Nurse Maude

The Management of Lower Limb Oedema

Catherine Hammond CNS/CNE
2018

Causes of oedema

- Venous stasis
- Lymphoedema
- Heart Failure
- Dependency
- Liver and kidney failure
- Medications
- Cellulitis
- Low protein

Under use of compression therapy means lost opportunities for healing wounds and improving patients quality of life

Revisit patient's experience and expectations

- Experience of living with an ulcer
- Understanding of underlying cause and factors affecting healing
- Social and financial factors that affect healing

Wound Management

T = Debride necrotic tissue and/or slough

I = Control infection and or inflammation

M = Manage exudate, moist environment

E = Epithelial edge

Compression Therapy

- ↓ distension superficial veins
- Restores valve function
- ↑ blood flow in deep veins
- Supports calf muscle pump action
- ↑ venous & lymphatic return
- Reduces pain
- Improves skin condition
- Increases healing

Selecting compression therapy

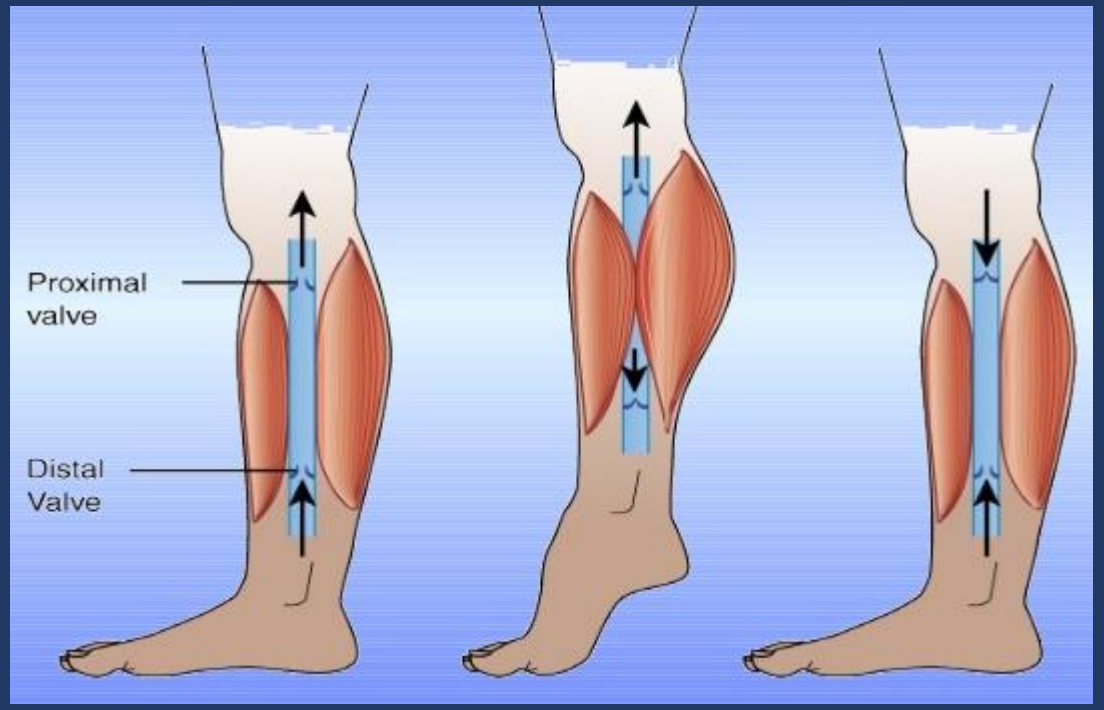
- Compression bandages
- Compression wraps
- Compression hosiery
- Intermittent Pneumatic Compression

Clinical Decision for Bandage Choice

- Amount of compression required
- The shape of the leg
- Effectiveness for the individual patient
- Patient acceptability
- Cost effective

Materials: Bandage Stiffness

- Remains rigid as calf muscle contracts
- Generates ↑working pressure
- Active calf muscle ↑effectiveness
- Inelastic material or multiple layers



