# Compression therapy for mixed venous arterial disease

Devon NHS Primary Care Trust

**Janine Prytherch** RGN Dip Bsc Hons, Clinical Nurse Specialist.

## Introduction

Venous ulceration can be complicated by underlying pathologies with arterial impairment being recognised as a complex cause (Moffatt et al 2004). This presents challenges for practitioners to employ safe practice whilst providing healing solutions for patients with mixed venous arterial disease. Guidelines advocate the use of compression for patients with Doppler readings of >0.8 - <1.3 (WUWHS 2008) when applied by generalist practitioners (EWMA 2003).

## Rationale

- It was recognised that all patients are individual and standard regimes are not always appropriate.
- The human body will present many variables that need to be considered when choosing treatment.

## Aim

- To highlight the importance of individual clinical assessment.
- To develop a set of guidelines to which the Tissue Viability team refer for treatment of mixed venous arterial disease.
- To demonstrate collaboration with all disciplines including our patients, community nurses, the satellite clinics and the vascular team.

## Methods

The previous audit (Prytherch 2005) showed that patients had been inappropriately treated with inadequate compression. Reduced elastic compression bandage systems sometimes caused pain at night (Prytherch 2003). Experts theorise that insufficient pressure will not address venous incompetence (Partsch 2006).

Studies that highlighted the safety and efficacy of inelastic compression bandages (Hofman 1998, Stewart et al 2007) reassured the team of the implementation of cohesive inelastic bandages for these patients.

In the last 5 years more comprehensive assessment methods and specialist nursing intervention with consultant input have led to a change in practice.

**Snapshot of leg ulcers with an APBI <0.9 from April 2008 to March 2010.**
Of a total of 370 new patients seen 97 new patients were reviewed in the Franklyn Leg Ulcer Team during this time with APBI below 0.9.

| Patients | Readings |
|---|---|
| 48 | Between 0.8 and 0.9 |
| 15 | Between 0.75 and 0.8 |
| 11 | Between 0.7 and 0.75 |
| 9 | Between 0.65 and 0.7 |
| 8 | Between 0.6 and 0.65 |
| 6 | Below 0.6 and had an automatic referral to vascular |

87 patients were put into inelastic cohesive bandaging*
10 refused to go into compression and were non-concordant.

### Mixed Venous Arterial Disease Guidelines

**0.7 - 0.8 Biphasic signals**
no other arterial signs
Ankle systolic >100

↓

Cohesive Inelastic Bandages
1 or 2 layers over padding
depending on circumference

**0.6 - 0.7 Biphasic signals**
no other arterial signs
Ankle systolic >100
Good mobility
No Diabetes/neuropathy

↓

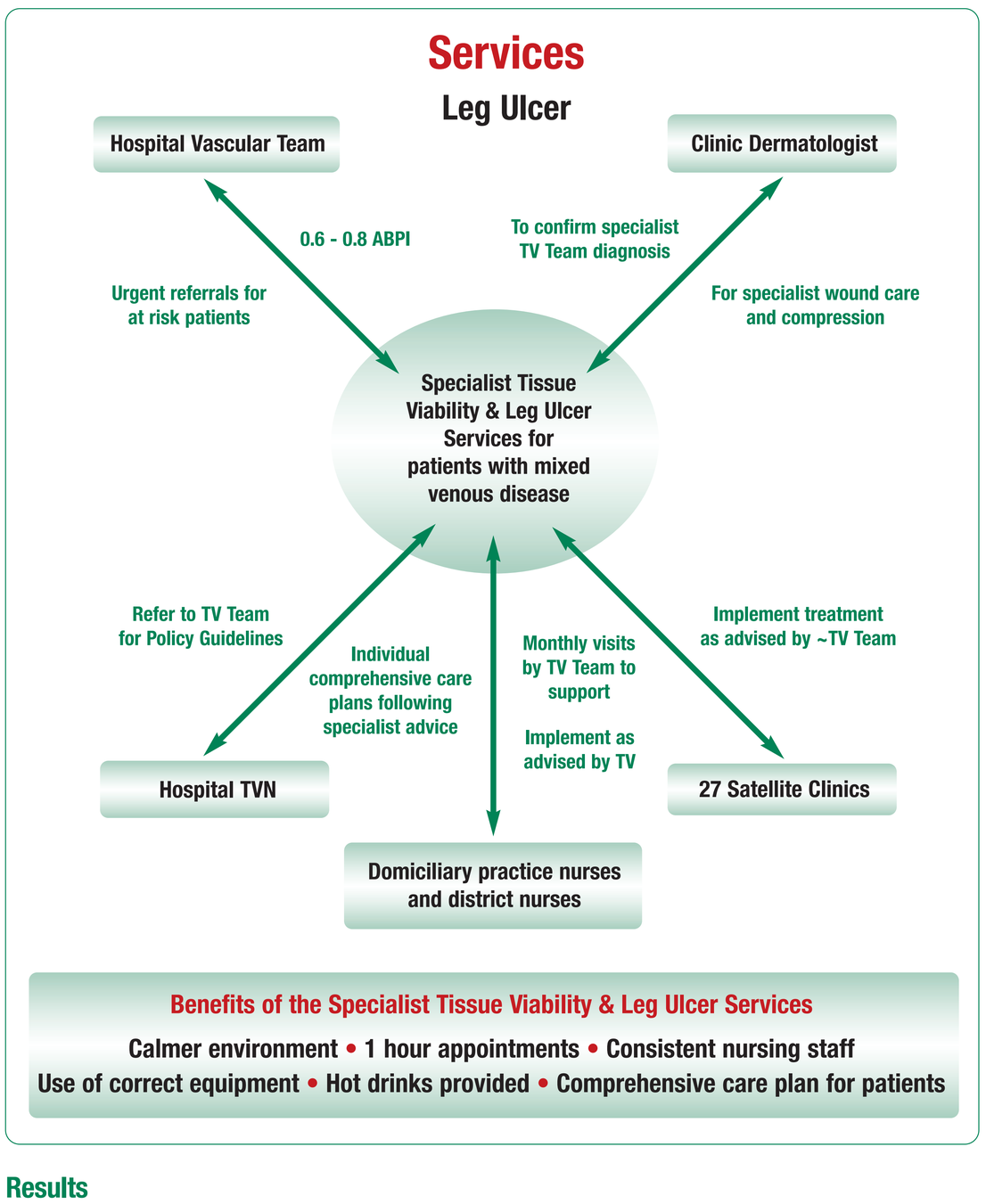
Cohesive Inelastic Bandages
only 1 layer over padding
with visit next day

