Common & Atypical Leg Ulcers

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Diagnosis

- Common omission identified in the care of patients with a leg ulcer is a failure to establish the underlying aetiology of the wound.
- An accurate leg ulcer diagnosis should initiate the appropriate therapy
- Vascular disorders are the major cause of leg ulcers, there are other aetiologies that should be considered when the leg ulcer has failed to respond to evidence-based therapy

- Most commonly venous (75%)
- Arterial (10%)
- Mixed arterial and venous (10%)
- Atypical (5%)

Causes of Ulceration

Atypical Ulcers

- Atypical ulcers are generally understood to be wounds that cannot be defined under one of the primary non-healing wound categories, such as venous, arterial, mixed or diabetic foot ulcers (European Wound Management Association [EWMA], 2019).
- Traumatic, vasculitic, inflammatory and malignant ulcers, account for 5% (NHS England, 2016; Circulation Foundation, 2018).

- Chronic wounds and leg ulcers are a high-profile topic within the NHS, with the recent launch of the **Legs Matter campaign** providing impetus for a national framework to support effective care (Legs Matter, 2018). In 2015, Guest et al outlined the extent of the burden that chronic wounds place on the health economy, prompting NHS England (2016) to focus on wound assessment as part of the **'Leading Change, Adding Value' campaign.**

High Burden to Patients & NHS

- Approximately half of all ulcers have no identified cause. Although inadequate lower limb treatment pathways and suboptimal training of healthcare professionals are contributing factors to this lack of accurate diagnosis (Anderson, 2018)

Inaccurate Diagnosis Leads to Ineffective Treatment

- PATIENT
- LEG
- WOUND

Diagnosing Ulcer Aetiology

THE PATIENT

- Medical history and comorbidities, such as; cardiovascular disease, venous insufficiency, chronic kidney disease, autoimmune disorders
- IVDU?
- Obesity & mobility
- Lymphoedema
- Gravitational eczema and oedema
- Drugs (hydroxyurea a cytotoxic chemotherapy)
- DVT previously
- Etc…

Leg Characteristics

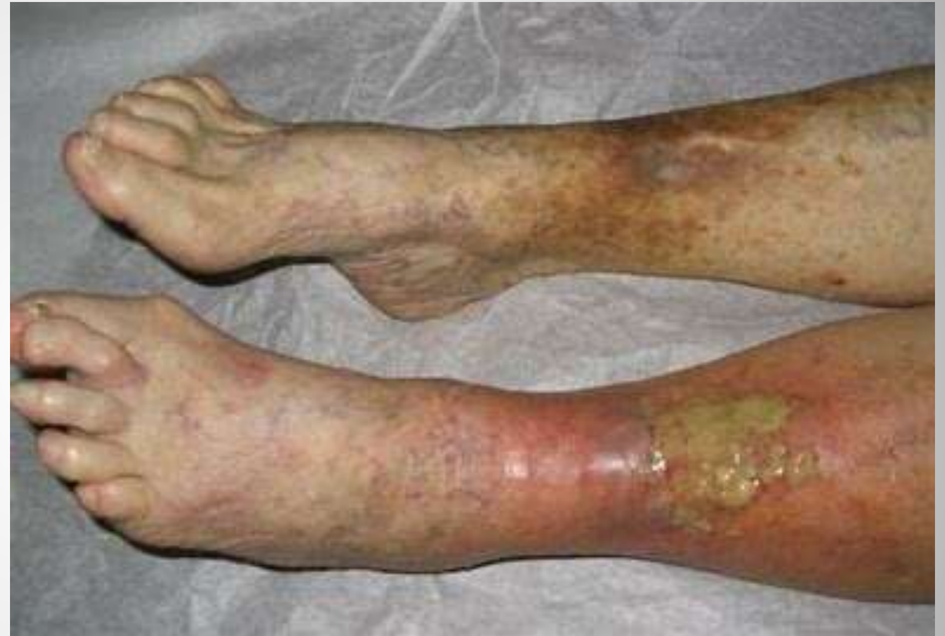
- Vascular signs –
  - Pulses
  - Varicose veins
  - Claudication
- Scars & previous amputations
- Shape –
  - 'Inverted champagne bottle legs' in venous LDS
  - Swelling – Lymphedema or Dependent leg syndrome due to CLI
  - Deformity – Charcot or trauma

