

## **Abstract**

# **A prospective pilot study of thigh-administered intermittent pneumatic compression in the management of hard-to-heal lower limb venous and mixed aetiology ulcers**

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This was a prospective observational pilot study of a unique intermittent pneumatic compression (IPC) device designed to be applied in the thigh region of the affected limb in patients with lower limb ulceration of both venous and mixed (venous and arterial) aetiologies. This compression system consists of a circumferential three chamber thigh garment and an electronic pneumatic compression pump operating over a repeated 4-minute cycle. Patients were recruited from outpatient wound clinics. Those recruited were treated with standard therapy in addition to IPC, which was applied for 2 hours per day, and followed up for a total of 8 weeks. The primary objective of the study was to examine the effects of IPC on wound healing over an 8-week period. The other objectives were to assess patients' experiences of pain and the acceptability of IPC device. Twenty-one patients were recruited, and wounds progressed towards healing in 95.24% (20/21) of the patients. Pain scores decreased in 83.33% (15/18) of the patients. Most patients felt that the thigh applied IPC device was comfortable and easy to apply and remove. The thigh administered IPC device can be recommended for use in routine clinical practice, especially when other treatment options are limited.

## **KEYWORDS**

intermittent pneumatic compression devices, leg ulcer, wound healing

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