherapy and phlebectomy are usually needed to treat residual tributary varices. Many important questions, such as late clinical recurrence using endovenous techniques vs. surgery as well as comparing endovenous techniques themselves, remain to be answered by randomized clinical trials that incorporate measures of improvement in quality of life as the bottom line for relevant clinical success.



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