

Compression Therapy for Venous Leg Ulcers



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Presented at the University of British Columbia's Derma(toe)logy: From Head to Toe Conference, March 2007.

Venous leg ulcers represent a major public health problem, especially for the elderly. If one looks at only active venous ulcers, the point prevalence rates are in the range of 1%.¹ Since venous ulcers frequently have a relapsing and remitting course, this number probably underestimates the true prevalence of this disease. It should be added that with the aging population, the problem will only get worse. Given the amount of professional healthcare and dressings these patients require, the costs to the system are enormous. Furthermore, not to be dismissed are the social and psychological costs of this chronic disease.

In clinical practice, it is, unfortunately, all too common to see patients with venous ulcers managed without the use of compression bandaging. It seems more convenient to simply suggest a dressing and write a prescription for antibiotics. Unfortunately, if the underlying disease, venous hypertension, is not treated, the ulcer will not heal.

The management of venous leg ulcers requires a few important steps that involve taking into account the different aspects of general wound care and specific venous ulcer treatment, outlined below.

Management of the whole patient

Make sure your patient is well-nourished, has his/her diabetes well-controlled and is not applying agents to the wound that might impair healing. One should routinely order a serum prealbumin to assess protein status. Some drugs such as prednisone (> 10 mg q.d.) can slow the healing process. If the patient is obese, be prepared to discuss weight-loss strategies. Morbid obesity can be one of the most difficult obstacles to overcome in the management of venous disease.

Assessment of vascular status

Because of the average elderly age of patients with venous leg ulceration, mixed venous-arterial disease is not uncommon. It then becomes imperative to assess arterial status. The ankle/brachial index (ABI) is important to obtain using the vascular Doppler device in order to measure blood flow to the leg. An ABI of > 1.1 is considered normal. An ABI down to 0.9 is thought to represent mild arterial insufficiency; down to 0.6 is moderate; < 0.6 is severe insufficiency. Compression therapy should not be administered to legs with ABI < 0.6 and vascular surgical opinion should be sought.

Select an ulcer dressing

At the onset of treatment that includes compression bandaging, the fluid (edema) in the interstitial space will find its way out through the ulcer. This means an absorbent dressing would be optimal to prevent the development of a periwound irritant dermatitis. Later, when drainage lessens, other dressings can be tried including hydrocolloids.

Select a compression bandage

The decision to start with a compression bandage depends on a number of things.

Amount of edema

Legs that are particularly edematous require a type of bandage known as “short-stretch.” Bandages that are relatively inelastic are much better at reducing edema because calf muscle contraction during walking against a stiff resistance is much more efficient at maximizing venous return. Elastic bandages are most suitable once the edema has been successfully reduced. Examples of short-stretch bandages include Beiersdorf-Jobst and Coloplast.

Ankle mobility

It is important to note that short-stretch bandages have no advantage if there is insufficient ankle mobility. Because of arthritis or injury, some patients do not have much ankle flexion and, therefore, little calf muscle contraction.

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These patients usually shuffle when they walk and are incapable of reducing their edema through bandaging. As an alternative, leg elevation for at least two hours per day is effective.

ABI

Patients with an ABI result of > 0.8 can tolerate high-compression bandages. Studies have shown that the best results are seen when the highest compression tolerable is utilized. Examples of high-compression bandages are SurePress[®] (Convatec) and Profore[®] (Smith & Nephew) or Coban II[®] (3M). If the ABI is < 0.8 but > 0.6 , light compression must be used because of concerns about arterial compromise. An example of a light compression bandage is Profore Lite[®] (Smith & Nephew).

Prevention

After the ulcer heals, it becomes imperative to encourage your patient to prevent recurrences. Knee-high graduated compression stockings should be prescribed to provide 30 mmHg to 40 mmHg of compression. The elastomer has a lifespan of about six months, so new ones must be purchased twice a year. The patient should be told that these stockings must be worn for life or else ulcer recurrence will be inevitable.



Reference

1. Baker SR, Stacey MC, Jopp-McKay AG, et al: Epidemiology of Chronic Venous Ulcers. *Br J Surg* 1991; 78(7):864-7.