MAKING SENSE WITH CODING WOUNDS

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TERROR
TYPES OF WOUNDS

- ARTERIAL
- PRESSURE ULCERS
- VENOUS
- DIABETIC
- SURGICAL
- TRAUMA
- ATYPICAL
ARTERIAL ULCERS

- Causes
  - Atherosclerosis
  - Vaso-spastic disease
  - Arterial embolism
  - Trauma
  - Cold

- Risk Factors
  - Smoking
  - Diabetes
  - Hypertension
  - Trauma

- Complications
  - Infection/Sepsis
  - Amputation
  - Multiple wounds may affect bilateral limbs
ARTERIAL ULCERS

- Characteristics
  - Pain with elevation
  - Location of ulcer: fingers, toes, lower extremities, ankles
  - Pulses weak/absent
  - Coldness
  - Poor tissue perfusion
  - Pallor with elevation
  - Dependent rubor
  - Atrophic, shiny skin
  - Loss of hair
  - Minimal drainage/dry
  - Indurations with or without edema
VENOUS ULCERS

- 400,000 – 600,000 persons affected in US
- Loss of > 2,000,000 workdays annually
- 20% of venous leg ulcers have not healed in 2 years
- 66% of patients will have at least one episode of active venous ulcers lasting >5yrs
- Most common type of non-healing wound
CAUSES OF VENOUS HYPERTENSION

Can be caused by one or a combination of factors

- Valve Failure: can be congenital or acquired from DVT/SVT, obesity, malignancy
- Failure of calf pump mechanism: causes include immobility and paralysis
- Obstruction: Rare
  - Outflow tract obstruction/regurgitation
  - Deep vein obstruction
VENOUS ULCERS

Characteristics
- Edema
- Dilated superficial veins
- Induration
- Erythema
- Hemosiderin staining
- Pain
- Dryness/ Stasis Dermatitis
- Hair loss due to decreased oxygenation to hair follicles
- Location: Superior to or near the medial malleolus
CODING A VENOUS ULCER

- SENERIO:
  - 65M patient who hit lateral left ankle on a coffee table two weeks ago. There is pitting edema, the LLE is reddened with a wound noted on the left lateral ankle. Stasis dermatitis noted LLE
  - Patient has a history of venous insufficiency and ulcerations in the past.

- Trauma ?? Venous Ulcer?? Varicose Veins??
Patient also has arterial disease and is an insulin dependent diabetic and the wounds is infected.
Diabetes is the fastest growing disease in the US. 50% of all diabetics will have a DFU in their lifetime. Approximately 50% of those patients will suffer an amputation. More than 50% of those patients will have a 2nd amputation within 1 year. And dead within 5 years of the first wound.
Most Common Ulcers of the Foot

Causes
- Age
- Duration of illness
- Glucose control
- Smoking
- Diet
- Infections
- Circulatory insufficiencies
- Neuropathies
Diabetics have 3 *types* of Neuropathy

- Autonomic, Motor and Sensory

**Clinical signs and symptoms of neuropathy:**

- Foot deformities
- Excessive callus formation over bony points
- Altered sensation
- Reduced or absent sweating

Complications from Neuropathies include ulcers, infection and amputation
DIABETIC FOOT ULCERS

- Wound Characteristics
  - Location – any bony prominence on foot/toes
  - Painless
  - Size and depth – Variable, well defined margins, with or without undermining
  - Color
  - Drainage - Variable

- Complications
  - Infection/Sepsis
  - Amputation
DIABETIC FOOT ULCERS VS. PRESSURE ULCERS

- Patient scenario
  - 70F patient who had a fracture to the right hip. She has IDDM and was found to have a wound noted to her heel.
  - Measurements: 7.0 x 7.0 x 0.3
  - Drainage- Small, serous
  - Wound Base: 100% slough
  - Wound edges: Macerated
PRESSURE ULCER

- As defined by NPUAP:
  A localized area of tissue necrosis that develops when soft tissue is compressed between a bony prominence and an external surface for a prolonged period of time.
PRESSURE POINTS

**SUPINE POSITION**
- Occiput 1%
- Spinal Processes 1%
- Scapula 0.5%
- Sacrum 23%
- Heel 8%

**LATERAL PRESSURE**
- Elbow 3%
- Knee 6%
- Malleolus 7%
- Trochanter 15%

**SITTING POSITION**
- Ischium 24%
- Elbow 3%
CAUSES OF PRESSURE ULCERS

Pressure
- Tissue ischemia when blood supply is cut off
- Time and pressure relationship

Sheer
- Movement in opposite direction but parallel, sliding motion
- which compresses and stretches capillaries
- Buttocks and lower back prone
- Irregular shape
- Causes undermining

Friction
- Resistance between two surfaces like rubbing
- Abrasive force
- Stage I or Stage II

MOISTURE
- Denuded skin
- Macerated, white, soft
- Many causes such as sweating, failing to dry patient completely,
or incontinence
- ½ of all incontinent patients develop pressure ulcers
INCONTINENCE ASSOCIATED DERMATITIS

IS NOT A PRESSURE ULCER
STAGING

- Classification System for pressure ulcer
- Describes the depth of tissue destruction visible
- If necrotic tissue present may not be able to accurately stage wound
- NPUAP Position Statement
  - Reverse staging should not be used to describe the healing of pressure ulcers
  - The body is unable to regenerate certain tissues (fat, fascia, muscle), therefore, reverse staging is inaccurate when used as a parameter for wound healing
TISSUE INVOLVEMENT

Partial → Full

- Stage I: Intact
- Stage II: Epidermis, Superficial Dermis
- Stage III: Dermis, Subcutaneous Tissue
- Stage IV: Muscle, Bone
PRESSURE ULCERS

- Associated Factors
  - Mobility status
  - Activity status
  - Mental status
  - Nutritional status
  - Incontinence
  - Chronic diseases
  - Medications

- Wound Characteristics
  - Stage
  - Location
  - Pain
  - Size and depth
  - Color
  - Drainage
An observable pressure related alteration of intact skin whose indicators, as compared to an adjacent or opposite area on the body, may include changes in one or more of the following:

- Skin temperature (warmth or coolness)
- Tissue consistency (firm or boggy feel)
- Sensation (pain, itching)

The ulcer appears as a defined area of persistent redness in lightly pigmented skin, whereas in darker tones, the ulcer may appear with persistent red, blue, or purple hues.
STAGE I PRESSURE ULCER

IF THERE IS ANY DRAINAGE IT IS NOT A STAGE 1

PRESBYTERIAN
STAGE II PRESSURE ULCER

- Partial thickness skin loss involving epidermis or dermis, or both. The ulcer is superficial and presents clinically as an abrasion, blister or shallow crater.
STAGE II PRESSURE ULCERS
STAGE III PRESSURE ULCER

- Full-thickness skin loss involving damage or necrosis of subcutaneous tissue which may extend down to but not through the underlying fascia. The ulcer presents clinically as a deep crater with or without undermining of adjacent tissue.
STAGE III PRESSURE ULCERS

SO WHY DO THESE LOOK SO DIFFERENT IF THEY ARE BOTH STAGE III?
STAGE IV PRESSURE ULCER

- Full-thickness skin loss with extensive destruction, tissue necrosis, or damage to muscle, bone or supporting structure (such as tendon, joint capsule)
STAGE IV PRESSURE UCER
SUSPECTED DEEP TISSUE INJURY

• Purple or maroon localized area of discolored intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.

• **Further description:**
Deep tissue injury may be difficult to detect in people with dark skin tones. Evolution may include a thin blister over a dark wound bed. The wound may further evolve and become covered by thin eschar. Evolution may be rapid exposing additional layers of tissue even with optimal treatment.
Suspected Deep Tissue Injury
UNSTAGEABLE PRESSURE ULCERS

- Full thickness tissue loss in which the base of the ulcer is covered by slough (yellow, tan, gray, green or brown) and/or eschar (tan, brown or black) in the wound bed.

Further description:
Until enough slough and/or eschar is removed to expose the base of the wound, the true depth, and therefore stage, cannot be determined.
UNSTAGEABLE PRESSURE ULCERS
• Pressure ulcers that have been surgically debrided are still coded as a pressure ulcer and not a surgical wound.
SKIN GRAFTED PRESSURE ULCERS

• Until the edges of the skin graft are completely healed the Pressure Ulcer is coded as “unstageable”
• Once the edges of the graft have healed the Pressure Ulcer should be regarded at its worse stage (Stage 3 or 4)
• Using a skin graft does not change the status of the pressure ulcer to a surgical wound
SURGICAL CLOSURE WITH FLAP

- Pressure ulcer with a muscle flap that is not healing would be coded as a non-healing surgical wound and the Pressure ulcer as unstageable.
- A Pressure Ulcer treated with a muscle flap and is healing normally would be coded with the surgical code and the PU as unstageable until the site is fully healed.
BURN INJURIES
RULE OF NINES

- **SCENARIO**
- 70F cooking in home spilled hot grease on front of thighs and calves resulting in 2nd 3rd degree burns. She also has a 2nd degree on the back of hand.
- Using rule of nines estimated on 20% of body surface. Code area to the highest level of burn even though mixed 2nd and 3rd degree burns.
- The hand is coded as a 2nd degree burn.
DEFINITION OF BURNS

- Burn injury to tissues caused by the contact with heat, flame, chemicals, electricity, or radiation.
- First degree burns show redness, affect the epidermis causing redness without blistering and are partial-thickness.
- Second degree burns show blisters; a burn that affects the epidermis classified as superficial (involving the epidermis and the papillary dermis) or deep dermis and are also Partial-thickness.
- Third degree burns show necrosis through the entire skin affecting the epidermis and the dermis into the subcutaneous tissue, may involve muscle, fascia, or bone and are full-thickness burns.
SECOND DEGREE BURN
Partial Thickness
THIRD DEGREE BURNS
Full-Thickness

- Damage Extends Thru Epidermis and Dermis
- Circulation Compromised
- Requires Skin Grafting for Closure
- Dry, White Eschar
SURGICAL WOUNDS

- SURGICAL INCISIONS
- DEHISCED SURGICAL SITES
SKIN TEARS

- Traumatic wounds are the most common down coded diagnosis.
- Skin tears can be considered traumatic wounds or superficial injuries.
- Category 2 skin tears can either be coded as superficial injuries or trauma wounds depending on complicating factors. “Details rest in the documentation”
### PAYNE–MARTIN CLASSIFICATION SYSTEM for SKIN TEARS

<table>
<thead>
<tr>
<th>Category I. Without tissue loss either linear, or with a flap that closes the tear to within an approximation of 1 mm of the wound edges.</th>
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</thead>
<tbody>
<tr>
<td>Least severe</td>
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<tr>
<td><strong>Superficial</strong></td>
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<tr>
<td>Category I - Linear Type</td>
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<tr>
<th>Category II. Partial tissue loss, considered scant when the loss is 25% or less and moderate or large when the tissue loss is more than 25%.</th>
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</thead>
<tbody>
<tr>
<td><strong>Partial Thickness</strong></td>
</tr>
<tr>
<td>Category II - Scant, tissue loss less than 25%</td>
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<thead>
<tr>
<th>Category III. Complete tissue loss or no epidermal flap covering the injury.</th>
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<tr>
<td><strong>Most severe</strong></td>
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<tr>
<td><strong>Full thickness</strong></td>
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</tbody>
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Figure 3. Payne-Martin Method of Skin Tear Classification. Images provided courtesy of Frans Meuleneire, RN, and the Journal of Wound Care. Reproduced with permission.
SKIN TEAR: MY DOCUMENTATION

- Location- Rt lower arm
- Measurements: 5.0cm x 5.0cm x 0.3cm
- Wound bed- 50% granulation tissue, 50% slough
- Drainage: Large, serous sanguineous
- Peri-wound: Red, warm to touch, painful
- Wound edges: Jagged, rolled
Questions?