- **Ulcer Location** – Gaiter/shins (Venous), toes/bony points (arterial/diabetic/Charcot), Nonspecific (vasculitis)
- **Ulcer Base** – Sloughy (V), necrosis (A), infection (DM),
- **Ulcer Edge** – Sloping (V), Punched out (A), Raised (BCC, SCC), Purple (PyoDG)
- **Skin** – LDS, pigmentation, eczema (V), Pale/cool/gangrene (A), Oedema/Stemmers sign (L), Skin lesions/purpura (Vasculitis)

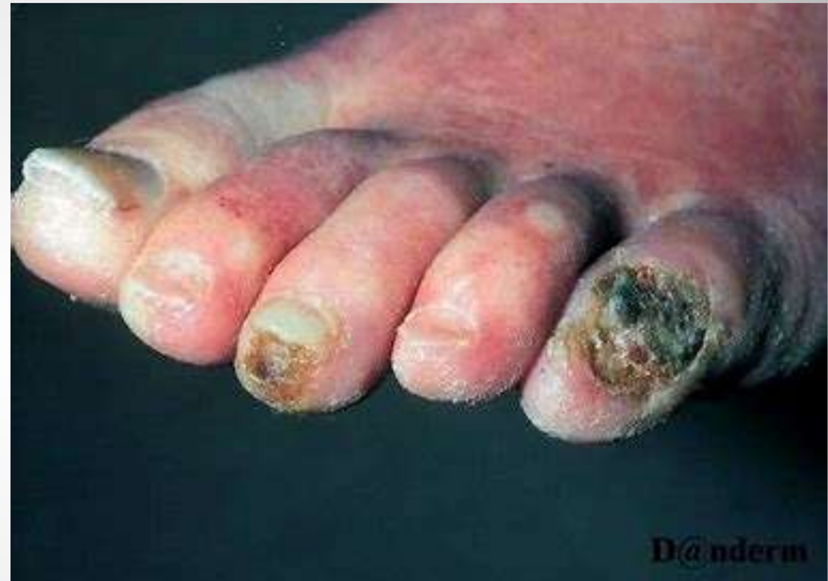
The Wound & Surrounding Skin

Venous Ulcers

- VVs
- Haemosiderin
- LDS
- Eczema
- Atrophie blanche
- Ankle Flare



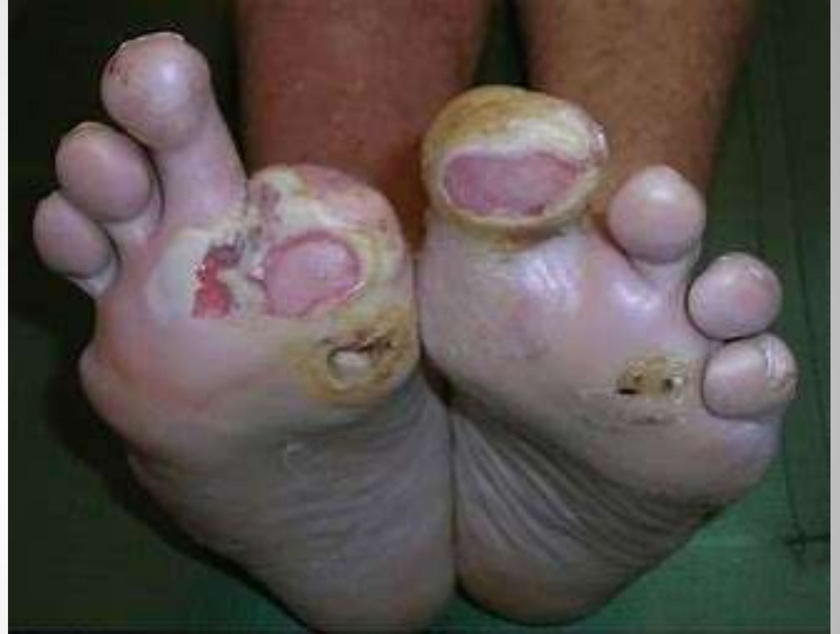
- Hx claudication
- Sleeps in a chair
- Hx previous angioplasty/bypass/ toe amputations
- Pale, cool, poor pulses/cap refill
- Sunset forefoot
- Monophasic Doppler/ABPI



Arterial Ulcers

Neuropathic Ulcers

- Neuropathic foot ulcers form as a result of a loss of peripheral sensation and are typically seen in individuals with diabetes/neuropathy.
- Lack of sensation, over pressure points on the foot leads to extended microtrauma, breakdown of overlying tissue, and eventual ulceration.



Source: Usatine RP, Smith MA, Mayeaux EJ, Chumley HS: *The Color Atlas of Family Medicine, Second Edition*: www.accessmedicine.com
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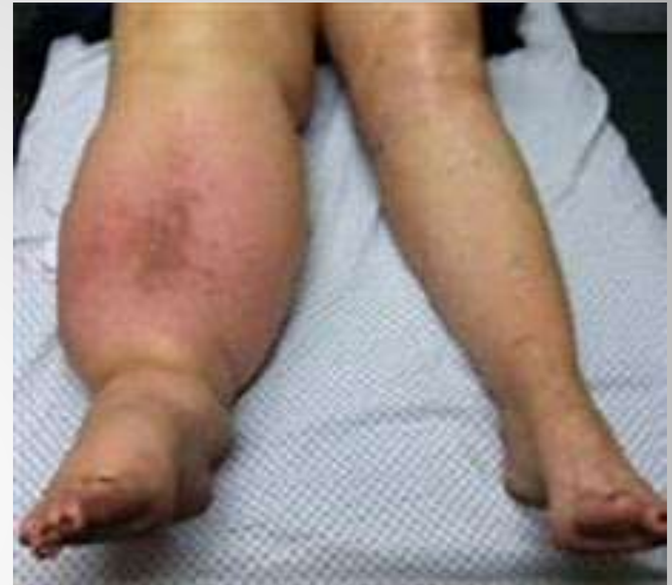
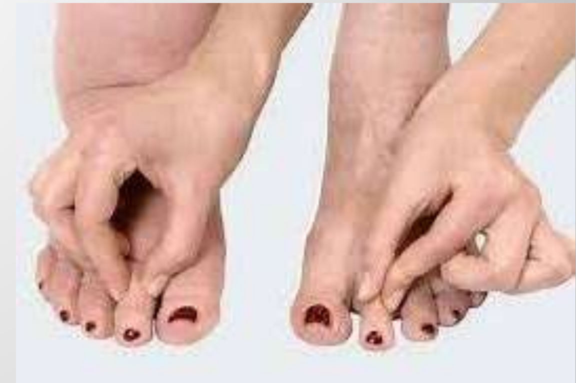
Oedematous Ulcers

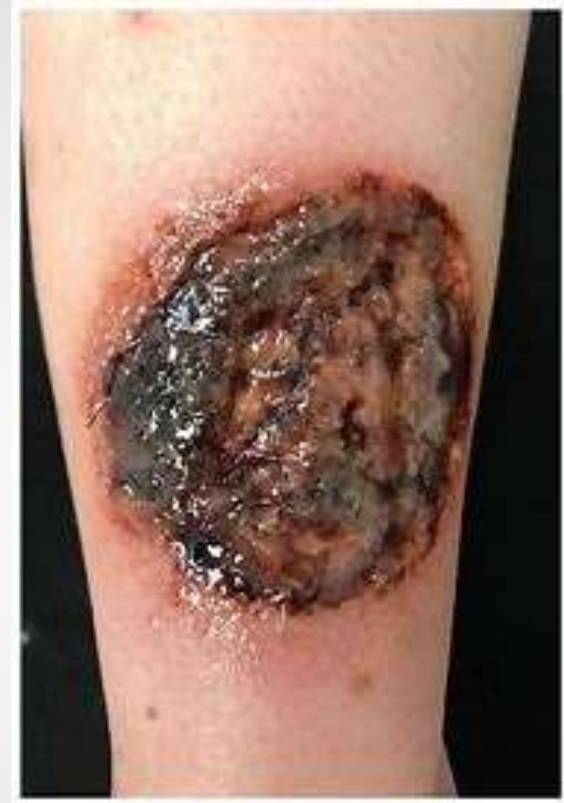
- Lymphoedema (Stemmer's Sign 2nd toe)
- Gravitational Ulcer (Chair sleepers, Wheelchair bound, MS etc, poor calf pump/ankle flexion)
- Shallow, infection, crusts, slough



