Treatment of a venous leg ulcer

The key to healing and preventing recurrence is graduated compression therapy.

The underlying theory relates to Laplace’s Law.

Pressure on the limb is determined by the bandage width as well as the application technique of 50% stretch and 50% overlap, assuming the leg has a graduated profile with the ankle being smaller than the calf.

Options for compression:
- Multilayer elastic systems
- Multilayer inelastic systems
- Reduced compression systems
- Stockings/hosiery
- Intermittent pneumatic compression

Other conservative management
- Elevation of the limb
- Pharmacology – agents to reduce cramps e.g. Quinine

Compression does not correct the underlying disease process. It simply reduces the long term complications of chronic venous hypertension.

Surgical intervention for venous disease

Compression has a place in managing venous disease.

Barwell et al. 2004 found no advantage to having surgery with an active ulcer, but surgery after the ulcer had healed reduced reoccurrence from 28% to 12% over 1 year.

After 5 years the reoccurrence was 56% in the group that did not have surgery and 31% in those that did.

Types of corrective surgery
- Invasive – superficial or deep venous
- Endovascular surgery – sclerotherapy
- Endovenous radiofrequency ablation
- Endovenous laser therapy

To complement conservative or surgical treatment plans appropriate dressing selection must be made according to:
- Wound and surrounding skin characteristics
- Allergies
- Availability
- Wound type – i.e. sloughy, necrotic
- Location
- Size depth
- Stage of healing
- Level of pain
- Presence of infection
- Comfort/conformability

Prevention of a venous leg ulcer recurring

Recurrence can be reduced by taking a detailed history to assess if there is an increased risk of ulcer recurrence.

Other factors to consider would be patient compliance. This would include patients’ attitude to health, ownership of their condition and level of motivation.

Clinical assessment for prevention and use of hosiery:
- Skin integrity
- Arterial supply
- Allergy check
- Limb examination for deformities
- Measurement for hosiery – with the potential for made to measure
- Assess patient understanding
- Check manual dexterity
- Check footwear

Aftercare should also include good management of the healed skin ensuring the use of a good emollient as a skin moisturiser.

Education should be given to correct application method.

Advice on how to apply hosiery, how to get further pairs should be communicated.

Patient advice should be given on:
- Exercise
- Elevation
- Weight management and diet
- Leg examination

Referral

In the case of patients suffering with venous ulceration it depends on the health care provider that is delivering care.

There would be local guidelines, policy and procedure directing, when where and how a patient should be referred to a more appropriate and or experienced practitioner.

As a general guide, refer to specialist if healing is not achieved within 12 weeks.

For non-conservative treatment the referral to a specialist surgeon would usually come from a General Practitioner.

For an international suggested referral route see the International leg ulcer advisory board pathway.