Leg ulcer update

Wounds International clinical updates present recent developments in the field of leg ulcers, pressure ulcers, skin integrity and diabetic foot, including the latest from associations, clinicians and industry. If you use an innovative technique in your practice that you would like us to feature in future issues, please email the editor at: scalne@woundsinternational.com

Special strapping for retro malleolal ulcers

This report describes the development of a novel compression technique, which has shown a dramatic reduction in leg ulcer prevalence rates.

Venous ulceration creates an enormous economic burden in many countries across the world. This is primarily due to the chronicity of these ulcers, the nursing time required to manage them, the dressing and bandage costs, and of course the poor quality of life, which has been eloquently described in a variety of qualitative studies.

Our team based at the East London wound healing centre in the UK has recently described an innovative approach to compression therapy. The premise is that often the most complex or chronic venous ulcers are not positioned in the traditional gaiter site, but in the retro malleolal area. It is our belief that traditional high compression therapy does not adequately compress in this area, contributing to non-healing.

We have, therefore, developed a strapping technique using cohesive inelastic bandages, which focusses compression around the ankle, foot and retro-malleolal fossa. The full technique has been well described in a recent paper, detailing how we have improved the development of the technique over several years.

As a specialist team we have many patients with complex non-healing ulcers referred to us from outside our catchment area. These patients often have large, painful, longstanding and debilitating ulcers. Through case review we have been able to demonstrate the efficacy of the strapping regime, which is a transferable technique that is able to transform lives.

The leg ulcer prevalence rate in our area has reduced dramatically since the introduction of the technique and on audit was found to be 0.14 per 1000 patients, less than half the expected rate. The team presented the prevalence data at the 2011 European Wound Management Association (EWMA) conference in Brussels.

In the absence of a randomised controlled trial, these prevalence figures have to be analysed within the context of the type of service we provide, namely a specialist service of 15 years’ duration, which has an experienced team.

The trust and general medical practitioners involved have invested heavily into the service, enabling early specialist intervention and a zero tolerance of all non-healing wounds. In addition, community nurses are accompanied on visits to patients’ homes or clinics by specialist nurses. The team is multidisciplinary and includes a dermatologist and a specialist podiatrist. We also focus on the impact of poor gait and the role of ankle exercise in this group.

It is likely that the complete package we provide, including pain management, the focus on improving ankle mobility, as well as the strapping technique, all contribute to improved patient outcomes. However, we believe the improvements in outcome are primarily down to the strapping technique and would welcome a comprehensive study to demonstrate this.

Alison Hopkins is a Head of Service, East London Wound Healing Centre


Figure 1: Ulcer in the retro-malleolal area.
Severe post-thrombotic venous ulcers due to iliofemoral/caval occlusion

This short paper describes a new technique using common femoral endovenectomy and endovenous recanalisation for chronic iliofemoral/vena caval post-thrombotic occlusion. The early results using this technique show that restoring unobstructed venous drainage from the common femoral vein (CFV) into the vena cava can make an enormous difference to outcome in patients with recalcitrant venous ulcers. The ulcer heals rapidly and as venous pressures fall substantially, oedema is controlled and pain is relieved.

Chronic post-thrombotic iliofemoral venous obstruction is associated with severe morbidity and high recurrent thrombosis rates. Labropoulos et al. measured venous pressures in a spectrum of patients with post-thrombotic venous disease and controls. They found that chronic iliofemoral venous occlusion was associated with the highest venous pressures, both when resting and exercising. The technique detailed here is indicated for those patients with chronic post-thrombotic iliofemoral venous obstruction causing severe post-thrombotic syndrome who have common femoral vein occlusion. The goal of the procedure is to provide unobstructed venous drainage from the profunda femoris vein to the vena cava. To date, 13 patients with severe post-thrombotic iliofemoral/vena caval venous obstruction presenting with clinical class C3–C6 (CEAP classification) have been treated. The duration of their obstruction ranged from seven months to 25 years (mean 6.8 years).

Preoperative preparation includes complete phlebography of the target leg, including the inferior vena cava. A guide wire is passed through the occlusion into the patent inferior vena cava. All patients are given preoperative platelet inhibition and take chlorhexidine showers twice daily for three days prior to the operation.