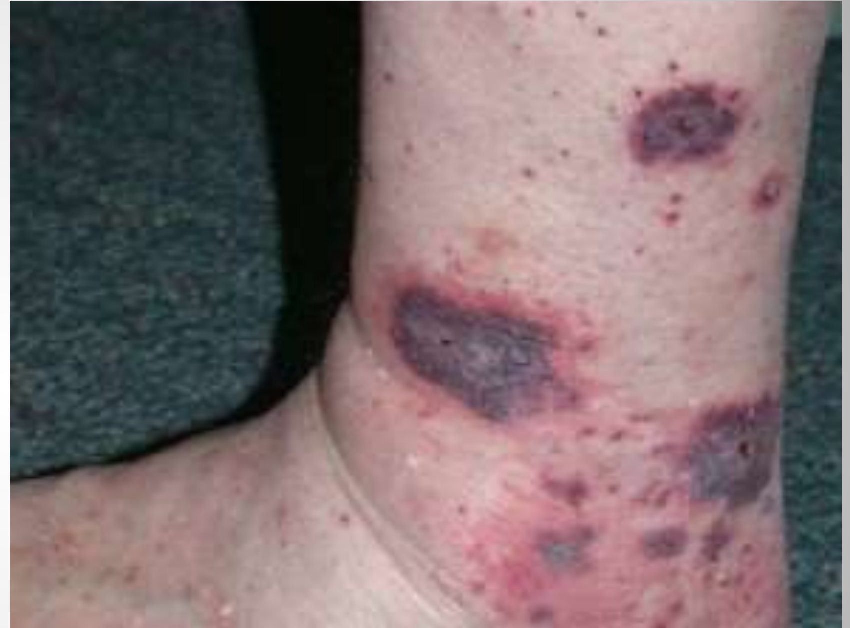


Pyoderma Gangrenosum

- Inflammatory ulcer
- Autoimmune – IBD/Rh A
- Rapid progress from pin-prick size lesion/minor trauma
- Pain
- Legs and elsewhere
- Purple edge and necrosis



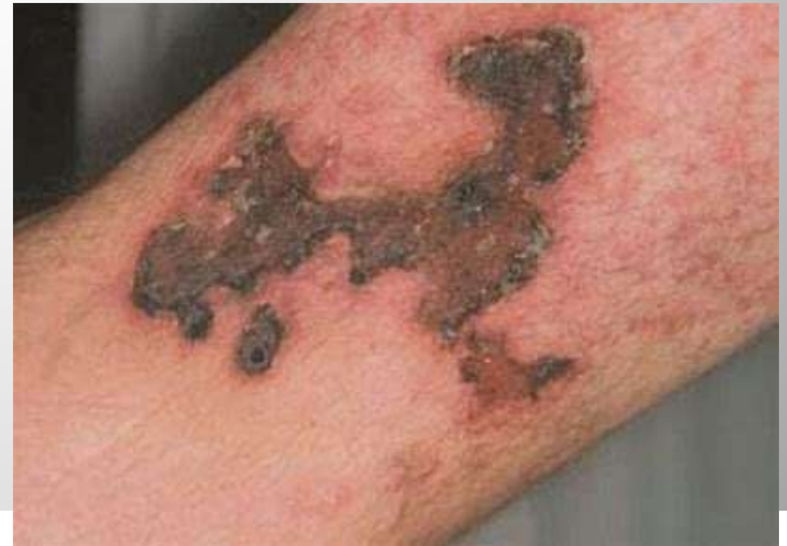
- Inflammation of the small blood vessels.
- Underlying autoimmune disorders - rheumatoid arthritis, lupus, scleroderma and Buerger’s disease
- Multiple lesions/purpura



