

Four case studies using Intermittent Pneumatic Compression (IPC) device in the resolution and management of non-healing lower limb ulcers



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Aim: To examine the effects of IPC applied to the thigh of patients with a lower limb ulcer of venous aetiology over a 16 week period.

Method: Four patients with long standing venous leg ulcers (VLU) were followed for 16 weeks. Outcomes assessed were: % change in wound size, wound related pain (via visual analogue scale) and acceptability of IPC as an adjunctive therapy. Wear time of the device was captured using a patient diary which was reviewed every 2 weeks

Case study 1
75 year -old- gentleman – 5 year duration VLU
Hydrofiber dressing, compression: 2 layer bandage system

Week 0
Area 15.96cm²
Pain VAS: 21

Week 16
Area 5.22cm²
Pain VAS: 16

Case study 2
74-year-old lady - 5-year duration VLU
Hydrofiber dressing, compression wrap system

Week 0
Area 63.84cm²
Pain VAS: 91

Week 16
Area 18.2cm²
Pain VAS: 26

Case study 3
78 year -old gentleman – 13 month duration VLU
Hydrofiber dressing, two layer bandage system

Week 0
Area 4.5cm²

Week 5
Healed – measured for class 3 hosiery

Case study 4
51 year-old lady - 13-month duration VLU
Contact layer wound dressing, plus compression wrap.

Week 0
Area 7cm²

Week 16
Healed – measured for class 3 hosiery

Results

Wound Size	Pain	Device Acceptability	Device wear time
<ul style="list-style-type: none"> • Patient 1's wound reduced by 64% • Patient 2's wound reduced by 72% • Patients 3 & 4 healed 	Pain scores were significantly lower following IPC therapy	Patients found the device easy to apply and remove	2 hours was an acceptable therapy time for patients.

Discussion
Traditionally IPC has been applied directly over wound sites and patients frequently find this uncomfortable and difficult to tolerate. Within these case studies, the application of IPC to the thigh as an alternative was both effective at progressing wounds towards healing and also acceptable to patients. Patient experience was extremely positive, the feeling of being actively involved in their therapy had a hugely positive impact on all 4 patients.