Operative procedure

The common femoral vein, common distal external iliac vein, cephalad portion of the femoral vein, and profunda femoris vein are exposed through a standard longitudinal inguinal incision [Fig 2].

A longitudinal venotomy [Fig 3] exposes the extensive endoluminal fibrosis and the endovenectomy is performed with a sharp dissection. The vein is then patched with a bovine pericardial patch, leaving the distal end of the closure open to admit a 10 Fr sheath, which is inserted into the inguinal wound from a separate thigh puncture.

Endoluminal recanalisation is performed with sequential balloon dilation and stenting, generally building from the distal external iliac vein to the vena cava. Once recanalization is complete, the sheath is removed and patch closure completed. A small arteriovenous fistula is constructed and the wound is closed. A closed system wound drain is then put in place. Following the operation, patients remain on systemic anticoagulation.

Results

There was one perioperative mortality — a patient who died nine days after discharge from an acute myocardial infarction. Three patients developed wound haematoma requiring operative evacuation and three developed early...
Managing leg ulcers in a Swedish specialist clinic

This short report describes the challenges, frustrations and practical problems experienced when dealing with patients attending a specialist leg ulcer clinic in Stockholm, Sweden.

In Swedish primary care and nursing homes, knowledge about leg ulcer treatment is still very limited and there is a genuine lack of education. One of the biggest challenges is that many of the patients seen in our clinic have been in primary care for long periods of time without having a proper diagnosis or adequate bandaging. Usually, patients have been managed with only a simple wound dressing and no compression at all.

Economic factors also cause problems and limit optimum treatment. Bandages are expensive and leg ulcer patients can take up a substantial amount of the district nurse’s time. Even when patients attend clinic, which should in theory reduce the amount of nursing time, caregivers often fail to use the recommended dressings and compression because of cost.

In some Swedish hospitals and units the patient is required to pay a small amount (less than 10 euros for a consultation with a nurse and about 25–30 euros for a medical consultation), although when the total reaches 90 euros in any one-year period the consultation are free the rest of that year. The bandage and dressings are included in the fee for the consultations.

In Sweden there are only a few specialist centres (probably five multidisciplinary specialist units in total) for treating leg ulcer patients. In spite of this, we have huge numbers of elderly people with leg ulcer problems. Historically, leg ulcer patients in Sweden have been treated in primary care by nurses. In our specialist unit, a vascular surgeon and a dermatologist visit once a month to assess the patients.

In our clinic (the Department of Dermatology and Venereology at South General Hospital, Stockholm), diagnosis is undertaken by a doctor and this is always the first step in the treatment pathway before the patient is seen by a dermatologist or a vascular surgeon. Ankle brachial pressure index (ABPI) is seen as very important, and is used to facilitate the decision to use compression and the level of compression needed. In the vascular assessment the following questions are addressed:

- Is the circulation normal, i.e. greater than 0.8?
- Is the APBI lower than normal (compression is not used at all if the APBI is less than 0.6)? If the APBI is less than 0.6 the patient is referred for Duplex ultrasound and to the vascular team
- Is the patient likely to be compliant?
- How mobile is the patient?
- Has the patient had any allergic reactions (e.g. latex)?

The wound management protocol includes cleansing the wound, usually with tap water. Sometimes when the wound is infected or critically colonised, polyhexamethylene biguanide (PHMB) solution, acetic acid solution, iodine or silver dressing are used. Oral antibiotics are also used if the wound has clinical signs of infection. A local anaesthetic is used prior to any necessary debridement, which is often sharp. However, we have just started to use a new mechanical debridement product (Debrisoft®; Activa), which has had positive initial results.

The type of dressing used depends on the condition of the wound (ie the amount of exudate, odour, pain, condition of the surrounding skin and presence of allergies). Dressings commonly used for patients with leg ulcers include Hydofiber dressings, polyurethane foam, non-adherent dressings, absorbent dressings, iodine and silver dressings.

In the future, the focus must be on better education with greater attention to the management of leg ulcers within the nursing and medical curriculum. The hope is that the status of leg ulcers as a specialty will improve and that physicians will become more interested in the subject. We must work towards raising standards nationally with better and more equal access to specialist services.

Agneta Bergsten is a Registered Nurse at the South General hospital (Stockholm)

References: