WOUND MANAGEMENT FOR HOSPITAL MEDICINE: MORE THAN "CONSULT WOUND CARE"

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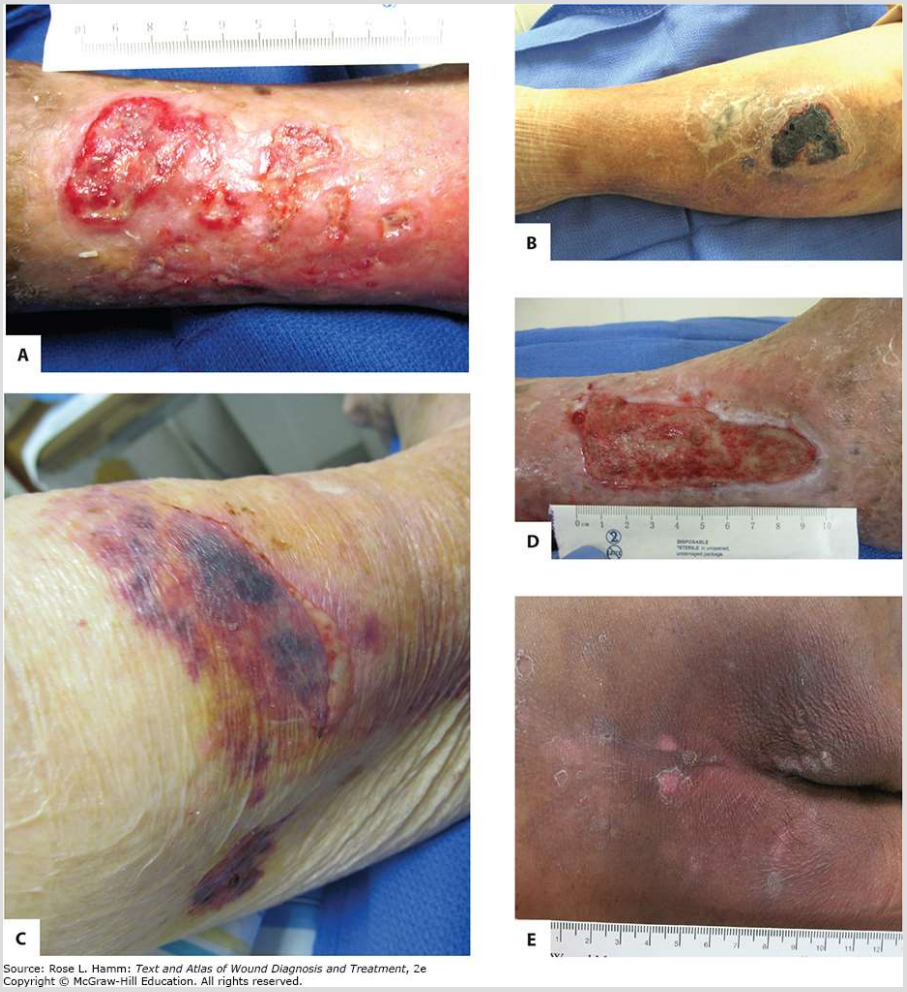
DISCLOSURES

I have no relevant financial disclosures

OBJECTIVES

- Recognize the tenets of Wound Care
- Review common wounds seen in hospital medicine
- Describe the treatments and management tactics of commonly seen wounds



Source: Rose L. Hamm: *Text and Atlas of Wound Diagnosis and Treatment*, 2e

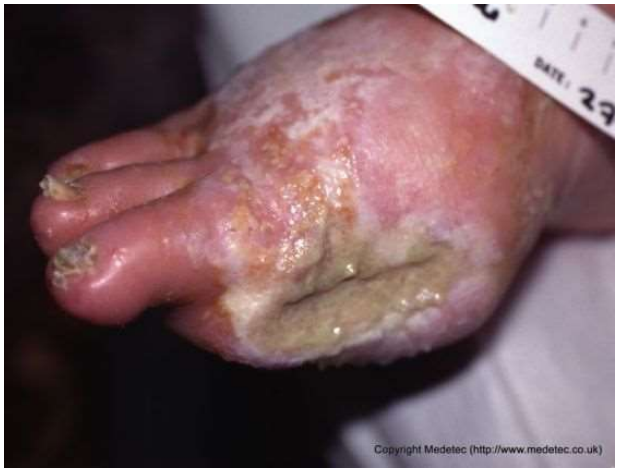
A. Vasculitis. B. Trauma with edema. C. Skin tear with surrounding ecchymosis. D. Chronic venous insufficiency. E. Deep tissue injury.

