Venous Leg Ulcer Workshop

Mandy Pagan
Wound Care Specialist: Southern DHB
NZWCS Vice-President
Co-ordinator NZWCS Leg Ulcer Advisory Group
Objectives

- Overview Venous Leg Ulcers (VLU) ANZ Clinical Practice Guideline / Introduce NZWCS leg ulcer assessment form
- Understand venous / arterial pathophysiology
- To recognise importance of clinical assessment and correct diagnosis
- To understand the importance of compression therapy and associated risks
- Introduce Intermittent Pneumatic Compression
- Learn how to apply a safe and low compression option whilst awaiting referral
- To understand supplemental pressure and how to use it
- Importance of patient education
Venous Leg Ulcer Definition

ANZ (2011)
Full-thickness defect of the skin that persists due to venous disease of the lower leg.

NICE (2013)
Open lesion between the knee and the ankle joint that occurs in presence of venous disease and takes more than two weeks to heal.
Guidelines:

- Identify those at risk of VLU
- Assess and accurately diagnose VLU
- Optimise management plan
- Promote self care
- Prevent complications
- Optimise QoL (e.g. pain)
- Reduce VLU recurrence
- NZWCS Leg Ulcer Assessment form based on guidelines
Accurate Diagnosis

1. Comprehensive history
2. Physical examination (compare both legs)
3. Diagnostic reasoning
Leg Ulcer Assessment Form

- HISTORY – Clinical, Pain & Leg Ulcer
  - Compression can decrease pain by reducing oedema & inflammation

- EXAMINATION of the Leg & Ulcer
  - Apply principles of skin care & wound bed preparation

- INVESTIGATIONS to Support Diagnosis
  - ABPI, duplex scans
  - Differential diagnosis

- Planning, Implementation & Evaluation
  - Education & self care can increase concordance
  - Referral for suitability for corrective surgery
Arterial Clinical Signs & Symptoms

- Intermittent claudication
- Ischemic rest / night pain
- Pain relief when foot lowered
- Dependent rubor / ischemic pallor on elevation
- >2 sec capillary refill time
- Loss of hair lower leg
- Cool foot
- Skin thin / shiny
- Thickening toenails
Venous Disease Risk Factors

- Advancing age
- Family history varicose veins / ulcers
- Previous vein surgery / leg ulcer
- DVT / PE / chest pain, hemoptysis
- Hx phlebitis
- Lower leg fracture, trauma or surgery
- Reduced calf pump function
- Prolonged standing / sitting occupations
- Multiple pregnancies
- Overweight
Venous Clinical Signs & Symptoms

- Limb pain present (aching, tired, night cramps)
- Pain relieved with elevation
- Prominent, superficial veins
- Ankle Flare
- Lipodermatosclerosis
- Hemosiderin Staining
- Eczema dry or wet
- Atrophie Blanche
- Edema: pedal / ankle / leg
- Inverted champagne-bottle shaped leg
Varicose veins
Eczema
Haemosiderin Staining
Atrophie Blanche
Lipodermatosclerosis
Ankle flare
Inverted Champagne bottle shaped leg
Ulcer Characteristics

**Venous**
- Partial to full thickness ulcer
- Can be painful
- Irregular wound edges
- Slow progress
- Gaiter region
- Spontaneous breakdown

**Arterial**
- Full thickness ulcer
- Painful, sharp, intense
- Punched out appearance
- Rapid progression / prone infection
- Ulcers located on toes, heels, and bony prominences of the foot
*check for inter-digital ulcers*
Ankle Brachial Pressure Index

Measures fall in BP in the arteries. Detect evidence of arterial blockages and calcification of the lower leg. Confirms if safe to apply levels of compression.
**Compression Therapy**

- Aids healing: promotes venous return, reduces venous pressure and prevent venous stasis.
- Trained application (bandaging / hosiery systems) scope of practice!
- Seek advice / early referral
- Healing rates up to 70% at 12 wks
- 12-month recurrence rates 18-28%
- Program to prevent recurrence can improve quality of life & reduce costs
Risks of Compression - Safety First!
Case Study

- Ankle fusion surgery
- NPWT ceased
- Healing achieved < 2-months with compression bandaging
Localised Supplemental Pressure

- Additional pressure to aid healing.
- Place over primary dressing (‘Southland Snail’, gauze or foam) before compression is applied.
- Softens fibroded skin
- Helps flatten raised wound edges
Intermittent Pneumatic Compression

- Three chamber (sequential pressure)
- Half or full leg garments
- Inserts for larger limbs
- Vascular / lymphatic conditions
- Increases venous / arterial flow
- Increases pressure in the extracellular space forcing excess fluid back into circulation
- Antithrombotic effect

May increase healing compared to no compression. Unclear if it can be used instead of compression bandaging. May improve healing when used as adjuvant to compression bandages.
Tubigrip Application: *Toe-to-below Knee*

- Ankle / calf circumferences (oedema reduction)
- Regime avoids using adhesives on skin.
- Tubigrip alone can cause pressure marking on thin legs and fragile skin; hence use padding 1\textsuperscript{st} to protect limb.
- Stockinet (optional).
- 10cm Soffban 1.5 rolls: create normal shaped leg, pad out bony prominences or dressing ridges. Run hands down the leg to ensure it is smooth and well padded.
- 10cm Crepe: apply firmly; if loose soffban/dressings will slip.
- Tubigrip: start one layer first; assess tolerance (can increase to 2 layers). Normal shape leg: size E.
- Reassess limb for skin marking at each dressing change.
Tubigrip Case Study

Skin Tear Trauma  25-days post trauma  3-months post trauma
Education: Engagement!

- Blood has left the highway (veins) and gone to the hills! (skin). Need to move blood off hills back onto the highway!
- Please remove compression: numbness, tingling, toes discoloured, pain
- Exercise & maintain ankle flexion
- Patient VLU Information Leaflets: www.nzwcs.org
Hosiery & Skin Care

- Compression hosiery improves venous return /reduces oedema & ulcer recurrence rates
- Individual assessment & patient preference (replacement!)
- Skin care: when to apply & use of topical steroids
- Donning devices
- Caregiver assistance
Any Questions?
References