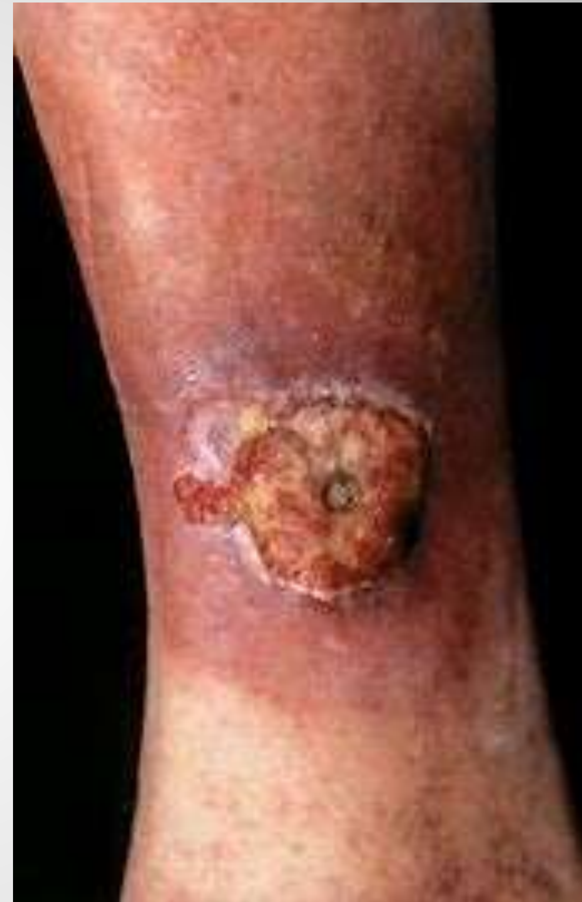
Vasculitic Ulcers

- In patients undergoing haemodialysis and presents with vascular calcification, thrombosis and skin necrosis that eventually leads to ulcer formation (Fukaya and Margolis, 2013).
- 1% of patients with CKD
- 4% undergoing dialysis (Rayner et al, 2009).
- Rapid progression,
- Very painful