CASE 1:

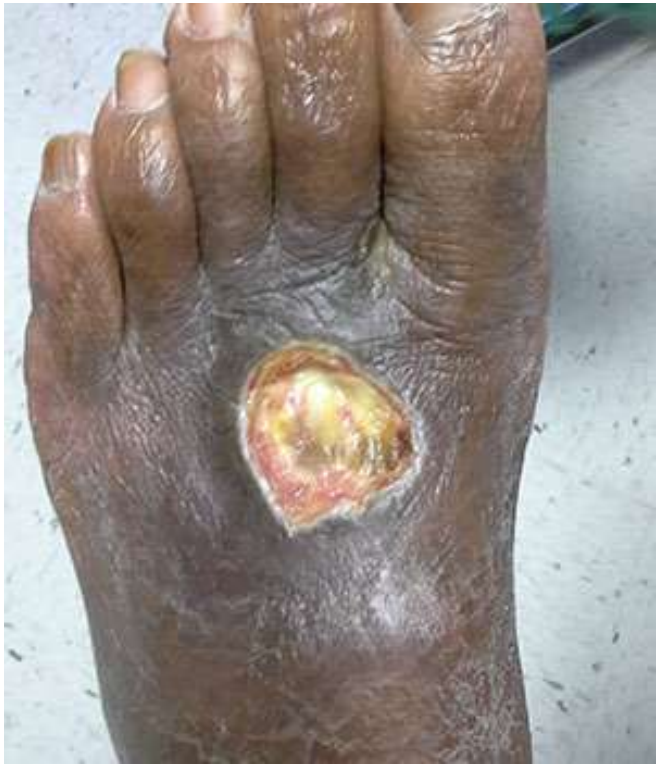
THE CASE OF THE HOE DOWN

- 62 yo M with PMHx of HTN presents to ED with progressively worsening lethargy and fever x 2 days.
- HR: 110 sinus tachycardia
- T: 101.1 degrees F
- WBC: 21,000/mm^3
- Lactic acid elevation
- Workup of the source of sepsis is negative aside from an open skin ulcer on the medial side of his left lower leg.
  - Open for 2 months now
  - Started as an abrasion from a new cowboy boot which he had worn to a hoe down without high socks
  - Increased discharge from wound over past few days

CASE 1: WOUND EXAM



- Wound Exam
  - Foul-smelling
  - Surrounded by erythema
  - Warm to the touch
  - Thick foul-smelling purulent discharge
  - No fluctuance noted
  - Hair is missing from most of his lower legs bilaterally
    - The patient's wife reports his hair has been scant on his legs for a few years.



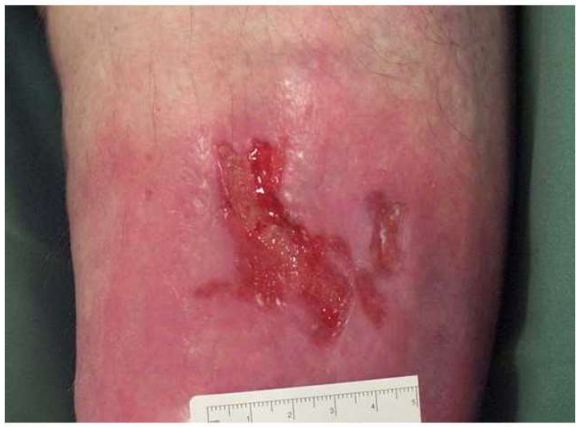
https://afcdallas.com/wound-care/infected-wounds/

