



## Appendix 4 – Difference Between Neuropathic and Ischaemic Foot Ulcers

Foot ulceration is usually caused by combination of factors including peripheral arterial disease, peripheral neuropathy and infection. A rapid assessment, diagnosis and treatment is crucial for all those who develop it.

## Neuropathy:

Damage to one or more nerves that typically results in numbness (sensory neuropathy), tingling, muscle weakness (motor neuropathy) and pain in the affected area. Autonomic neuropathy (damage to nerves that are part of the autonomic nervous system) can lead to symptoms such as dizziness, night sweats and constipation. Within the foot, it commonly causes dysfunction within the sweat glands of the foot, causing dry skin, which can cause cracking, fissures and render calluses thicker and harder. Peripheral neuropathy (damage to peripheral nerves) increases the risk of ulceration through loss of protective sensation and the development of foot deformities, particularly clawing of the toes.

## Ischemia:

Acute Limb Ischaemia: Rapid decrease in blood flow to the lower limb due to acute occlusion. Symptoms occur suddenly and include acute pain, pallor, pulseless, perishingly cold paraesthesia / acute sensory change, paralysis/ acute motor dysfunction. Chronic Limb Threatening Ischaemia (CLTI): is a clinical syndrome defined by the presence of peripheral arterial disease (PAD) in combination with rest pain, gangrene, or a lower limb ulceration greater than 2 weeks in duration.

| SIGNS AND<br>SYMPTOMS | NEUROPATHIC                                                                                                                                                        | ISCHAEMIC                                                                                          |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Appearance            | Commonly found on pressure points on the<br>toes and plantar surface. Often irregular with<br>heavy callus around ulcer site with sloping<br>edges, can be sloughy | Punched- out, undercutting,<br>sloughy surrounded by thin glassy<br>callus and devitalised tissue. |
| Deformity             | Clawed toes, Charcot foot, high arch.                                                                                                                              | No deformity                                                                                       |
| Pain                  | Painless                                                                                                                                                           | Agony                                                                                              |
| Skin temperature      | Warm                                                                                                                                                               | Cool                                                                                               |
| Colour                | Normal                                                                                                                                                             | Pale, cyanotic                                                                                     |
| Tests                 | Insensitive/ diminished response to 10mg<br>monofilament. Neurotip, temperature<br>discrimination and reduced or absent reflexes                                   | Doppler assessment for wave<br>formation. ABPI/ TBPI for vascular<br>status                        |
| Pulses                | Palpable                                                                                                                                                           | Not palpable or weak                                                                               |
| Callus formation      | Commonly found on pressure weight bearing areas, can be heavy with maceration present                                                                              | Commonly found on the pressure<br>points, bony prominences of the<br>toes and borders of the feet  |
| Ulcer sites           | Usually associated with high pressure points on the toes and plantar surfaces                                                                                      | Commonly found on the pressure points, bony prominences of the toes and feet                       |

The differences between neuropathic and ischaemic ulcers:

Reference: National Wound Care Strategy Programme 2023, Foot Ulcer Recommendations.

Developed by: The Foot Protection Service 2021. Updated by the Tissue Viability and Lymphoedema Service, The Skin Integrity Team, and Foot Protection Service July 2024 v2. For Review July 2027









NHS

Early referral to the Podiatry Foot Protection Service (FPS) at Cantley Health Centre will help to ensure optimum patient outcomes. The Podiatry FPS will:

- Assess and determine the underlying causative factors •
- Debride where appropriate •
- Arrange X-Rays/ swabs •
- Prevention and/or control of infection •
- Pressure relief .
- Education •

The Foot Protection Services will also refer to other specialist services when appropriate:

- TVAL- for those patients with primary cause: venous, lymphoedema or pressure wounds.
- Multi-disciplinary management for patients with complex needs requiring a joint • approach- often they have a history of amputation, static/ deteriorating ulceration, poor glycaemic control, vascular insufficiency and foot deformity (including Charcot).
- Vascular Consultants- for those patients whose primary cause is peripheral arterial • disease/ severe venous disease.
- Glycaemic control- refer to appropriate service to improve glycaemic control (GP, • specialist diabetes nurse, Endocrinology consultant).
- Foot deformity suitable for elective foot surgery-Podiatry Surgery consultants.



Reference: National Wound Care Strategy Programme 2023, Foot Ulcer Recommendations.

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