Types of Leg Ulcers

- Venous Insufficiency
- Arterial
- Diabetic Neuropathic
Venous Insufficiency

- Previously known as “stasis ulcer”
- An open lesion of the skin and subcutaneous tissue of the lower leg, usually occurring in the pretibial area of the lower leg or above the medial ankle.
Venous Insufficiency Ulcer
Vascular Problems

- Incompetent venous system of the legs
- Increased fibrous tissue
- Hyperpigmentation (Hemosiderin)
Chronic stasis dermatitis

- Increased venous pressure induced by incompetent valves
- Induces inflammation
Acute stasis dermatitis
Underlying Condition

- Venous Insufficiency Ulcer
  - Previous DVT & varicosities
  - Reduced mobility
  - Obesity
  - Vascular ulcers
  - Phlebitis
  - Traumatic injury
  - CHF
  - Orthopedic procedures
  - Pain reduced by elevation
Characteristics

- Venous Insufficiency Wound Bed
  - Ruddy base
  - Usually shallow
  - Moderate to heavy exudate
  - Granulation tissue frequently present
Characteristics

- Venous Insufficiency Ulcer
  - Ulcer edges: irregular
  - Shape: irregular
  - Surrounding tissue: erythema and/or brown staining
  - Location: Medial aspect of lower leg and ankle, superior to medial malleolus
**Perfusion**

- **Venous Insufficiency Ulcer**
  - Pain: minimal unless infected or desiccated
  - Peripheral pulses: present/palpable
  - Capillary refill: normal-less than 3 seconds
Treatment

Improve Venous Return By:

- Surgical obliteration of damaged veins
- Elevation of legs
- Compression therapy to provide at least 30mm hg compression @ ankle
  - Example: Unna boot or therapeutic support stockings
Topical Therapy

- **Venous Insufficiency Ulcer**
  - Absorb exudate
  - Maintain moist wound surface
Arterial Ulcer

Is an ulceration that occurs as the result of arterial occlusive disease when non-pressure related disruption or blockage of the arterial blood flow to an area causes tissue necrosis.
Arterial Ulcer
Arterial Ulcer
- Diabetes
- Anemia
- Arthritis
- Increased pain with activity and/or elevation
- CVA
- Smoking
- Intermittent claudication
- Traumatic injury to extremity
Underlying Condition

- Arterial Ulcer continued
  - Vascular procedures/surgeries
  - Hypertension
  - Hyperlipidemia
  - Arterial disease
Characteristics

- **Arterial Ulcer Wound Bed**
  - Base of wound, pale/pallor on elevation; dependent rubor
  - Deep
  - Minimal exudate
  - Granulation tissue rarely present
  - Necrosis, eschar, gangrene may be present
**Characteristics**

- **Arterial Ulcer**
  - Ulcer edges: even
  - Shape: round
  - Surrounding tissue: skinny, taut, thin, dry, hair loss of lower extremities, atrophy of subcutaneous tissue
  - Location: Toe tips or web spaces, phalangeal heads around lateral malleolus
**Perfusion**

- **Arterial Ulcer**
  - Pain: intermittent claudication, resting, positional, nocturnal
  - Peripheral pulses: absent or diminished
  - Capillary refill: delayed-more than 3 seconds, ABI < 0.8
Treatment

Improve Tissue Perfusion By:

- Revascularization if possible
- Medications to improve RBC transit through narrowed vessels
- Lifestyle changes (ex. no tobacco or caffeine)
- Improve hydration
- Appropriate footwear to prevent trauma
**Topical Therapy**

- **Arterial Ulcer**
  - Uninfected wound: keep dry
  - Infected wound: immediate referral for surgical debridement/ aggressive antibiotic therapy
  - Open: Moist wound healing, non-occlusive dressing or cautious use of occlusive dressings, aggressive treatment of any infection
Diabetic Neuropathic Ulcer

- Characteristically occurs on the foot e.g. at mid-foot, at the ball of the foot over the metatarsal heads, or on the tops of toes with Charcot deformity.
- Requires that the resident be diagnosed with diabetes mellitus and have peripheral neuropathy.
Diabetic Neuropathic Ulcer
Underlying Condition

- Diabetic neuropathic ulcer
  - Diabetes
  - Spinal cord injury
  - Hansen’s disease
  - Relief of pain with ambulation
  - Parasthesia of extremities
Diabetic Neuropathic Ulcer Wound Bed
- Variable depth
- Variable exudate
- Granulation tissue frequently present
- Gangrene uncommon, necrotic tissue variable
Characteristics

● Diabetic Neuropathic Ulcer
  – Ulcer edges: well defined
  – Shape: variable
  – Surrounding tissue: normal skin tones, fissuring and/or callus formation
  – Location: Plantar aspect of foot, metatarsal heads, heels
Diabetic Neuropathic Ulcer
- Pain: diminished sensitivity to touch
- Peripheral pulses: palpable/present
- Capillary refill: normal
Measures to eliminate trauma

- Appropriate footwear
- "Offloading" for plantar ulcers
- Tight glucose control
- Aggressive infection control
Topical Therapy

- Diabetic Neuropathic Ulcers
  - Cautious use of occlusive dressings
  - Dressing to absorb exudate/keep surface moist
References:

- National Pressure Ulcer Advisory Panel. (2007) Pressure Ulcer stages Revised by NPUAP
References:


- http://www.globalwoundacademy.com/