How should compression hosiery be used for patients who have had deep venous thrombosis?

We are reviewing practice at our deep venous thrombosis (DVT) clinic with particular reference to compression hosiery. Application research suggests that a significant number of patients who have had DVT develop post-thrombotic syndrome within 1–2 years (Brandjes et al, 1997; Prandoni et al, 2004) with 10% developing venous leg ulceration (Ziegler et al, 2001). These studies identified that below-knee compression hosiery can reduce the occurrence of this chronic and often distressing condition. Our questions are:

- At what stage is it safe to undertake an ABPI following an acute episode of DVT, allowing for the fact that the patient may be in too much pain to allow the procedure to be carried out?
- Is there any benefit in wearing thromboembolism deterrent (TED) stockings in the meantime given that these patients are for the most part mobile?
- At what stage after an acute DVT should hosiery be applied and at what pressure?
- How long should compression hosiery be worn after having acute DVT?

Joan Ragan, Tissue Viability Nurse, Belfast City Hospital

A chronic venous insufficiency is a frequent complication of DVT and is manifest by pain, swelling, dependent oedema, discoloration and, in severe cases, ulceration and scarring (stasis ulcer). The risk of developing this complication, which is usually referred to as post-phlebitic syndrome, is as high as 30% after eight years (Prandoni et al, 1998) and continues for at least 20 years. The risk is greater in people who have:

- DVT recurring in the same leg
- Proximal (as opposed to distal) DVT
- Body mass index (BMI) greater than 28kg/m²

Wearing compression hosiery markedly reduces the subsequent development of post-phlebitic syndrome (Brandjes et al, 1997). The application of compression to a limb is, however, risky, as the Scottish surgeons confirmed in their survey where pressure damage was identified with even low levels of compression (Callam et al, 1997). A simple test is therefore required to determine the adequacy of peripheral perfusion before the application of compression and the test most frequently applied is the measurement of the ankle brachial pressure index (ABPI). Ankle systolic pressure measurement and ABPI calculation can safely be undertaken as soon as the patient starts to mobilise and is fully anticoagulated. It is important to remember that if the limb is significantly swollen or large it is necessary to adjust the cuff size and possibly use a 5MHz rather than an 8MHz Doppler probe. The ABPI will need to be repeated as part of a reassessment process for patients receiving compression therapy. The frequency of reassessment can be stratified according to the patient’s risk of developing peripheral vascular disease (risks include age; smoking history; vascular disease; diabetes; etc).

Class 2 (European Standard) hosiery offer an appropriate level compression but the exact level should be defined by the ABPI:

- ABPI > 0.8 — Class 2 (European) hosiery
- ABPI 0.5–0.8 — consider Class 1 (European) if the patient can tolerate
- ABPI <0.5 avoid compression therapy
- ABPI > 1.3 compression is safe if the patient is young and otherwise fit and well. If there are no other arterial symptoms or history; compression can be trialled. Further assessment is needed for patients who are elderly or have diabetes or peripheral neuropathy.

The advice given on the Prodyg website (www.prodygtnh.uk) is that in general hosiery should be worn for at least two years to reduce the incidence of post-thrombotic syndrome after a proximal DVT. Patients with recurrent thrombosis or other significant risk factors for later skin ulceration such as extensive superficial venous disease should however be encouraged to wear stockings long-term. It is important that hosiery is fitted appropriately and made-to-measure garments may be needed for some patients. Hosiery needs to be replaced regularly and prescribed in adequate quantities if it is to be used effectively. In general hosiery need only be worn on the affected limb. Anti-embolism stockings do not offer sufficient compression to protect the ambulatory patient from developing a post-phlebitic limb and are of little additional benefit in an adequately anticoagulated patient.

Peter Vowden, Visiting Professor of Wound Healing Research and Consultant Vascular Surgeon, Bradford and Kathryn Vowden, Nurse Consultant, Bradford Teaching Hospitals NHS Foundation Trust

Further information on DVT management is available from http://www.prodygtnh.uk/deep_vein_thrombosis/.


Changes to medicines legislation for podiatrists

The Health secretary and the Department of Health, Social Services and Public Safety, acting jointly, have recently announced significant additions to the list of prescription-only and pharmacy medicines available for access and supply by podiatrists. The changes outlined below have been formally agreed by parliament and came into force on 17th November 2006. The Society of Chiropodists and Podiatrists were involved in these negotiations and further information is on their website — www.members.footlife — for members only.

This new order gives podiatrists who are registered with the Health Professions Council and hold a qualification in the use of medicines access and supply to the following medicines: 1.0% griseofulvin (P); 1.0% teracil (P); amoxicillin; erythromycin; fluoroquinolons; silver sulfadiazine. (This list is concerned with those products that are relevant to wound care and does not form the complete list).

This change will significantly enhance wound care provision within the field of tissue viability. Patients presenting to a qualified podiatrist with foot ulceration complicated by acute bacterial infection can receive timely supply of broad spectrum antibiotics avoiding potential delays in referral to medical staff, thus improving patient care. Access and supply rights to anti-fungal therapy will enable podiatrists to initiate appropriate treatment that can minimise the risk of established wounds becoming colonised by fungi. Fungal infection is recognised as a risk factor for delayed healing of diabetic foot ulcers (Missoni et al, 2006). This is an exciting and long-awaited development for the podiatry profession and it will enhance our evolving extended scope of practice.

Caroline McIntosh, Senior Lecturer in Podiatry, University of Huddersfield