

# Cohesive short-stretch vs four-layer bandages for venous leg ulcers

Lisa Martin, RGN, HE Dip Tissue Viability. Nick Puffett RN, DN BSc Hons (District Nurse), BSc Hons (Nursing), HE Dip. Cancer Nursing. Meng Kiew (Jenny) Chow RGN, RMN, HE Dip. Palliative Care.

## Introduction

High compression has long been recognised as the gold standard for the management of venous leg ulcers (Cullum et al 2001). This can be achieved by using a variety of treatment modalities, many of which are now included in best practice care (Marston and Vowden 2003). However, many factors need to be considered when implementing treatment regimes.

## Background

Four layer bandaging was introduced in the 1988 (Blair et al 1988) and is still being used by many practitioners today. Although this system achieved the results required for healing, many patients in our clinic found the bandages uncomfortable and even painful, resulting in poor concordance and an adverse effect on healing (Puffett et al 2006).

## Adapting to patients' needs

We decided to review all the available systems, taking into account efficacy, patient concordance, cost and training required.

## Efficacy

The literature review identified 3 studies comparing four layer (elastic) bandaging (4LB) with short stretch (inelastic) bandages (SSB), and one randomised controlled trial comparing four layer bandaging with a cohesive short stretch bandage (CSSB). Results showed similar healing or no statistical difference in healing with four layer bandaging compared with the traditional or cohesive short stretch bandages (Cullum et al 2001, Iglesias et al 2004, Moffatt et al 2003, Franks et al 2004). As both elastic and inelastic systems are recommended by the International Guidelines (2002), we felt confident to offer our patients a choice of treatment.

## Concordance

The DOH defines concordance as 'a partnership between patient and health professional in which an agreement is reached whether and how medicines are to be taken' (DOH 2001). Concordance with leg ulcer treatment has been widely discussed by specialists (Moffatt 2004, Edwards 2003, Lindsay 2001) and is an important issue which affects successful leg ulcer management. Making patients aware of all the choices that will achieve healing and still allow a near normal lifestyle will help to improve this partnership, leading to early healing and patient concordance.



Self treating for 1 year



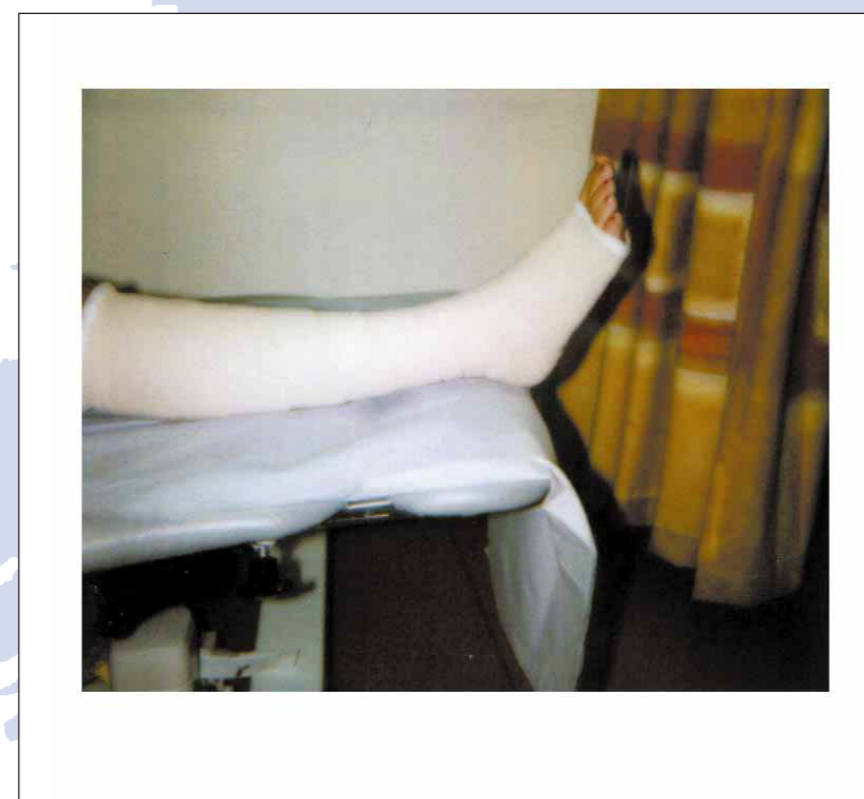
Partnership with patient. Improvements in 8 weeks using Actico