**>0.6 Monophasic signals**
Ankle systolic <100

↓

Urgent vascular referral
no compression

* Actico® Cohesive Inelastic Bandage by Activa Healthcare, UK.




**Benefits of the Specialist Tissue Viability & Leg Ulcer Services**

Calmer environment • 1 hour appointments • Consistent nursing staff
Use of correct equipment • Hot drinks provided • Comprehensive care plan for patients

## Results

The service now treats complex wounds with a clear referral pathway and treatment recommendations. 400 telephone advice calls monthly. Mixed venous arterial diseased patients with full assessment are treated safely with cohesive inelastic compression to manage the venous component. This method has been used safely and successfully over the last five years. Continued monitoring of patients with mixed venous arterial disease conducted in 27 satellite clinics and local surgeries with care plans changed accordingly. Regular referrals are received from the Hospital Vascular Team and Consultant Dermatologists with a view to using the Principals of the Guidelines to maintain concordance.

## Discussion

Within Devon PCT we have a robust system that:

1) treats the patient as an individual
2) allows all healthcare professionals to access the service
3) provides mandatory training
4) has evidence based practice for safe and effective treatment

## Conclusion

Multi-disciplinary teams in NHS Devon now have a pathway to follow in which they can make informed decisions (always recognising the individuality of the patient) a treatment for mixed venous arterial wounds which often in the past would not have been put into compression as they were <0.8 (seen as not suitable). For the patient the use of inelastic bandages give support and comfort, with the added reassurance of a reduced resting pressure (Mosti et al, 2008) when the leg is elevated which appears to make concordance more acceptable in mixed aetiology wounds.

## References

World Union of Wound Healing Societies (WUWHS) Principles of best practice: Compression in venous leg ulcers. A consensus document. London: MEP Ltd, 2008.

Moffatt CJ, Franks PJ, Doherty DC, Martin R, Blewett R, Ross F (2004) Prevalence of leg ulceration in a London population. QJM 97 (7): 431-7.

Marston W, Vowden K (2003) Compression therapy: a guide to safe practice. EWMA Position Document 11-17.

Partsch H (2006) Compression therapy of venous ulcers EWMA Journal 6 (2:16-19).

Prytherch, J (2005) Not a Stretch Too Far. Poster presentation at Wounds UK Conference, Harrogate, 2005.

Prytherch,J et al (2003) Implementation of Actico for patients with mixed aetiology ulceration. Poster presentation at Wounds UK Conference, Harrogate, 2003.

Hofman D, Poore S, Cherry GW (1998) The use of short stretch bandaging to control oedema Journal of Woundcare 7(1:10-12)

Stewart G, Turnbull K, Kiernan K, Poster presentation EWMA Conference, Glasgow May 2007.

Mosti,G., Mattaliano, V., Partsch,H. (2008) Inelastic compression increases venous ejection fraction more than elastic bandages in patients with superficial venous reflux. Phlebology, Vol.23:287-294.

This poster was supported by a scientific grant by Activa Healthcare Ltd.