Calciphylaxis

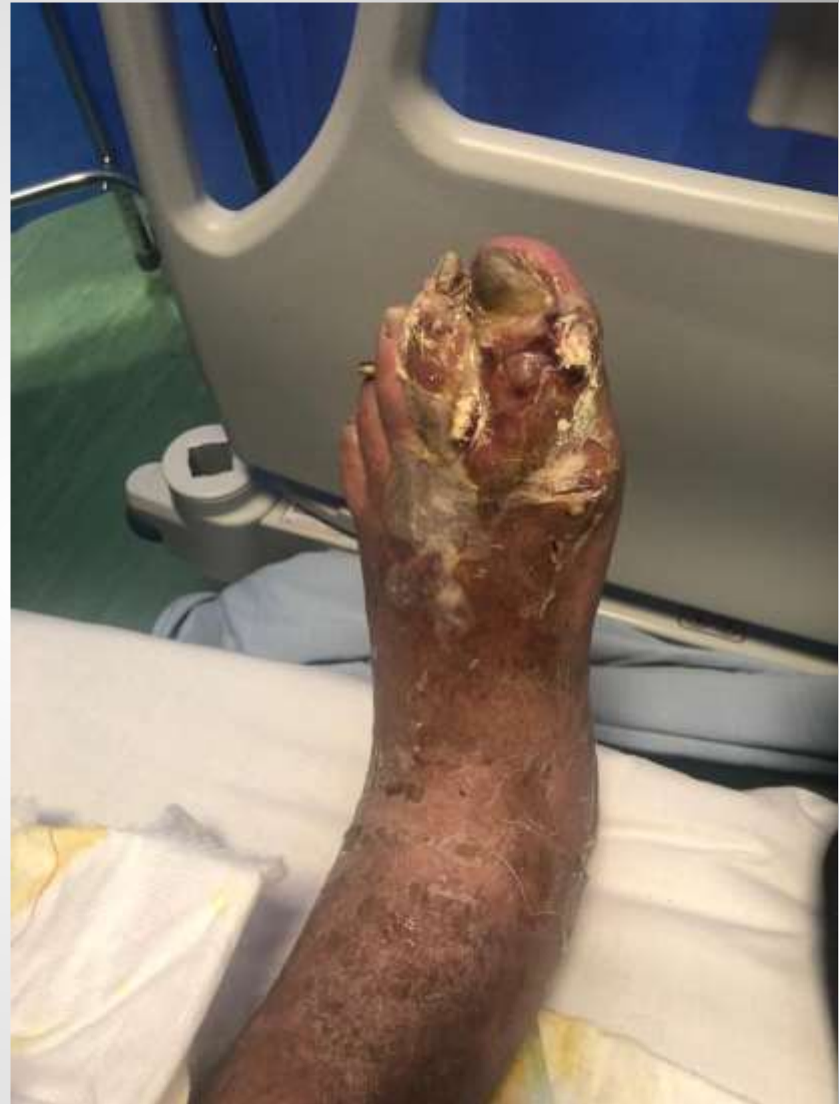


- SCC & BCC
- Rolled edges
- Hypergranulation
- Failed conventional treatments
- Prolonged HX
- Marjolin's Ulcer



Malignant Ulcers

- Often confused with ischaemia
- Debride
- Uric acid levels
- Colchicine/Allopurinol
- Rheumatology



Gout Ulcers

- **How long have you had the ulcer?**
  - Weeks/months? trauma/arterial/Venous
  - Years? Venous/SCC/BCC/
- **Where is the ulcer?**
  - Foot – arterial/diabetic?
  - Calf – Venous?
  - Shin – Venous/Vasculitic/Other
- **Symptoms?** VVs/claudication/foot pain at rest/hangs foot out of bed/chair sleeper
- **Clues?** VV surgery/arterial surgery/Rh Arthritis/AI dx/Diabetes/smoker/toe amputations

Telephone/Zoom Diagnosis 1

- **Swelling?** Lymphoedema/Venous/Oedema
- **Size and Colour?** Round and deep (arterial), irregular and shallow (venous), rash around ulcer (Rh A), Dry Black (gangrene), Red (cellulitis), Purple (PyoD)
- **Odour?** Necrosis/infection
- **Heat?** Cool (arterial), Hot (infection)

Telephone/Zoom Diagnosis 2

- **Venous Ulcers** – Radiofrequency, Foam Sclerotherapy, Compression, Rarely open surgery, Debride, Split skin grafts, antibiotics
- **Arterial Ulcers** – BMT, Angioplasty, Stents, Bypass, Split skin grafts
- **Diabetic/Neuropathic Ulcers/Charcot** – treat PVD and infection, BMT, Offload, Debride
- **Lymphoedema Ulcers** – Compression, wraps, massage, debride, treat infection
- **Malignant Ulcers** – biopsy and plastics referral
- **Autoimmune Ulcers** – Steroids, Biopsy, Rheumatology
- **Pyoderma Gangrenosum** – Biopsy negative but excludes other causes, debridement not recommended, light compression, Dermatology + Steroids/tacrolimus
- **Calciphylaxis** - Debridement, Sodium thiosulphate IV, Nephrology

Treatment Summary

- Specialist dressings for specific wounds
- Debridement
- Elevation for non-arterial (heels protected)
- Negative pressure devices
- Compression
  - Stockings/liners
  - Velcro wraps

  - OVER TO EMMA>>>

Wound Management

- Hot Foot CLI Clinics CGH 11am Tues-Thurs Wivenhoe
- Leg Ulcer Clinics CGH and IH Helen Langthorne
- Joint clinics Mr Howard and Emma Rayner
- Private Leg Ulcer Clinic Oaks Hospital
    - Monday evenings 6-8pm from April 2021
    - Emma will link with district and practice nurses/ulcer clinics to advise on community care
    - Replicating our NHS joint clinics

Oaks Leg Ulcer Clinic