

FLOW CHART FOR ASSESSMENT OF VENOUS LEG ULCERS

Australian and New Zealand clinical practice guideline for prevention and management of venous lea ulcers



quality of life

nutrition

Patient presents with an ulceration on the lower leg



ASSESSMENT

EXAMINATION

INVESTIGATI

DIAGNOSIS

HISTORY

Patient's clinical history (page 20)

- venous disease
- family history of leg ulceration •
- decreased calf muscle pump . function
- surgery or trauma of affected
- chest pain or pulmonary
- prolonged standing or sitting
- varicose veins
- phlebitis

previous or

current DVT

- obesity
 - number of

preanancies

- Patient's leg ulcer history (page 20) the duration of the current ulcer
- previous ulcers and the time they have taken to heal

Comprehensive assessment of the patient (page 20)

time spent free of ulcers

medications

psychosocial

comorbidities

strategies used to manage previous ulcers

Venous characteristics (page 22) Associated changes in the leg

- Firm ("brawny") oedema
- Haemosiderin deposit (reddish brown pigmentation)
- Lipodermatosclerosis (skin hard and woody)
- Evidence of healed ulcers
- Dilated and torturous superficial veins
- Hair is evident
- Atrophie blanche (white areas of intact skin)
- Venous eczema (dry or wet itchy scaly skin)
- Altered shape inverted "champagne
- Ankle flare (distended veins in foot arch or ankle region)
- Leaking oedema may result in maceration, pruritis and scale
- Limb may be warm heat and/or itch <u>Ulcer location and characteristics</u>
- Anterior to medial malleolus
- Pretibial area (lower third of leg)
- Shallow with ragged, irregular edges
- Ruddy granulation tissue
- Wound exudate moderate to high
- May be odorous

<u>Pain</u>

- Varying from nil, to mild or extreme
- May be relieved by elevation of leg

Arterial characteristics

Associated changes in the leg

- Oedema may be observed if infection present
- Thin, shiny skin often with minimal hair growth
- Leg shape is often straight with minimal shape
- Limb cool to touch
- Elevated toes/leg become pale, dependent rub (+ve Beurger's
- Weak or absent pedal or leg pulses

Ulcer location/characteristics

- Ulcer margins well demarcated with "punched out" appearance
- Poorly perfused wound bed
- Necrotic tissue that may be tenacious (difficult to remove)
- Minimal wound exudate unless infected
- Prone to infection

<u>Pain</u>

Claudication or rest pain, may be worse at night or if leg is elevated

Atypical ulcer characteristics

- None or minimal venous and arterial ulcers characteristics
- Pain is extreme
- Oedema
- Ulcer has an unusual appearance or atypical distribution
- Suspicion of malignancy
- Deterioration in ulcer or necrotic tissue present
- Ulcer that has not healed in three months

Non-invasive diagnostic tests may be ordered: (page 24)

Pedal and leg pulses • Arterial and/or venous duplex scanning ABPI

Wound swab

- Photoplethysmography
- TBPI TCPO₂ X-ray
 - Pulse oximetry

Blood profiles

Wound tissue biopsy

Invasive diagnostic tests may be ordered:

MRI

ABPI < 0.8 or > 1.2 orAtypical or arterial characteristics

ABPI 0.8-1.2 or Characteristics of venous aetiology

Use CEAP classification



Referral to specialist health professional (page 26)

4 Refer to other side for management MANAGEMENT of the **Venous**



PATIENT

PREPARE THE LEG AND WOUND

3

COMPRESSION

4

REVIEW

5

FLOW CHART FOR MANAGEMENT OF VENOUS LEG ULCERS

Australian and New Zealand clinical practice guideline for prevention and management of venous leg ulcers



Patient assessed as having a venous ulcer on the lower leg

Provide appropriate PAIN MANAGEMENT (page 28)

Provide patient **EDUCATION** (Grade C, page 30)

- Leg elevation Compression therapy including use and care of hosiery
- Nutrition
 - Exercise

Provide access to appropriate **PSYCHOSOCIAL** support (page 31)

Recommend **ELEVATION** of the lower limb to reduce oedema (**Grade C**, page 32)

PROGRESSIVE RESISTANCE EXERCISE to improve calf muscle function (Grade C, page 33)

Encourage optimal NUTRITION AND HYDRATION to assist healing (page 34)

Prepare the surrounding skin:

- **CLEANSE** the leg at dressing changes (page 35)
- MAINTAIN SKIN INTEGRITY of surrounding leg skin (page 36)
- CONTROL VENOUS ECZEMA (Grade C, page 36)

Wound bed preparation:

- **CLEANSE** the ulcer at dressing changes (page 35)
- Consider **DEBRIDEMENT** of non-viable tissue (**Grade C**, page 37)
- Consider treating **CLINICAL INFECTION** (page 38–47)
- Select appropriate PRIMARY DRESSING (Grade B, page 47)

Graduated compression therapy (Grade B, page 53)

In the absence of arterial disease or diabetes mellitus aim for > 30 mmHg (elastic) or high stiffness system (inelastic) Caution: Compression should be applied by a trained health professional and according to manufacturer's guidelines

Patients receiving compression therapy should be MONITORED CLOSELY to ensure they are able to tolerate compression and to monitor signs of healing

Review and consider referral (page 26)

