Specialist VeinCare

A Revolution in Varicose Vein Treatment

Endovenous Laser Ablation (EVLA) & Ultrasound Guided Sclerotherapy (UGS) in the management of Varicose Veins

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***EVLA** is a procedure for the treatment of major varicose veins previously treated by vein "stripping" surgery under general anaesthetic in a hospital. **EVLA** uses laser energy delivered via a thin fibre-optic probe to heat seal the Great Saphenous Vein (GSV) and/or the Small Saphenous Vein (SSV), and is performed under ultrasound guidance and local anaesthesia.*

UGS is the injection, under ultrasound control, of sclerosant chemicals into superficial veins.

*Most patients undergoing **EVLA** will require follow up UGS treatment to treat the remaining tributaries. Some patients will be candidates for UGS alone. Deciding which therapy is to be utilised will depend on the size and position of the abnormal veins.*

Major Points (EVLA)

EVLA is a fast, minimally invasive laser procedure with a 95-98% success rate. It is an alternative to surgery and has comparatively favourable results.

Advantages compared to alternative surgical treatment ("stripping")

- Minimally invasive
- Quick: EVLA takes up to an hour.
- No hospital admission.
- Local anaesthesia (No general anaesthesia)
- No stitches and no surgical scaring (4mm puncture wound).
- Return to normal activity the next day.
- Higher safety profile.

Results

EVLA 95-98% immediate success rate.

- Great Saphenous Vein (GSV) - 3 year success rate 90%
- Short Saphenous Vein (SSV) - 3 year success rate 90%

EndoVenous Laser Ablation and Ultrasound Guided Sclerotherapy

Procedure

Endovenous Laser Ablation

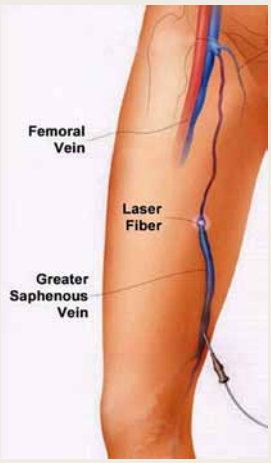
- The leg veins are first mapped by a vascular sonographer.
- Prophylactic Clexane – blood thinner is administered subcutaneously pre-procedure.
- Procedure performed under local anaesthetic.
- The relevant vein is punctured about the knee for the GSV, or the ankle for the SSV.
- A thin guidewire is passed up the vein, a catheter is passed over the wire, and the laser probe is introduced through the catheter.
- Local anaesthetic is infiltrated around the vein at several levels using a fine needle (25 gauge) directed by ultrasound.
- The laser tip is precisely positioned and then activated and slowly withdrawn destroying the full length of the vein.

UGS

This is the injection under ultrasound control of sclerosant chemicals into superficial veins. It can be used for ablation of the superficial veins (Great Saphenous and Small saphenous veins) as well as the varicosities/tributaries.

The sclerosant is either Sodium Tetradecyl Sulphate (Fibro-vein) or Aethoxysklerol (Polidocanol). The sclerosant damages the inner lining of the vein which causes the vein to close. It is done under ultrasound guidance or with direct visualisation of the vein.

The EVLA laser probe being inserted into the Saphenous vein



Management Post EVLA and UGS:

- You will be asked to go for a 20-30 minute walk immediately after treatment and 30 minutes daily for a week or two
- Usual daytime activities can be continued with avoidance of standing still for long periods
- Avoid strenuous physical activity such as aerobics for one week after treatment
- Airline flight should be avoided for 4 weeks post therapy
- If unavoidable then cover with Clexane would be advised
- Depending on type and extent of treatment, the patient wears stockings for between 1-2 weeks
- It is routine to perform check ultrasound scans post treatment. If residual veins are shown then they may require further treatment at a subsequent appointment.

Ultrasound Guided Sclerotherapy ONLY

Following EVLA / UGS the following features are expected:

1. Bruising down the length of the treated vein
2. Mild pain persists for several days and can persist for up to 2 weeks. It shows that the treatment is working. Pain is managed with walking, NSAID and Paracetamol as necessary
3. Discolouration is usual early on and is not a cause for concern. Red, raised areas can develop over tributaries but these usually disappear within 4- 6 weeks
4. Tender Lumps due to “trapped blood” in the treated vein are not uncommon and persist for the first few weeks. The doctor can remove these by needle puncture if they are causing undue discomfort
5. Inflammation or phlebitis of the treated veins can occur. Management includes further compression, anti inflammatory medication and regular walking.

Possible complications from EVLA/UGS

These include:

1. Pigmentation along the treated veins caused by Haemosiderin, a form of iron from the blood. Most disappears within 12 months but there is permanent staining in about 5% and this is of cosmetic significance. Persistent pigmentation may respond to laser treatment.

2. Deep vein thrombosis – clots extending into the deep veins can occur but this serious complication is extremely rare if the protocol of compression and regular daily walking is followed. It is important to stop oral contraceptives prior to EVLA as they increase the risk of deep vein thrombosis.

3. Nerve damage – The adjacent sensory nerves can suffer heat damage causing numbness but this is usually mild and rarely lasts for more than a few weeks.

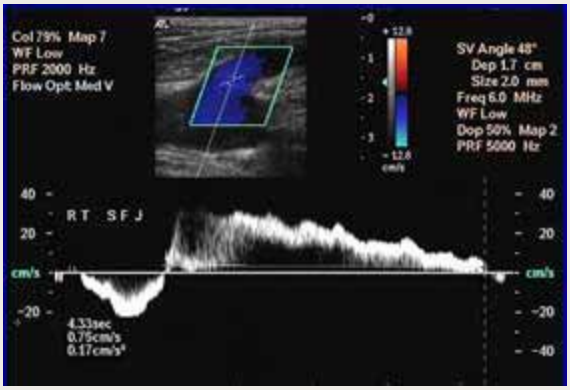
Venous Disease Plan of Management
What do I do ?

1. If a patient presents with symptoms/signs that are suggestive/indicative of venous disease then a Venous Incompetency Ultrasound study should be performed.

   - This should be performed by a Specialist Vascular Sonographer.

   - A Specialist Vascular Sonographer from Independent Vascular Ultrasound (IVU) can perform the Duplex Ultrasound onsite before the consultation with Dr Berman.

2. Specialist Vein Care when contacted will sent to the patient a pack including an information document and questionnaire. A referral letter requesting assessment and potential treatment will be required.



Duplex Ultrasound of incompetent Saphenofemoral junction (SFJ).
- *Blue colour and spectral waveform indicating reflux down the Great Saphenous vein due to an incompetent valve at the SFJ.*

3. At the initial consultation Dr Berman will make an assessment of the venous problem. This is followed by a discussion where the exact nature of the patients particular vein problem will be explained. The treatment protocol and a costing will then be provided.

References

1. Varicose veins and their treatment. B. Campbell. BMJ 2006:333:287-292
2. What are the symptoms of varicose veins? A. Bradbury BMJ 1999:318:353-6
3. National Institute for Clinical Excellence: Referral advice for varicose veins. London:NICE.2001
4. Endovenous Laser ablation of varicose Veins. R.J.Min J Cardiovascular Surgery Aug 2005 Vol 46.No 4. Pages 395-405

Dr Ivor Berman Specialist Vein Care

Suite 3, 276 Springvale Road, Glen Waverley 3150
Appointments phone: (03) 9561 5155
Contact phone: (03) 9561 5155 or 9210 7100 Fax: 03- 9561 9011
Email: ivor.berman@specialistveincare.com.au
Website: www.specialistveincare.com.au