Stage 3 and Stage 4 Pressure Injury

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Objectives

• Discuss the new elements of the staging definitions for stage 3 and 4 pressure injuries

• Identify challenges in differentiating a stage 3 from a stage 4 pressure injury

• Discuss strategies for management
Definitions

• Revised in 2016

• Do not significantly change in context

• Stage 3 and 4 are full thickness, but sometimes difficult to differentiate

Definition- Stage 3

• Stage 3 Pressure Injury: Full-thickness skin loss
  Full-thickness loss of skin, in which adipose (fat) is visible in the ulcer and granulation tissue and epibole (rolled wound edges) are often present. Slough and/or eschar may be visible. The depth of tissue damage varies by anatomical location; areas of significant adiposity can develop deep wounds. Undermining and tunneling may occur. Fascia, muscle, tendon, ligament, cartilage and/or bone are not exposed. If slough or eschar obscures the extent of tissue loss this is an Unstageable Pressure Injury.
Definition - Stage 3

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Stage 3 Pressure Injury with Epibole

Area of Focus
Definition-Stage 4

• Stage 4 Pressure Injury: Full-thickness skin and tissue loss
  Full-thickness skin and tissue loss with exposed or directly palpable fascia, muscle, tendon, ligament, cartilage or bone in the ulcer. Slough and/or eschar may be visible. Epibole (rolled edges), undermining and/or tunneling often occur. Depth varies by anatomical location. If slough or eschar obscures the extent of tissue loss this is an Unstageable Pressure Injury.
Definition - Stage 4

Stage 4 Pressure Injury

Stage 4
Stage 4-exposed hardware
Treatment strategies

• Offload effectively
• Debride necrotic tissue
• Moist wound healing
• Nutrition

Therapeutic Positioning
30 Degree Laterally Inclined Position
Therapeutic Positioning

- Managing tissue loads while in sitting
  - Avoid sitting directly on the ulcer site, unless pressure can be relieved
  - Consider postural alignment, balance, stability, weight distribution, mobility, etc.
  - Reposition the sitting person at least every hour...individuals who are able should weight shift every 15 minutes

Therapeutic Positioning
Support Surfaces

- Physical Form:
  - Mattress overlay – beware of “bottoming out”
  - Mattress replacement
  - Full framed specialty bed

- Function:
  - Static
  - Alternating/pulsating
  - Low air loss
  - High air loss
  - Turning/rotating/oscillating
Debridement Options and Cleansing guidelines

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Debridement Options

- Debridement serves to prepare the wound bed for healing

- Necrotic tissue is a source of infection and poses a physical barrier for wound healing

- Debridement allows for improved wound assessment
Debridement Options

- Mechanical
- Autolytic
- Enzymatic
- Sharp
- Biologic

Debridement Options

- **Mechanical debridement**
  - Use of physical forces to remove dead tissue
  - Includes hydrotherapy, wound irrigation, and wet to dry dressings
  - Disadvantages:
    - Non selective, can be painful, may cause trauma to the wound bed, may lead to maceration, can have a drying effect on the wound bed, cost and labor intensive
  - Advantages:
    - Can decrease the bacterial burden
    - Familiar to most healthcare workers
Debridement Options

• Autolytic debridement
  – Wound bed utilizes its own secretions to remove debris via phagocytic cells and enzymes
  – Accomplished through the use of moisture-retentive dressings
  – Disadvantages:
    • Slower than other methods, contraindicated in presence of infection, associated odor and exudate
  – Advantages:
    • Selective, little or no pain, easy to perform, low in cost, effective with other debridement techniques

• Enzymatic debridement
  – Utilization of topical agents to stimulate the breakdown of necrotic tissue chemically
  – Collagenase
  – Physician orders required for use of these agents
  – Cross-hatching must be utilized with dry eschar and a moist wound environment must be maintained
  – Disadvantages:
    • Often utilized longer than necessary, slower than other methods
  – Advantages:
    • Selective, painless, easy, wound trauma reduced
Debridement Options

• Sharp debridement
  – Utilizes surgical instruments to remove non-viable tissue from the wound base
  – Especially indicated for wounds with thick eschar or heavy, adherent slough
  – Must be performed by appropriately licensed personnel
  – May also be performed surgically
  – Disadvantages:
    • Specific level of expertise and skill required, can be painful and might require anesthesia/analgesia, caution in compromised patients, adequate perfusion required
  – Advantages:
    • Highly selective, fast, effective in combo with other techniques

• Biologic Debridement
  – Utilizes sterilized bottle fly maggots
  – Disadvantages
    • Allergic reactions
    • Patient concerns regarding aesthetics
    • Occasional pain or discomfort
    • Contraindicated in wounds involving vital organs or exposed blood vessels
  – Advantages
    • Rapid debridement
    • Selective
    • Easy to use and doesn’t require extensive medical training
Moist Wound Healing

- Protect tendon and bone
- Promotes faster healing
- Account for drainage

Pressure Injury PI

What stage is it??
What stage is it??

Stage 4
What stage is it??

Stage 3
What stage is it??

Unstageable
What stage is it??

Stage 3
What stage is it??

Stage 4
What stage is it??

Stage 3
Conclusions

• Full thickness ulcers can pose challenges in staging

• A systematic approach to management will help promote faster healing

• Identifying markers in the wound bed can help stage the pressure injury