CASE 1: MANAGEMENT

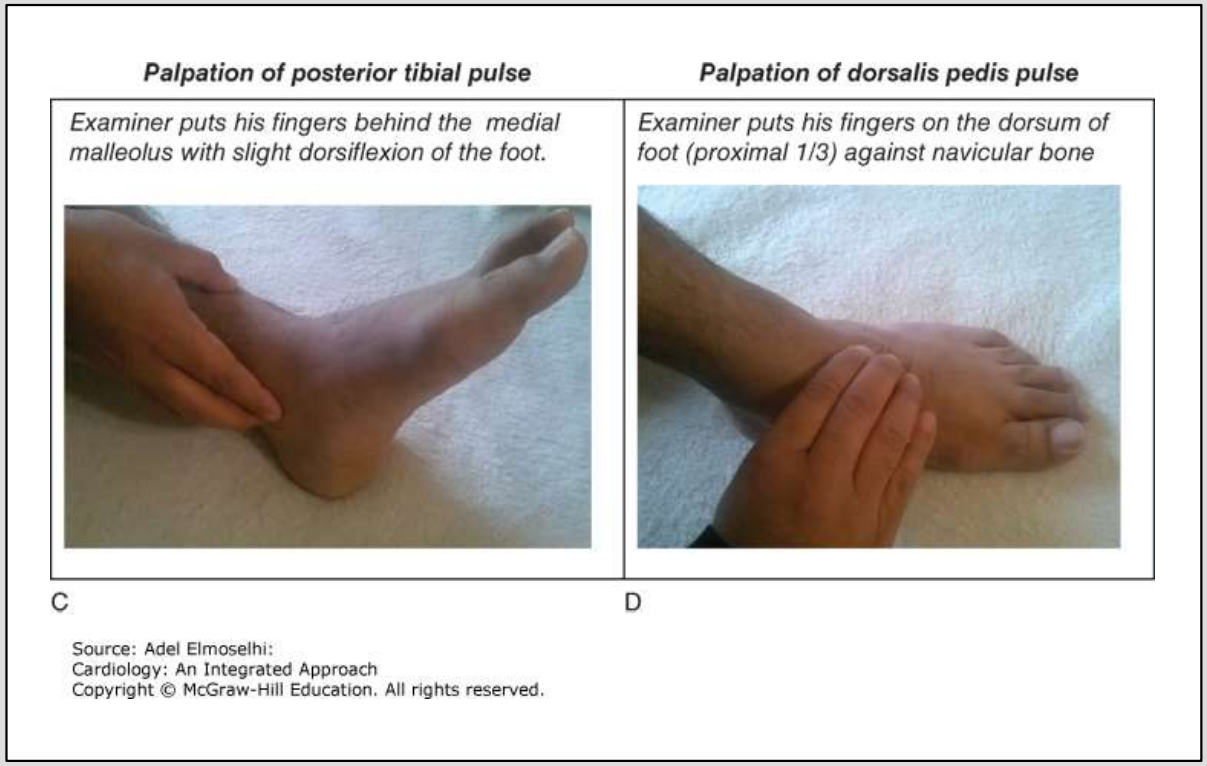
- **Wound Care Support**
  - A consult to the wound care team if available is warranted
  - Be aware of turn around times esp on weekends/holidays
- **Sepsis Treatment**
  - This patient warrants the full sepsis treatment protocol including blood cultures, IV fluids and antibiotics, monitoring of lactic acid, etc.

CASE 1: MANAGEMENT

- **Monitor Treatment Progress**
  - Demarcate edges of the erythema
  - Monitor lactic acid



- **Assess Vascular Status**
  - Assess pulses on exam
  - Signs of vascular disease are present visibly and by pulse exam
  - Vascular studies are warranted to assess blood flow
    - Ankle brachial indices are a reasonable next step
    - Consider eventual further imaging and/or referral to vascular surgery for evaluation of stent placement or other treatment



Methods of peripheral pulse palpation. C. Palpation of the posterior tibial pulse. Examiner places fingers behind the medial malleolus with slight dorsiflexion of the foot. D. Palpation of the dorsalis pedis pulse. Examiner places fingers on the dorsum of foot (proximal third) against the navicular bone.

Consider Deep Extension of Wound

Consider if there is further extension of the wound beyond the soft tissue.

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warranted.

