

Management of Chronic Wounds – A Clinician's Perspective

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Surgery Devices Advisory Panel

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My Background

- Have been practicing wound care 36 of the 40 years as a nurse
- Practice in outpatient clinics, 70% of my time is spent teaching all aspects of wound management
- Co-Chair Symposium on Advanced Wound Care
- Faculty Wound Certification Prep Course
- Authored or co-authored many journal articles and book chapters; 2 book chapters on assessment and management of bioburden

Key Points for Today

- Short historical perspective and conceptual framework for my remarks
- The patients with wounds are complex, and have multiple comorbidities to consider
- These patients are managed in all sites of care
- Wound management is not a predictable continuum; we must respond to assessed changes
- Antimicrobial dressings are a critical piece of our care

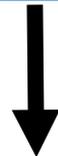
Lessons Learned from an Historical Perspective

- Topical wound management has evolved
 - Our eye is on wound healing, not just wound care
 - Research into toxicity of agents used in the past
 - Povidone iodine, hydrogen peroxide
 - Presumption that all levels of bacteria are bad
 - Pan-culturing leading to overuse of antibiotics
- Our assessment drives all treatment decisions
 - Wounds are dynamic and change often; we must be able to rapidly respond to these changes

Wound Patients are Complex

- Multiple comorbidities contribute to altered healing potential; we have to deal with this along with the wound
 - Compromised immune system creating fragile wound environment
 - Decreased levels of essential cytokines
 - Elevated proteases
 - Nutritional deficits
- Most of these wounds are chronic: Venous, Diabetic, Arterial, Pressure, Atypical and some burns
- While we can get them to close, they recur often due to these comorbidities; as many as 80% will re-open
- These wounds are equal opportunity problems affecting patients in all sites of care
 - Some environments we can control, some we cannot
 - The potential for contamination is high regardless of site of care

Antimicrobial Stewardship: Judicious Use of Antimicrobial Dressings



Topical antimicrobial dressings are not indicated because bioburden is not causing clinical problems

Topical antimicrobial dressings indicated

Combined systemic antibiotics and topical antimicrobial dressings indicated

Critical Colonization

- Presence of bacteria on the wound
 - Healing process compromised
 - No standard signs of infection
- May delay healing via bacterial competition with tissue cells for oxygen and nutrients, production of bacterial toxins, and inflammatory mediators
- Also referred to as “locally infected” (vs spreading infection)

Signs of Critical Colonization

- Granulation tissue
 - Color
 - Friability
 - Absent or abnormal
- Odor – subtle or dramatic change
- Increased/high exudate levels in the presence of granulation tissue
 - Wounds attempt to “flush out” foreign particles or chemicals



Dressing Selection

- Healing vs. Non-healing

- Healing:

- Maintain environment changing as wound needs change

- Non-Healing:

- Assess patient factors (nutrition, smoking, meds)
 - Assess wound: critical colonization , hostile protease environment
 - Assessment driven culture

- Infected vs. Non-infected

- Culture driven antibiotics
 - Topical antimicrobials

- Acute vs. Chronic

- Decision drivers virtually the same

Pre and post cleansing with monofilament pad



POD 20: skin graft clearly colonized, was cultured, showed 3+ MRSA

Started topical silver dressing with absorbent secondary dressing, oral antibiotic



Treatment Plan

- Antiseptic
 - Soak / cleanse with hypochlorous acid
- Antimicrobial dressing
 - Fenestrated 7 day silver dressing
- Absorbent dressing
 - Covered with Ca Alginate
- Multilayer compression wrap
- Oral antibiotic
 - linezolid



3 Days post dressing, 2 days post antibiotic



Recommendation: Antimicrobial dressings be classified in Class I or II

- Bacteria are a far bigger threat to the health of the wound and the patient than any dressing
- Addressing the bioburden early reduces the need for antibiotics and thus decreases morbidity
- The risks associated with antimicrobial wound dressings do not warrant a higher level of regulatory oversight.