

Arterial Leg Ulcer Flow Chart

Assessment

- History
 - medical
 - wound
 - medications
 - psychosocial & activities of daily living
- Characteristics of the wound
- Diagnostic investigations

All persons with a leg ulcer should be screened for peripheral arterial disease, including Ankle Brachial Pressure Index (ABPI) or toe brachial or toe pressures

Assessment should be undertaken by those with training and skills in the area

Wound Bed Management

- Cleanse the wound gently with water or normal saline
- In general, debride necrotic or devitalized tissue, *however, do not debride dry gangrene or eschar*

**Debridement should be undertaken by a trained health practitioner*
- Maintain a moist wound environment, however if dry gangrene or eschar is present, leave dry
- Consider topical antimicrobial dressings if the person is at risk of infection

Management

- Refer to vascular surgeon for restoration of blood flow by revascularization, if appropriate considering the person's context
- Ensure optimal pain management strategies, considering individual needs
- Educate persons and family on wound management, aetiology and prevention

Prevention

- Reduce risk factors:
 - cease smoking
 - control blood glucose levels
 - control elevated lipids
 - control hypertension
 - anti-platelet therapy
 - control weight
- Refer to vascular surgeon for assessment if appropriate
- Exercise the lower limbs
- Protect legs and feet:
 - ensure soft, conforming, well-fitting shoes
 - refer to podiatrist for foot care, orthotics and offloading as necessary
 - protect legs (e.g., padded equipment, long clothing)
 - use pressure relief devices (e.g. foam or air cushion boots) for those with limited mobility
- Keep the legs warm
- Eat a nutritious diet

Characteristics of an arterial leg ulcer

Arterial leg ulcers typically:

- Occur on the anterior shin, ankle bones, heels or toes
- Have pain which is relieved when legs are lowered below the level of the heart
- Have 'punched out' wound edges
- May have mummified or dry and black toes

The surrounding skin or tissue often has:

- Shiny or dry skin with loss of hair
- Devitalised soft tissue with dry or wet crust
- Thickened toe nails
- A purplish colour when the leg is lowered to the ground
- Atrophied skin or purpura
- Cool skin



When to Refer

- ABPI <0.9, or ABPI >1.3, or TBI <0.7
- Symptoms of acute limb ischaemia
- Multiple aetiologies
- Signs of infection, or gangrene
- Ulcer appears ischaemic
- No progress in healing in 2 – 4 weeks
- Unrelieved pain

References

Abramson B, Al-Omran M, Anand SS et al. Canadian Cardiovascular Society 2022 Guidelines for Peripheral Arterial Disease. Canadian Journal of Cardiology 2022; 38:560-587.
Beaumier M, Murray B, Despatis M et al. Best practice recommendations for the prevention and management of peripheral arterial ulcers. Foundations of Best Practice for Skin and Wound Management. Wound Care Canada 2020; www.woundscanada.ca/
Chuter V, Quigley F, Tosenovsky P et al. Australian guideline on diagnosis and management of peripheral artery disease: part of the 2021 Australian evidence-based guidelines for diabetes-related foot disease. Journal of Foot and Ankle Research 2022; 15:51.
Fitridge R, Chuter V, Mills JL et al. The intersocietal IWGDF, ESVS, SVS guidelines on peripheral artery disease in patients with diabetes mellitus and a foot ulcer. IWGDF 2023; www.iwgdfguidelines.org
Wounds UK. Best Practice Statement: Ankle brachial pressure index (ABPI) in practice. 2019, Wounds UK. <http://www.wounds-uk.com/>



E: woundresearch@qut.edu.au