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mote proper new

is available, they
. Otherwise,
odiatry often can

Consider alternatives to surgical debridement if necessary: **enzymatic** or **biologic**

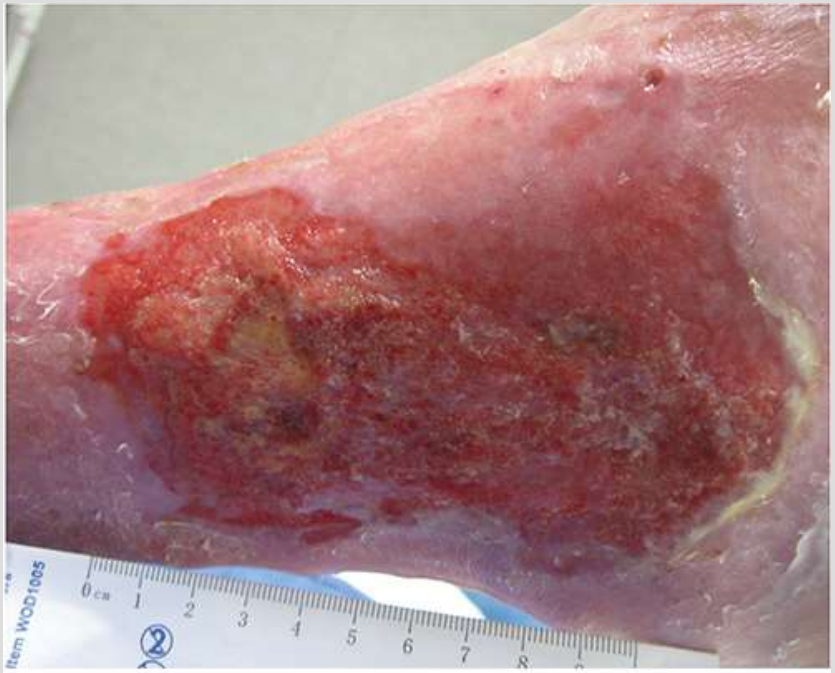
CASE 1: MANAGEMENT

- **Wound Dressings**
  - What dressings do you have available?
  - Do no harm; return to homeostasis
    - Dry out wet wounds
    - Consider frequent dressing changes and absorbent dressings
- **Wound Culture**
  - <u>Use caution!</u>
  - Culturing the fluid from superficial wounds like this will often yield skin flora or contaminants.
  - If obtaining a wound culture, the wound needs to be cleaned first, with only freshly expressed fluid obtained in a sterile fashion sent for culture.

CASE 1: MANAGEMENT

- **Edema**
  - Edema control = wound healing
  - Diuretics, elevation of leg, compression stockings
  - Use caution – don't create a new problem
- **Offload Further Pressure**
  - Remove any materials that may cause further irritation of the skin.
  - Turn the patient frequently
  - Prop the patient up at an angle with pillows and foam wedges
  - Elevate legs or arms

- **Diet and other considerations**
  - Optimize nutrition
  - Glycemic control is paramount for wound healing
  - Check for and treat protein calorie malnutrition