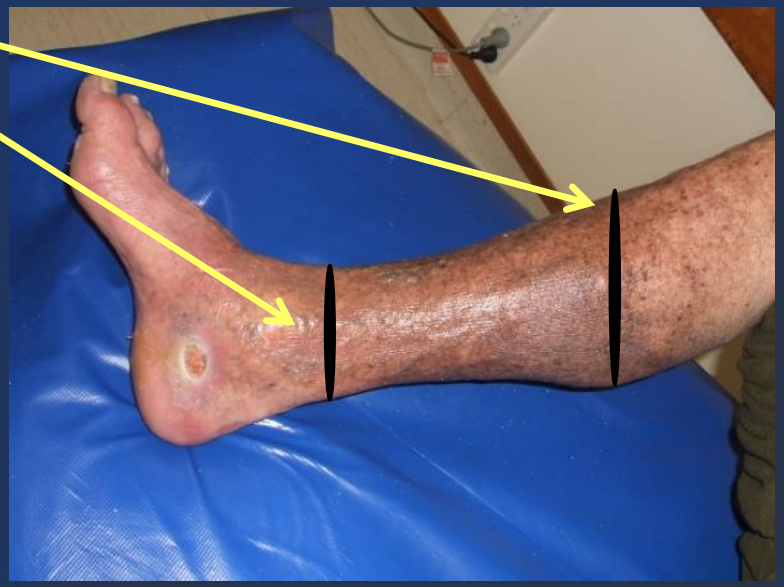
Criteria for compression bandaging

- Ankle circumference >18cm
- ABPI ≥ 0.8 - ≤ 1.2
- ABP1 ≤ 0.8 reduced compression on specialist advice
- ABP1 ≤ 0.5 contraindicated
- ABPI ≤ 1.2 further investigation
- No clinical signs of ischaemia
- No other contra-indications for compression

La Place's Law Related to Compression Bandaging

Limb circumference

Number of layers



Width of bandages

Tension of bandages

Choice of bandage type

Compression wraps

- Can be applied by patient or carer
- Adjustable
- Removed for wound or skin care
- Removed every night
- Ease of application
- Fragile skin
- Compliance issues

Clinical Decision for Hosiery Choice

- Amount of compression required
- The shape of the leg
- Effectiveness for the individual patient
- Type of work
- Patient acceptability
- Affordable

Type of hosiery: circular knit hosiery

- Knitted cylinder with no seam
- Shear, silky materials
- Suitable for lower risk patients

Type of hosiery: flat knit hosiery

- Knitted flat and sewn together
- For high risk patients
- Distorted shaped limbs eg champagne bottle
- Can be designed to reduce cut in at ankle flexure and below knee
- Inelastic – improves venous return during walking
- Easier to apply
- Less aesthetically pleasing

Measuring and fitting

- Adequately trained
- Accurate measuring
- Oedema must be controlled
- Avoid pulling tape tight
- Financial advice on funding of hosiery
- Always check the fit of the hosiery
- Application and removal

Intermittent Pneumatic Compression

- Use multi-chamber sleeve
- Rapid inflation preferred
- For those who cannot tolerate compression
- Some evidence increases healing when used in conjunction with compression bandaging/hoisery

Considerations for venous stasis

- Evidence of venous stasis/disease
- Rule out ischaemia
- Look for other causes
- Monitor for skin cancers
- Control biofilm
- Effectiveness of calf muscle pump
- Control venous eczema

Treat venous eczema aggressively

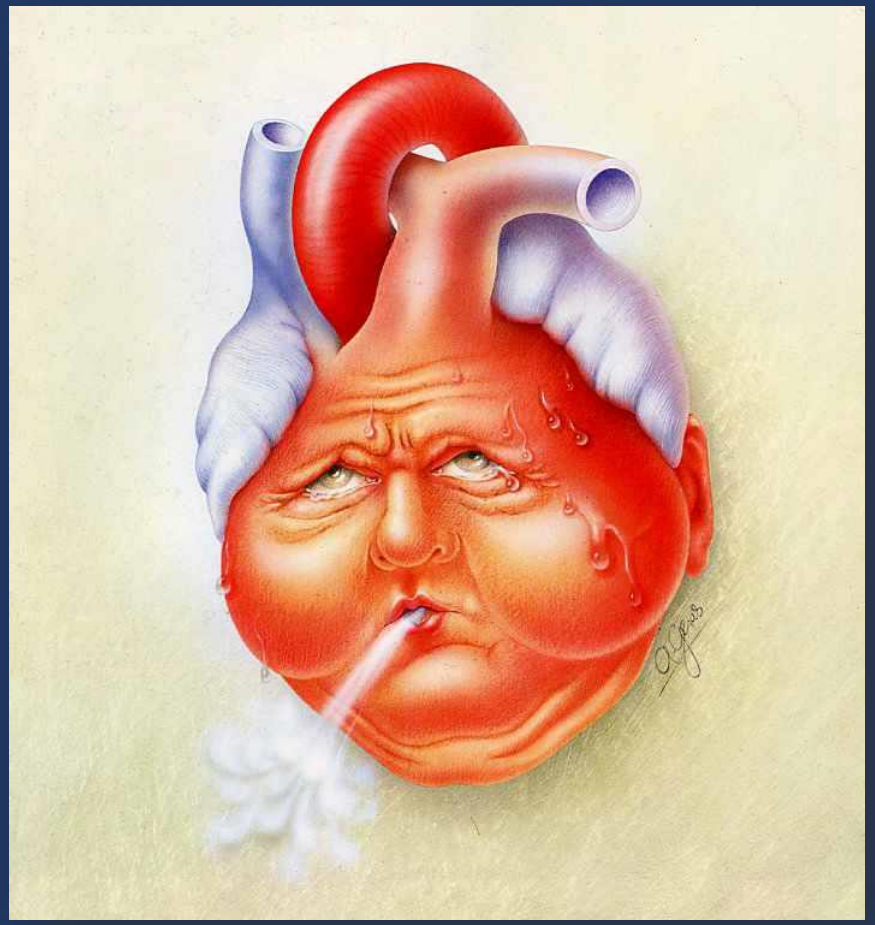
- Assess all moisturizers being used as possible sensitivity
- Wash legs with water
- Mild eczema may respond to zinc paste bandages
- Topical potent steroid ointment daily
- Consider stopping compression bandaging

