

## Compression therapy for leg ulcers

Sir,

The article compression therapy for venous leg ulcers by B Nair<sup>[1]</sup> is interesting, and the author has very lucidly dealt with an important aspect of management for leg ulcers, especially of venous origin. The cornerstone of management of patients with venous ulcers continues to be compression of the limb to eliminate edema counteracting the ambulatory venous hypertension (AVH) underlying the causative inflammatory mechanisms.<sup>[2]</sup> Based on multicenter, prospective, randomized trials, it appears that high-strength compression (more than 30 mmHg) and multilayered compression methods are more effective than lower strength or single layered compression.<sup>[3]</sup> Numerous bandaging regimens including a short stretch, multilayer systems, and double-layered compression stockings have been advocated. However, a multilayer graduated compression bandaging applied by trained personnel (providing 40 mmHg of pressure at the ankle and 17 mmHg at the upper calf) is accepted as the mainstay of treatment for chronic venous ulceration.<sup>[4]</sup> Compression materials can be classified into elastic and inelastic materials. Elastic material is not able to achieve strong pressure in the standing position when properly applied. Inelastic material exerts a very high standing pressure and strong or very strong pressure peaks during muscular exercise. This pressure is able to intermittently occlude the venous lumen. For these reasons, the inelastic bandage has a hemodynamic effect, is able to reduce AVH and should be preferred in ulcer treatment.<sup>[2]</sup> Once healed, patients should be advised to wear elastic stockings (Class II) to reduce the risk of recurrent ulceration.<sup>[5]</sup>

Usually, 15-20% but maybe up to half of ulcers due to venous origin may be associated with arterial insufficiency.<sup>[6]</sup> All limbs must be examined carefully for adequate arterial supply before high-strength compression is applied. Patients who do not have palpable pedal pulses should be tested with Doppler ultrasound to determine their ankle brachial pressure indexes (ABPI). If the ABPI is above 0.8, the arterial supply is likely to be adequate for high-strength compression.<sup>[7]</sup> With ABPI between 0.5 and 0.8, no more than light (Class I) compression is to be used as arterial disease is likely, and compression may further compromise arterial blood supply. For patients with significant arterial insufficiency (ABPI < 0.5), compression stockings should not be worn. In these patients, it is important that other standard aspects of venous leg ulcer care are combined with compression to obtain optimal results. With an ABPI > 1.3, compression should be avoided because high ABPI values may be due to calcified and incompressible

arteries. In such patients, a specialist vascular assessment should be sought.

Most venous leg ulcers are heavily exudative. Therefore, foams, alginates, and other highly absorptive primary dressings are selected for temporary coverage along with compression therapy. Which dressing is the best for these ulcers is not known. An extensive review published in the Cochrane database in 2006 concluded that the type of dressing applied to the wound under compression was not found to affect ulcer healing.<sup>[8]</sup>

That compression therapy is the mainstay of management of leg ulcer is beyond doubt. However, clinicians should recognize that compliance with compression is likely to be poor, particularly as compression stockings may be very difficult to put on and takeoff. Owing to that and other reasons, patient compliance can vary widely from 10% to 80% with an average of approximately 40%.<sup>[9,10]</sup> It is this poor adherence to compression therapy that can be critical in not allowing ulcers to heal or to cause high recurrence. Therefore, it is of paramount importance for the health care professional, to educate and motivate the patient to embrace this remedy, often for life.

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