Topical Therapy: Guidelines for Dressing Selection

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Dressing Selection

- Functions
  - Wick fluid from tunnels
  - Absorb exudate
  - Maintain moist wound surface
  - Provide bacterial barrier
  - Provide atraumatic removal
  - Insulate
Dressing Selection

- Select dressing in contact with wound surface (primary dressing) based on: wound depth; presence of tunnels or undermined areas; volume of exudate

- Select secondary (cover) dressing based on: volume of exudate and need for bacterial barrier
Dressing Selection

- Additional considerations
  - Occlusive dressings (hydrocolloids) contraindicated with:
    - infected wounds
    - wounds covered with eschar
  - Adhesive dressings may be contraindicated for patients with fragile skin and extremity wounds
Dressing Selection

- Assessment parameters
  - Wound depth
  - Tunnels or undermined areas
  - Volume of exudate
  - Exposure to stool and/or urine (bacterial barrier needed?)
Dressing Selection

- Classify wound:
  - Deep and wet: wound with depth, tunnels, or undermining + mod – large amount exudate
  - Deep and dry: wound with depth, tunnels, or undermining + minimal or no exudate
  - Shallow and wet: shallow wound with no tunnels or undermined areas + mod – large amount exudate
  - Shallow and dry: shallow wound with no tunnels or undermined areas + minimal or no exudate
Dressing Selection

▪ Deep and wet wounds: Goals
  ▪ Wick fluid from undermined or tunneled areas
  ▪ Absorb exudate
  ▪ Maintain moist surface
  ▪ Provide bacterial barrier if needed
▪ Absorptive filler + cover
Dressing Selection

Options for Deep Wet Wounds

- Filler Dressing
  - Alginate (flat or rope): absorbs 20 times its weight; high integrity vs. high gelling; change every 1–2 days
  - Hydrofiber (flat or rope): forms solid gel as exudate absorbed; change every 1 – 2 days
  - Polymer absorptive dressing: highly absorptive
  - Damp gauze: damp to damp and lightly fluffed (usually not best option unless used to deliver antiseptic to wound bed)
Options for Deep Wet Wounds Cont’d

- Woven gauze: contraindicated as contact layer (OK as secondary filler)
  - Sticks to wound bed (traumatic removal)
  - Loose fibers can be left in wound bed (foreign body response)
  - Hypothermic effect due to rapid transfer of fluid
  - Tendency to over-pack
  - No bacterial barrier
- Nonwoven better choice for contact layer
Dressing Selection

Options for Deep Wet Wounds Cont’d

- Options for “Wicking” Fluid from Narrow Tunnels
  - Gauze impregnated with sodium chloride: available dry and wet
  - Nonwoven gauze strip
  - Narrow fabric or foam strip impregnated with silver
Dressing Selection

Options for Deep Wet Wounds Cont’d

- **Cover Dressing**
  - Specific dressing dependent on wound characteristics and wound location (need for bacterial barrier and adhesion)
  - Options:
    - Gauze/tape (if bacterial barrier not needed)
    - Gauze/transparent adhesive dressing (if bacterial barrier needed)
    - Adhesive waterproof foam (if bacterial barrier needed)
Sample Dressings for Deep Wet Wounds
Dressing Selection

- Deep Dry Wounds: Goals
  - Wick exudate from undermined/tunneled areas
  - Maintain moist surface
  - Prevent trauma

- Types of Dressings Needed
  - Hydrating filler dressings
  - Cover dressing (may need bacterial barrier)
Dressing Selection

Options for Deep Dry Wounds

- Filler Dressing Options:
  - Layer of wound gel + damp fluffed gauze; change every 1 – 2 days
  - Gel-soaked gauze; change every 1 – 2 days
  - Damp gauze: woven gauze is NOT a good choice for contact layer; nonwoven gauze is better. Must change daily or twice a day.
Dressing Selection

Options for Deep Dry Wounds Cont’d

- Cover Dressing Options (specific dressing dependent on wound characteristics and location)
  - Gauze + transparent adhesive dressing good option (keeps dressing moist and provides bacterial barrier)
  - Silicone adhesive foam
  - Gauze/tape
Sample Dressings for Deep Dry Wounds
Dressing Selection

- Shallow Wet Wounds: Goals
  - Absorb exudate
  - Maintain moist surface
  - Protect and insulate

- Types of Dressings Needed
  - Cover dressing that is highly absorptive
  - Absorptive contact layer + absorptive cover dressing
Dressing Selection

Options for Shallow Wet Wounds

- Foam dressings
  - Absorb, insulate, and provide bacterial barrier, change every 2-3 days
  - Available nonadhesive (extremity) vs. adhesive (trunk)
  - Available with standard adhesive or gentle adhesive
  - May use alone or may use with alginate or hydrofiber
- Alginate or hydrofiber + gauze (or foam)
- Nonwoven gauze: must secure with wrap gauze or tape
- Nonadherent contact layer + gauze
Sample Dressings for Shallow Wet Wounds
Dressing Selection

- Shallow Dry Wounds: Goals
  - Maintain (or create) moist surface
  - Protect wound bed
  - Insulate wound

- Types of Dressings Needed
  - Cover dressing that provides hydration/ moisture retention
  - Hydrating contact layer + cover dressing
Dressing Selection

Options for Shallow Dry Wounds

▪ Solid gel (glycerine-based gels generally better than water-based gels)
▪ Amorphous gel + cover dressing
▪ Hydrocolloid: good for wounds with minimal exudate or wounds that just need protection
▪ Transparent adhesive dressing (if no exudate)
▪ Contact layer secured with wrap gauze (extremity wound)
▪ Moisture barrier ointments/paste for perineal wounds
Sample Dressings for Shallow Dry Wounds
Periwound Skin Protection

- Critical element topical therapy!
- Intact skin
  - Protect against maceration and medical adhesive-related skin injury (MARSI)
  - Options:
    - Trunk wound: liquid barrier film or hydrocolloid dressing sized to fit around wound
    - Extremity wound: liquid barrier film, hydrocolloid dressing, or moisture barrier ointment
- Damaged skin
  - Promote healing and protect against maceration & MARSI
  - Options: “crusting” (pectin or antifungal powder + liquid barrier film) with or without moisture barrier ointment or hydrocolloid
Decision Making Pathway for Topical Therapy

- Any evidence invasive infection?
  - Culture & Sensitivity if viable tissue; obtain order for ABX
- Any evidence of critical colonization?
  - Antimicrobial dressing
- Periwound skin? Intact (standard protection sufficient) or damaged (additional management indicated)?
- Wound edges closed? Consult needed
- Wound necrotic? Focus on debridement
- Dressing selection based on depth, tunnels, exudate, and need for bacterial barrier (see chart)
Summary

- **Dressing Selection Guidelines**
  - Determine depth, presence of tunneled or undermined areas, volume of exudate, and need for bacterial barrier
  - Classify wound as deep/wet, deep/dry, shallow/wet, or shallow/dry
  - Use “grid” (in resources section of this program) and clinical judgment to determine best dressing for the wound