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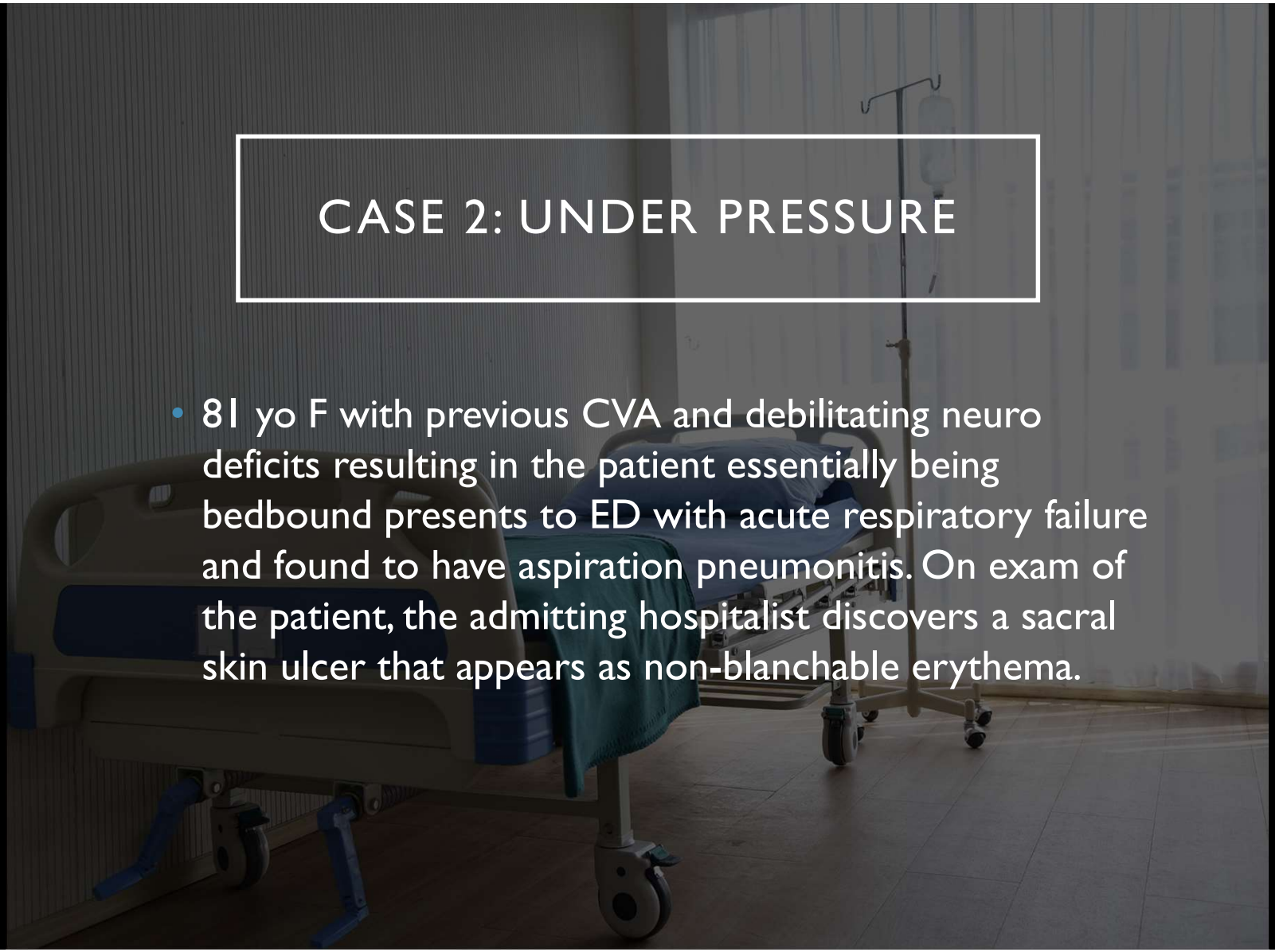
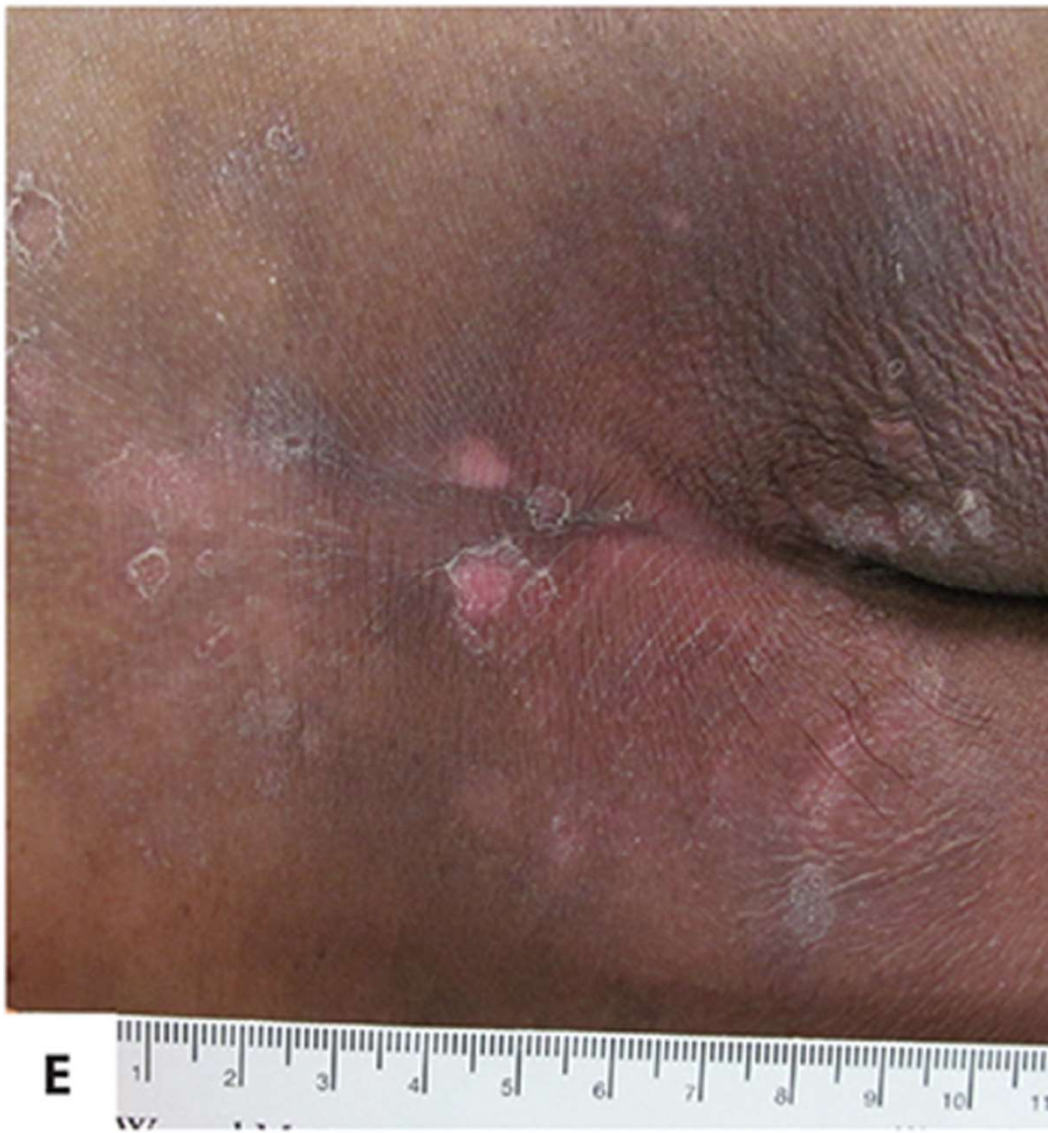