Ulcers not reduced in size by 25% in four weeks or failing to heal in 12 weeks should be considered for specialist referral

Prevention of recurrence

Measure and fit compression hosiery providing 18–40 mmHg (Grade B, page 62)

Ongoing encouragement should be given related to exercise, leg elevation and nutrition

Hosiery should be renewed at least annually

SUMMARY OF RECOMMENDATIONS

Table 3.1: Recommendation grades ¹⁵			
Evidence-based gradings developed from critical appraisal of the research			
Α	Excellent evidence — body of evidence can be trusted to guide practice		
В	Good evidence — body of evidence can be trusted to guide practice in most situations		
С	Some evidence — body of evidence provides some support for recommendation(s) but care should be taken in its application		
D	Weak evidence — body of evidence is weak and recommendation must be applied with caution		
Consensus-b	Consensus-based recommendation (CBR)		
CBR	Consensus evidence — a graded recommendation could not be made due to a lack of evidence from SRs or RCTs in populations with VLUs. The CBRs are supported by all members of the Expert Working Committee.		

PREVENTING INITIAL OCCURRENCE OF VLUS	Grade	
Prevent and manage venous hypertension by: • providing deep vein thrombosis (DVT) prophylaxis • detecting and managing DVT early • promoting access to venous surgery and phlebology interventions.	CBR	
When there are no contraindications, apply compression therapy to prevent the initial development of a VLU in those at risk.	CBR	
ASSESSMENT, DIAGNOSIS AND REFERRAL	Grade	
A health professional trained in the assessment and management of VLUs should conduct a comprehensive assessment of all patients presenting with a leg ulcer. A comprehensive assessment should include: clinical, pain and leg ulcer history examination of the leg and ulcer investigations to support diagnosis.	CBR	
A comprehensive assessment of the leg ulcer should be made on initial presentation and at regular intervals thereafter to guide ongoing management.	CBR	
Use CEAP classification to evaluate and classify venous disease.	CBR	
Refer patients with a non-healing or atypical leg ulcer for consideration of biopsy.	CBR	
Local guidelines should provide clear indication of appropriate criteria for referral to specialist health professionals.	CBR	
MANAGING PAIN ASSOCIATED WITH VLUs	Grade	
Provide adequate pain management to promote QOL and VLU healing.	CBR	
When there are no contraindications, apply ${\sf EMLA}^{\it B}$ cream to reduce pain associated with the debridement of VLUs.	Α	
Electrotherapy could be considered for reducing pain from VLUs.	С	
MANAGEMENT OF VLUs	Grade	
Managing the patient		
Provide patients with appropriate education on their condition and its management.	С	
Provide psychosocial assessment and support as an essential component in the patient's management plan.	CBR	
Elevate the patient's leg to promote changes in microcirculation and decrease lower limb oedema.	С	
Progressive resistance exercise may improve calf muscle function.		
Optimise the patient's nutrition and hydration to promote healing in patients with VLUs.	CBR	

Prepare the leg and ulcer

reat venous eczema and impaired peri-ulcer skin promptly. Consider using topical barrier preparations to reduce peri-ulcer erythematous maceration in patients with VLU. Tonsider using topical barrier preparations to reduce peri-ulcer erythematous maceration in patients with VEU. Tonsider other debridement methods to prepare the ulcer bed for healing. Tonsider other debridement methods to prepare the ulcer bed for healing. Tonsider other debridement methods to prepare the ulcer bed for healing. Tonsider other debridement methods to prepare the ulcer bed for healing. Tonsider other debridement methods to prepare the ulcer bed for healing. Tonsider other debridement methods to prepare the ulcer bed for healing. Tonsider other debridement methods to prepare the ulcer bed for healing. Tonsider using the healing in VLUs. Tonsider obsentits over standard care in promoting healing in VLUs. Tonsider on benefits over standard care in promoting healing in VLUs. Tonsider using the healing in VLUs. Tonsider using be a role for judicious use of topical antimicrobials when there is known or suspected increased nicrobial burden. Tonsider using dressing in managing VLUs as there is a concern that their use is associated with mitibiotic resistance and sensitivities. Tonsider using and topical treatment to specific dressing product is superior for reducing healing time in VLUs. Select dressings based on distinct assessment of the ulcer, cost, access and patient/health professional preferences. Tonsider using dressings or bandages impregnated with zinc oxide to provide comfort and promote population of a healthy granulated, superficial VLU. Topical, pale, sulphonated shale oil could be used to promote healing in VLUs. Topical, pale, sulphonated shale oil could be used to promote healing in VLUs. Topical, pale, sulphonated shale oil could be used to promote healing in PLUs. Topical pale pale pale pale pale pale pale pa		
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PREVENTING RECURRENCE OF VLUs Gra	Where access to specialist services is limited, health professionals could contact a VLU specialist via telecommunications for advice and support in assessing and managing a patient with a VLU.	CBR
	PREVENTING RECURRENCE OF VLUs	Grade
Maintaining practices that promote the health of the legs may reduce the risk of VLU recurrence.	Maintaining practices that promote the health of the legs may reduce the risk of VLU recurrence.	CBR
Consider the continued use of compression therapy to reduce the risk of VLUs recurrence.	Consider the continued use of compression therapy to reduce the risk of VLUs recurrence.	В