

Treatment Modalities for Varicose Veins of Lower Extremities

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Keywords

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Chronic venous disease affects 30% to 40% of adults and ranges from minor telangiectasias to varicose veins (VVs) to severe venous insufficiency and venous ulcers.¹ Associated symptoms vary from mild fullness sensation to severe pain impairing mobility. However, the most common reason patients seek treatment is cosmesis.¹ Treatment is based on the size of the affected vessels. Foam sclerotherapy, thermo-coagulation, and cutaneous lasers target spider telangiectasias and reticular veins. Surgery, foam sclerotherapy, and micro-invasive procedures like endovenous laser ablation (EVLA) are commonly used for larger varicosities.¹⁻³ Although clinicians are increasingly familiar with these modalities, little comparative and cost-effectiveness data exist.

Brittenden et al recently performed a randomized, comparative-effectiveness trial to assess the quality of life (QOL) and cost-effectiveness of EVLA, foam sclerotherapy, and surgery for the treatment of primary symptomatic VV (3-15 mm in diameter).² In this study, 798 participants, of whom 595 completed the participant questionnaires at 5 years, were randomized into 3 groups receiving either EVLA, foam sclerotherapy, or surgery. The Aberdeen Varicose Vein Questionnaire (AVVQ) was used as the primary QOL outcome measure and showed significantly better scores in the EVLA and surgery groups. At 5 years, 58% of EVLA patients, 54% of surgery patients, and 47% of foam sclerotherapy patients reported having no VV. Rates of complete success in treating truncal veins were much higher in laser ablation (64%) and surgery (75%) compared to sclerotherapy (33.3%).² These positive results have been corroborated in the previous literature.³ Brittenden et al also highlighted that EVLA had the highest chance of being cost-effective in the 3-way comparison.

Varicose vein is a very common condition that can be treated in a successful, cost effective, robust way leading to optimal long-term outcome. Surgery (saphenous vein stripping or phlebectomy), long regarded as the gold standard treatment of varicosities,¹ fails to hold up to this standard. Being performed under general or spinal anesthesia, it

requires a postoperative convalescence. It remains particularly indicated in complicated cases with prominent tortuous saphenous veins for which the use of ultrasound vein mapping done prior to surgery may improve results. The use of EVLA was first described in 2001 by Cornell dermatologists and an interventional radiologist.³ It consists of a 1-hour outpatient procedure performed by a phlebologist under local anesthesia destroying the damaged veins with infrared laser. Compared to surgery, this minimally invasive procedure offers several advantages. In a nutshell, it confines and transfers laser energy to the wall of the targeted ectatic veins via a fiber optic delivery system, reducing potential damage to surrounding tissues without the need for incisions and using only local anesthesia. Downtime is minimal with a rapid return to normal activities. The main complications of EVLA are bruising and rarely superficial thrombophlebitis. The contraindications include pregnancy, breastfeeding, deep venous thrombosis, severe uncorrectable coagulopathy, sciatic vein reflux, and inability to ambulate after procedure.⁴ Recently, a combination of EVLA and surgery has been reported with a successful outcome.⁵

In conclusion, Brittenden et al robust study validated EVLA as a real contender to surgery and possibly the next gold standard in the treatment of VV. It is, therefore, a very promising treatment modality considering that lasers are continuously evolving when compared to plain surgery.

Declaration of Conflicting Interests

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