CASE 2: UNDER PRESSURE

- 81 yo F with previous CVA and debilitating neuro deficits resulting in the patient essentially being bedbound presents to ED with acute respiratory failure and found to have aspiration pneumonitis. On exam of the patient, the admitting hospitalist discovers a sacral skin ulcer that appears as non-blanchable erythema.

CASE 2: WOUND EXAM

- Wound Exam
  - Non-blanchable erythema
  - No fluctuance
  - No drainage



STAGES OF ULCERS

- **Stage 1**
  - Superficial; no breaks in skin
  - Looks red/blue/purple, feels warm to touch, burns/hurts/itches
  - Non-blanchable erythema
- **Stage 2**
  - Open area
  - Expands into deeper layers of skin: epidermis and dermis

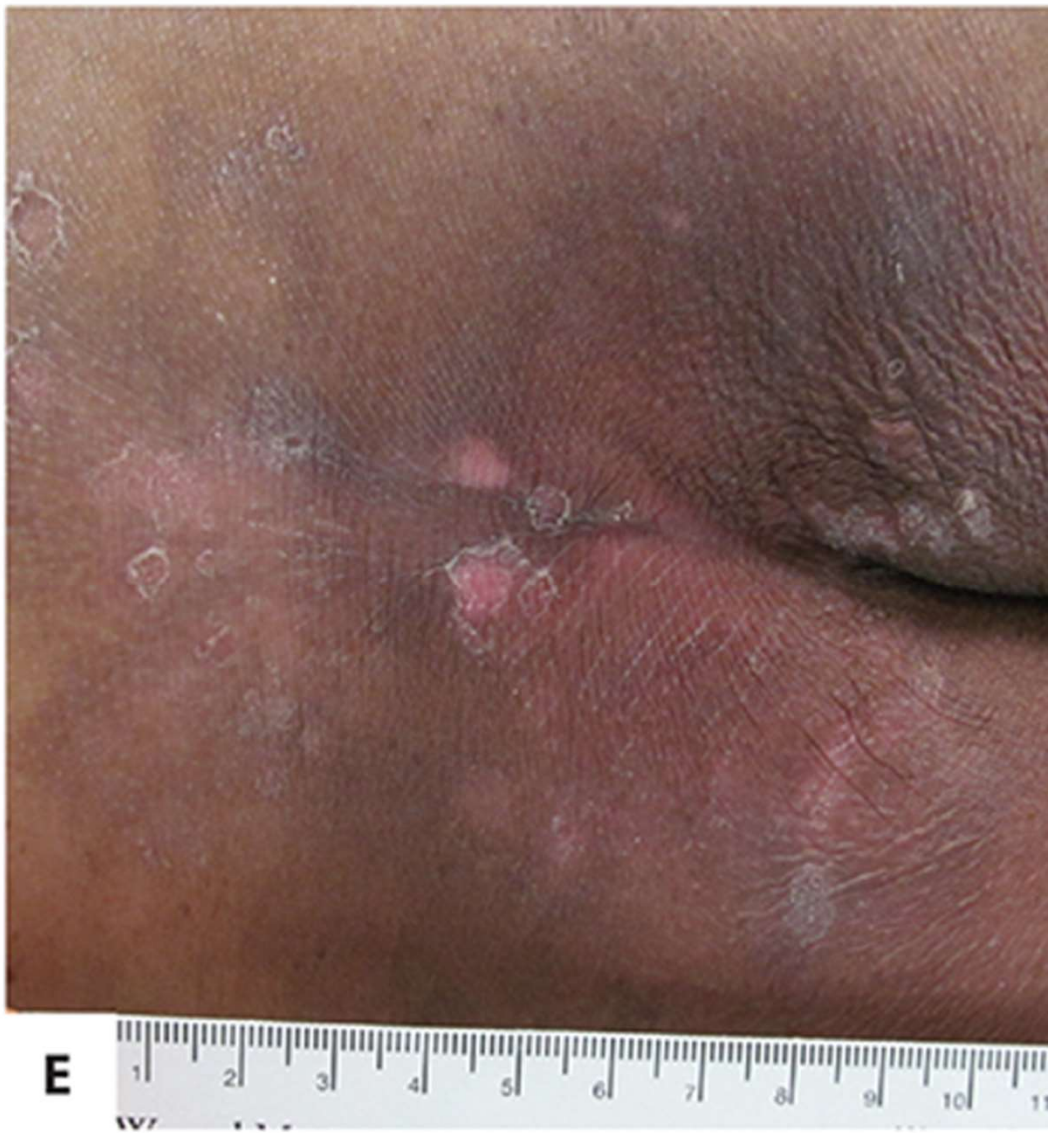
STAGES OF ULCERS

- **Stage 3**
  - Full thickness skin extension
  - Extends to subcutaneous tissue – does not cross the fascia
- **Stage 4**
  - Full thickness skin extension
  - Extends to subcutaneous tissue and through fascia
  - Extension to muscle/tendon/bone

CASE 2: WOUND EXAM

- Wound Exam
  - Non-blanchable erythema
  - No fluctuance
  - No drainage

STAGE I ULCER



CASE 2: MANAGEMENT

- **Wound Care Support**
  - Consult to the wound care team – but don't rely on them entirely
- **Sepsis Treatment**
  - This pressure ulcer does not appear infected on exam.
  - Patient does not warrant the full sepsis treatment protocol for the pressure ulcer.

CASE 2: MANAGEMENT

- **Consider Deep Extension of Wound**
  - Consider if there is further extension of the wound beyond the soft tissue. Is there concern of osteomyelitis or abscess? If so, further imaging is warranted.

- **Debridement**
  - Typically Stage 1 and 2 sacral ulcers do *not* get debrided.

CASE 2: MANAGEMENT

- **Wound Dressings**
  - Colloid dressings
  - Antibiotic
- **Wound Culture**
  - Again, use caution!

CASE 2: MANAGEMENT

- **Control Edema**
  - Diuretics as needed
- **Offload Pressure**
  - Offloading pressure will be key here in order to prevent further injury
  - Beds to distribute weight/pressure dispersion cushions
  - Frequent turning
  - Foam wedges/pillows to reposition

CASE 2: MANAGEMENT

- **Diet and other considerations**
  - Optimize nutrition
  - Glycemic control is paramount for wound healing
  - Check for and treat protein calorie malnutrition
- **Urinary and Fecal Diversion**

QUESTIONS?