Considerations for lymphoedema

- Cause of lymphoedema
- Frequency of bandage changes
- Possible obstructions
- Type of bandaging
- Consider massage
- Other comorbidities
- Risk of infection

Considerations for heart failure

- Exacerbation of HF
- Signs & symptoms HF
- Dry weight – increase
- Check level of oedema
- Check BNP
- Is it safe to apply compression?
- Referral to specialist team



Considerations for dependant oedema

- No calf muscle pump action
- Lack of sensation
- Frequency of monitoring
- Very careful fitting of hosiery
- Frequency of follow-up with hosiery once healed


19/03/2013 15:35


19/03/2013 15:35

In summation

- Thorough comprehensive assessment of the patient
- Instigate compression early
- The most appropriate compression to fit the individual
- Assess for potential complications
- Appropriate referral

References

International Lymphoedema Framework. (2003). *Compression therapy: A position document on compression bandaging.* (2nd ed).

Morrison, M. & Moffatt, C. (1994). *A colour guide to the assessment and management of leg ulcers.* (2nd. Ed.). London. Mosby. 10-32

Nelson, A. & Bell-Syer, S. (2014). ***Compression for preventing recurrence of venous ulcers.*** (Review). The Cochrance Database of Systematic Reviews, Retrieved from http://cochranelibrary-wiley.com/doi/10.1002/14651858.CD002303.pub3/full

O'Meara, S, Cullum, N., Nelson, A., & Dumville, J. (2012). ***Compression for venous leg ulcers.*** (Review). The Cochrance Database of Systematic Reviews, Retrieved from http://cochranelibrary-wiley.com/doi/10.1002/14651858.CD000265.pub3/full

Wounds International. (2013). *Principles of compression in venous disease: a practitioner's guide to treatment and prevention of venous leg ulcers.* Retrieved from http://www.woundsinternational.com/media/issues/672/files/content_10802.pdf

Nelson, A., Hillman, A., & Thomas, K. (2014). *Intermittent pneumatic compression for treating venous leg ulcers* **.** (Review). The Cochrance Database of Systematic Reviews, Retrieved from http://cochranelibrary-wiley.com/doi/10.1002/14651858.CD001899.pub4/full

National Institute for Health and Excellence N.I.C.E. (2015). *The Juxta Cures adjustable compression system for treating venous leg ulcers.*

Schultz, G., Sibbald, F., Falanga, V., Ayello, E., Dowsett, C., Harding, K., Romanelli, M., Stacey, M., Teot, L. & Vanscheidt, W. (2003). Wound bed preparation: a systematic approach to wound management. *Wound Repair and Regeneration. 1:* 1-28

Thomas, S. (2003). The use of the Laplace equation in the calculation of sub-bandage pressure. *EWAJ. 3*(1). 21-23

Wounds International. (2013). *Principles of compression in venous disease: a practitioner's guide to treatment and prevention of venous leg ulcers.*

WUWHS. (2008). Principles of best practice: Compression in venous leg ulcers. A consensus document. London. MEP Ltd.