Ulcer treated with 4 layer bandages for 10 years



Changed to Actico - Improvements in 4 months, healed in 8 months



Ease of training



Community care in a rural setting, combining domiciliary and clinics

## Training

Nurses need to expand their knowledge of different compression systems and their modes of action. Over the years nurses have become expert practitioners in the application of multi-layer elastic bandages. In order for our team to offer patients treatment options we had to acknowledge our training and educational needs - These were: to understand how CSSB works, how to apply it correctly and who to use it with. CSSB technique is quick to learn, safe to use and simple to apply.

## Cost

Cost-effectiveness with bandaging systems is difficult to calculate, as many variables can tip the balance. Supply routes, training issues, and nurses' bandaging skills and experience can all affect the overall cost. It is the role of the nurse to ensure that all these areas are addressed to minimise the cost of treatment. Bandage slippage that can occur with traditional SSB, can be overcome by using a CSSB (Moffatt 2005). This will enable the bandages to remain in place for the same length of time as 4LB, thereby ensuring that costs of reapplication are reduced.

In our trust we calculated that on a basic level the cost of CSSB (Actico®) and padding for an ankle circumference of 18-25cm is between £3.16 and £3.28 less than 4LB for the same size ankle depending on the 4LB brand used (Drug Tariff 2006).

## Conclusion

Nurses can influence the selection of treatment and it is important that they are kept up to date with the latest treatments available and to offer these choices to their patients, and so improve care and practice in leg ulcer management especially in a rural setting.

## References

- Cullum N, Nelson EA, Fletcher AW, Sheldon TA (2001) Compression for venous leg ulcers. Cochrane database Systematic review 2001 (2) CD000265
- Marston W, Vowden K (2003) Compression therapy: A guide to safe practice. Understanding compression therapy Position document; EWMA conference, Pisa 2003
- Blair S, Wright D, Backhouse C, Riddle E, McCollum C (1988) Sustained compression and healing of chronic venous ulcers. BMJ; (297): 1159-1161
- Puffett N, Martin L, Chow MK (2006) Cohesive short-stretch vs four-layer bandages for venous leg ulcers. BJCN Wound Care Suppl.; S6-11
- Iglesias C, Nelson EA, Cullum NA, Torgerson DJ (2004) VenUs 1: An RCT for two types of bandage for treating venous leg ulcers. Health Technology Assessments 8 (29): iii, 1-105
- Moffatt CJ, McCullagh L, O'Connor T (2003) RCT of four layer and two layer systems in the management of chronic venous ulceration. Wound Repair and Regeneration 11 (3): 166-71
- Franks PJ, Moody M, Moffatt CJ et al (2004) Quality of life in a trial of cohesive short stretch versus four layer bandaging in the management of chronic venous ulceration. Phlebology 19 (2): 87-91
- Stacey M, Falanga V, Marston W, Moffatt C et al (2002) The use of compression therapy in the treatment of venous leg ulcers: A recommended pathway EWMA journal 2 (1):9-13
- DOH (2001) Medicines and older people Implementing medicines-related aspects of the NSF for older people, DH, London
- Moffatt CJ (2004) Factors that affect concordance with compression therapy JWC 13 (7): 291-7
- Edwards L (2003) Why patients do not comply with compression bandaging BJN TV Suppl. 12 (11): S5-16
- Lindsay ET (2001) Compliance with Science: benefits of developing community leg clubs BJN 10 (22 Suppl): S66-74