

# Foot Ulcers

Ulcerations on or around the feet may be of arterial, venous or neuropathic aetiology.

## Suggested approach to foot ulcer OSCE station

### Describing lesions:

- Arterial ulcer
  - "There is a well-demarcated ulcer on the tip of the right great toe"
  - "This has a diameter of 1cm and a punched-out appearance"
  - "The ulcer has a necrotic base"
  - "The surrounding skin is cool and pale, and the dorsalis pedis and posterior tibial pulses are very weak"
  - "This lesion is characteristic of an arterial ulcer"
- Venous ulcer
  - "There is a large superficial ulcer on the medial gaiter region of the right leg"
  - "This has a diameter of approximately 14cm and has an irregular border"
  - "The ulcer has a exudative, granulating base"
  - "There is associated venous eczema and lipodermatosclerosis"
  - "This lesion is characteristic of a venous ulcer"
- Neuropathic ulcer
  - "There is a well-demarcated ulcer on the dorsal aspect of the first metatarsophalangeal joint"
  - "This has a diameter of 1cm and a punched-out appearance"
  - "The ulcer has a granulating base"
  - "The surrounding skin hyperkeratotic and there is reduced sensation peripherally"
  - "This lesion is characteristic of a neuropathic ulcer"

### Other aspects to examination:

- Surrounding skin (including temperature)
- Peripheral pulses and capillary refill
- Peripheral sensation

### If you are asked to ask the patient questions:

- Associated pain and when this is worse
- Loss of sensation
- History of diabetes, vascular disease, varicose veins, DVT

## Types

Type of ulcer	Commonest sites	History	Exam findings	Management
<b>Arterial</b>	• Areas of poor blood supply (e.g. tips of toes, pre-tibial area)	• Nocturnal pain • Worse with leg elevation	• Small deep ulcer • Well-defined • Punched out • Necrotic base • <b>Associated:</b> weak pulses, cool pale skin, loss of skin hair, nail dystrophy	• Vascular reconstruction
<b>Venous</b>	• Gaiter region	• Mild pain • Worse on standing • Associated varicose veins	• Large superficial ulcer • Irregular border • Exudative, granulating based • Sloping edges • <b>Associated:</b> varicosities, oedema, venous eczema, lipodermatosclerosis, haemosiderin deposition, atrophie blanche	• Compression bandaging (after arterial insufficiency excluded by ABPI)
<b>Neuropathic</b>	• Pressure points (e.g. metatarsal heads, soles, heel, toes) • Often under calluses	• Painless • Associated reduced sensation peripherally	• Small deep ulcer • Well-defined • Punched out • Granulating base • <b>Associated:</b> overlying hyperkeratosis, glove and stocking sensory loss	• Debridement • Appropriate footwear • Regular repositioning • Foot checking advice • Don't walk bare foot

## Possible investigations to determine cause

- Fasting glucose (to exclude diabetes)
- Ankle brachial pressure index (<0.8 = peripheral vascular disease)
- Duplex ultrasound (to look for peripheral vascular disease or venous incompetence)
- X-ray (to exclude osteomyelitis)
- Swabs (if signs of infection)



### Arterial ulcer

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