

Use of adjustable Velcro compression garments in patients with chronic venous insufficiency and diabetic neuropathy: An alternative compression solution to manage edema and edema related ulcers in this high-risk population.

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Introduction

Chronic venous insufficiency (CVI) is a global problem with a prevalence estimated in 2021 at 19% with an annual incidence of up to 2.3%. It represents 2% of the annual healthcare budget in Western Societies. (Salim, 2021) The gold standard for the treatment of CVI is compression therapy. Front line compression therapy is typically the use of a multilayer compression dressing to reduce edema and heal ulcers. Multilayer compression dressings are not an appropriate choice for every patient, especially those with diabetic neuropathy as their lack of protective sensation can result in serious secondary injuries.

The following three case studies look at different complications / injuries associated with multilayer compression dressings and how a solution was achieved with the use of adjustable compression wraps. These case studies can be generalized in this population and be used as an alternative compression treatment.

References:

Salim, Safa MBBS, BSc*; Machin, Matthew MBBS, BSc*; Patterson, Benjamin O. FRCS, PhD†; Onida, Sarah MRCS, PhD*; Davies, Alun H. MA, DM, DSc, FRCS. Global Epidemiology of Chronic Venous Disease. A Systematic Review With Pooled Prevalence Analysis. *Annals of Surgery* 274(6):p 971-976, December 2021. | DOI: 10.1097/SLA.0000000000004631

Case 1

38-year-old female with diabetic neuropathy and venous ulcer lost to follow up for four weeks. She returned with multilayer compression dressing still in place, healed venous ulcer, but with eschar covered diabetic ulcer to the anterior ankle. This became a limb salvage case with multiple hospitalizations, surgeries and ended in a rehab admission. Her need for compression therapy was managed with the use of an adjustable Velcro wrap to prevent further injury and allowed the wound to heal.



Case 2

30-year-old male with lymphedema, diabetic neuropathy, Klippel-Trenaunay-Weber syndrome and venous related ulcers. He developed a diabetic ulcer at the anterior ankle from a multilayer compression dressing. He healed with advanced wound care and compression via an adjustable reduction kit and the use of a custom compression capri garment to manage upper leg and abdominal edema.



Case 3

77-year-old male with limited mobility, lymphedema, diabetic neuropathy and venous ulcers. He developed bilateral diabetic ulcers to anterior ankles secondary to inability to feel multilayer compression dressing slipping and bunching at ankles creating full thickness injuries. He was treated with the use of an adjustable Velcro compression wrap to control venous hypertension while mitigating pressure at the anterior ankle.

