Who do you want to treat your varicose veins?

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Abstract

The management of varicose veins is evolving at pace but the speed of change often outstrips the evidence. Patients should expect to be offered the whole range of treatment options that are suitable for their particular circumstances. This range should include conservative management, surgery, endovenous ablation techniques, and ultrasound guided sclerotherapy. If all the options are not discussed, patients should ask why.

Strangle, strip, grill, or poison were options given for the treatment of varicose veins in one recently published review. These actions also reflect the consequences of many territorial disputes or “turf wars”. The management of superficial venous incompetence is controversial not only because the treatment options are evolving at a pace that exceeds the evidence, or because our understanding of venous pathophysiology is still incomplete but also because many interventions for varicose veins are performed outside the public sector with inherent conflicts of interest.

This viewpoint article aims to summarise and compare the treatment options commonly available for varicose veins in New Zealand and asks the question; if you had varicose veins who would you like to advise you regarding what is the best treatment?

Varicose veins and the complications of chronic venous insufficiency have been recognised and treated by surgeons since before the Byzantine era and the methods employed remained largely unchanged and unchallenged until the 16th Century. In modern public hospital systems in New Zealand and abroad the vast majority of patients assessed for treatment of superficial venous incompetence are seen by vascular surgeons or surgeons with a declared interest in vascular surgery. This situation is no accident nor is it an accident that much of the data published on the management of venous disease emanates from such practitioners.

The technical skill required for accurate, safe dissection of the saphenofemoral or saphenopopliteal junction, the evolving evidence and revolving argument about what constitutes the optimum surgical strategy and uncertainty about the significance of perforator and deep vein incompetence means that surgeons giving advice about what treatment is best for their patients have to keep their knowledge and skills up to date.

The same is true for doctors without specialist vascular surgical qualifications who choose to consult and treat patients with varicose veins. In countries with more fertile medicolegal soil varicose vein interventions are the most common medicolegal claims settled.

In New Zealand patients have the right to be provided with the necessary information to understand the potential risks, benefits and alternative treatment options for any
When it comes to treatment of varicose veins one size does not fit all and patients, doctors, proceduralists and insurers need to be cognisant of this fact.

When considering which treatment option is best many of us overlook conservative or non-interventional methods. It has been recognised that patients with varicose veins often present because they are worried about how their varicose veins or potential complications of venous insufficiency may progress in the future. Such fears can frequently be allayed with appropriate reassurance.

Class 2 support stockings will afford symptomatic relief, improve haemodynamics and reduce swelling but many patients are not compliant with support hosiery. Advice about regular exercise is probably sensible but is not supported by any evidence. For people who are obese, weight loss may reduce symptoms and might make planned intervention easier and safer.

The use of sclerotherapy techniques to treat reticular varicosities and telangiectasia is established. The use of sclerosants to treat significant superficial venous reflux fell out of favour in the 1970s because of high failure rates however, sclerotherapy has undergone a resurgence in recent years following published case series using foam sclerosants (instead of liquid), injected under duplex guidance. This technique, sometimes referred to as ultrasound guided sclerotherapy (UGS), has been suggested to be more economical than other varicose vein interventions but must be performed by or with the cooperation of a skilled sonographer. There is an agreed lack of good scientific data comparing the outcome of foam sclerotherapy in terms of quality of life, recurrence, cosmesis and symptomatic relief with other treatments.

One of the few published comparisons of foam sclerotherapy with surgery (and concomitant sclerotherapy) showed a high level of persistent reflux in the group of patients treated with sclerotherapy alone. Even with the use of foam and ultrasound guidance repeated treatment sessions may be required and high recurrence rates have been documented on duplex follow up.

Sclerotherapy has surprisingly been reported to have potentially significant complications, apart from the well documented local reactions and risk of deep vein thrombosis, including the passage of sclerosant to the circulation of the eye or brain through a patent foramen ovale. It is not cost-effective to screen all potential UGS patients for this common cardiac anomaly. UGS does appear to be a useful adjunct to the endovenous techniques described below.

Minimally invasive techniques for the abolition of superficial venous reflux include radiofrequency ablation and endovenous laser therapy (EVLT). Both techniques can be performed under tumescent local anaesthesia and involve cannulation of the saphenous trunk with subsequent treatment applied down the length of the truncal vein.

The laser technique works by a process of endothelial damage, focal coagulative necrosis, shrinkage and thrombotic occlusion of the vein while radiofrequency ablation results in endothelial denudation, collagen denaturation and acute vein constriction. Reviews of the literature regarding both techniques and one
subsequent randomised trial\textsuperscript{19} suggest that EVLT and radiofrequency ablation allow patients to return to normal activities more quickly than following conventional surgery but in the medium to long-term surgery and endovenous techniques are similar in terms of improvements in quality of life, complications and recurrent varicose veins.

Varicose vein surgery and EVLT also take the same time to perform.\textsuperscript{19} Like UGS these endovenous techniques require a skilled and credentialed sonographer to ensure their safety and efficacy. EVLT takes less time than radiofrequency ablation and might have a lower rate of complications such as deep vein thrombosis and thermal injury to nerves or skin but well designed and appropriately powered studies with adequate follow up are needed to clarify this and other suppositions.

Superficial venous surgery, usually in the form of saphenofemoral ligation with stripping of the greater saphenous vein to the knee and phlebectomies remains the “gold standard” against which newer techniques must prove themselves.\textsuperscript{10} Such varicose vein operations have been shown to be both clinically and cost effective\textsuperscript{7,21} and remain the only proven intervention that helps reduce recurrent venous ulceration.\textsuperscript{6}

Refinements in surgical and anaesthetic techniques mean that many patients, even with bilateral varicose veins, can be treated as day cases although general anaesthetic is still usually required. Further refinements in technique may reduce but do not eliminate post operative bruising and discomfort. Return to normal activities is usually slower following surgery when compared with less invasive treatments. Recurrence of varicose veins following surgery is a well published\textsuperscript{21,22} and publicised fact but is no more frequent than recurrence following other varicose vein interventions.\textsuperscript{10,11}

Careful consideration of the current published data concerning the treatment of patients with varicose veins confirms that any single intervention is not suitable for all patients. Not all treatments are currently available within the financial constraints of the New Zealand public health system but patients should be fully informed about all the treatment options available to them in both public and private practice. Endoluminal therapy is currently being trialled at some public hospitals in New Zealand and in all likelihood will become established.

Paternalistic advice to patients, based on anecdotal experience or limited interpretation of the literature, can only be avoided by clinical review with a doctor who is experienced at such patient focused assessments\textsuperscript{23} and who can tailor and provide the whole range of treatment options; UGS, endovenous ablation and surgery. Patients have the right to this information. Who do you want to treat your varicose veins?

**Competing interests:** David Lewis is a specialist vascular surgeon at Christchurch Public Hospital, a senior lecturer at The University of Otago, and a director of Christchurch Vascular Group which is a specialist vascular surgical private practice.

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References: