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**STUBBORN WOUNDS IN PALLIATIVE / HOSPICE CARE**

Larry Rose RN, BSN, CWON, CFCN

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**THANK YOU!!!!**



*To All Our*



*Hospice & Palliative Care Providers!*

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**Objectives**

1. Identify critical issues in overcoming factors that delay wound healing in palliative care.
2. Discuss and review various types of wound dressings.
3. Describe alternative methods in managing stubborn wounds.

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## **BASIC DEFINITIONS**

**WOUND**- represents a disruption in the normal structure, function of the skin and underlying soft tissues. It can be related to a variety of etiologies ( e.g. trauma, surgery, sustained pressure, vascular disease, arterial disease, diabetes, disease and infection)

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## **BASIC DEFINITIONS**

In Everyday Wound Care

**WOUND CARE** - helping the body progress through the 3-stages of wound healing (Inflammation, Proliferation, Maturation) by providing oxygen, nutrients, elimination of non-viable tissue, bioburden control, providing appropriate dressing.

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## **BASIC DEFINITIONS**

**BIOBURDEN** - Number of micro-organisms that are contaminating the wound.  
Development of a biofilm.

- 200 species of flora on the human skin.

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## BASIC DEFINITIONS

**BIOFILMS** - are characterized by an exopolymeric matrix of polysaccharides, proteins and DNA synthesized by the multiple species of bacteria and fungi present in the wound.

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## PALLIATIVE WOUND DEFINITIONS

Palliative wound care is an alternative approach that focuses on relieving suffering and improving the patient's quality of life when their wound no longer responds to, or the patient can no longer tolerate curative treatment. Where typical wound treatment primarily focuses on bringing a wound to closure, palliative care focuses on symptom management, addressing the problems of infection, pain, wound odor, exudate, and decreased self-confidence in end-of-life care. Palliative wound patients typically have long-term, potentially life-limiting illnesses of varying etiology that can affect skin integrity. Since "life-limiting" can mean weeks, months, or even years, it is important to set goals that don't exclude the possibility of healing when improving the patient's quality of life. Conditions that may necessitate palliative care include malignant forms of cancer, major organ failure (renal, hepatic, pulmonary, or cardiac), and in some cases, profound dementia.

**CHRONIC WOUND** - is a wound that does not heal in an orderly set of stages over a period of time.

- Is there any time frame or can we use a certain period? Example: 3 months

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What is a normal wound healing in palliative care?

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## TREATMENTS & INTERVENTIONS

Palliative wound care can take a variety of forms, let's review the following:

### Infection

Infection of a chronic palliative wound produces an enhanced and prolonged inflammatory response, which in turn causes more damage to the wound. Consequently, symptoms that would normally indicate the presence of an infection would be masked as a prolonging inflammatory response that also reduces the patient's immune response.

Depending on the nature of the infection, either systemic or local antibiotics may be used to combat the infection. Drainage or debridement may be necessary to remove slough and devitalized tissue, as these slow wound healing and can affect the efficiency of topical antibiotics. Antimicrobial dressings, including those that use silver technology, may be used to help reduce bioburden. Antibiotics, whether topical or systemic, should only be used under the explicit direction of a physician.

In addition to removing a barrier to wound healing, treating the source of infection in palliative wounds can also help mitigate other symptoms such as wound odor, exudate, and pain.

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## TREATMENTS & INTERVENTIONS (CONTINUED)

### Pain

Pain inhibits wound healing, whether curative or palliative. Pain must always be treated, preferably with an opioid based agent. Pain control in palliation is a primary goal.

Dressing removal is often the most painful part of the wound management regime. Analgesia should be given systemically or topically before the dressing change procedure begins, with enough time allowed for the analgesic to have the desired effect. Pain can be limited by the use of dressings that are minimally traumatic upon removal and by gentle irrigation of the wound with warmed normal saline prior to removal.

### Wound Odor

Wound odor, while not technically a barrier to healing and wound health, needs to be taken into account based on the psychological effects on the patient. Malodorous wounds can negatively impact the patient's relationship with family and friends, contributing to social isolation. Wound odor is produced by bacteria present in the wound. Limiting the bacterial burden on the wound, managing exudate, and the application of odor controlling dressing such as those containing charcoal or carbon can all help to reduce wound odor.

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## TREATMENTS & INTERVENTIONS (CONTINUED)

### Exudate

While moist wound healing has been well-received in recent years as an effective method of wound management for certain types of wound, chronic palliative wounds present a particular challenge.

Proteinases (tissue-destroying enzymes) present in wound exudate damage periwound skin and can enlarge the wound. Absorbent dressings should be used to manage heavy levels of exudate, and can be used in conjunction with a non-adherent contact layer to minimize dressing change trauma. However, in cases where the wound bed can be allowed to dry out and the amount of exudate reduced, this may be a preferred alternative to moist wound healing. Patient discomfort is the priority here, not faster wound healing. Dry wound healing may be a viable option.

### Nutritional Support

As patients become weaker and less alert, they are often unable to maintain oral intake of nutrition. Additionally, certain medication or symptoms of chronic conditions can affect the absorption of nutrients. Without proper nutritional support, the risk of skin damage and delayed healing increases significantly. As a result, the need to encourage the patient to eat and drink frequently can outweigh other dietary restrictions. One approach to increasing nutritional intake is to offer the patient their favorite food or beverage.

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### Factors Affecting Wound Healing

- Age
- Chronic Disease
- Perfusion
- Immunosuppression
- Impaired Skin
- Mental Status
- Nutrition / Dehydration
- Edema / Vascular Disease
- Infection
- Chemotherapy
- SCALE - KTU

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### Factors Affecting Wound Healing

- Medications

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### Common Concerns

- 50% of Americans take one Rx / month
- 20% take 3 or more / month
- 11% take 5 Rx / month
- 36 Million use herbals yearly

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## Rx = Healing Delays

- Anticoagulants
- Antimicrobials
- Aspirin/ NSAIDs; weaken wound contraction with long-term use (Guo et al, 2010)
- Povidone/ Iodine
- Colchicine
- Dakin's Soln.
- Glucocorticoids
- Immunopressive agents

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## Rx = Hinderling Delays

- Antineoplastic agents
- Colchicine
- Dakin's Soln.
- Vasoconstrictors
- Anti-rheumatoid agents
- Nicotine
- Chemotherapy
- Steroids
- NSAIDs
- Warfarin- Necrosis

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## Steroid Use

- Notorious inhibitors of wound healing
- Notorious systemic effects(hypoglycemia, osteo, mood changer)
- Affect gene expression in cells (all phases of healing)
- Effect is related to the potency of steroid
- Long-term use is immune modulator + associated risk
- Delay neutrophil and macrophage activity
- May result in thinned epidermis (wound contraction)
- Topically may help healing

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## Wound Management

- Wound Cleansing
- Topicals
- Dressings
- Alternative Treatments

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## Cleaning of Wounds

- ◉ Irrigation  
Normal Saline, wound cleaning solutions
- ◉ Scrubbing - gauze, micro-fiber pads
- ◉ Pressurized devices (4 - 15 psi.)

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## Topicals

- ◉ Antimicrobials
- ◉ Antifungals
- ◉ Antiseptics
- ◉ Enzymatic- collagenase, proteases
- ◉ Hydrogels
- ◉ Collagens
- ◉ Extracellular matrix
- ◉ Human derivatives

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## Dressings

- Hydrocolloid
- Gauze, ABD
- Foams
- Composite
- Alginates
- Wound Fillers

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## Dressing Comparison

- Three categories: Gauze, Foam, Composite
- Solution: NS
- Method: Each dressing was placed on a flat tray, NS was added over 15 minutes, in 15 ml volumes. Volume used up to 200 ml
- Time-frame after addition of fluid was 30 minutes

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## Results

- After waiting period, a 180 degree twist was done to each dressing.
- Which one retained the most fluid?

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## Dressings with Antimicrobials

### Factors to Consider:

1. Is the antimicrobial affective against the infection?
2. How long will it be effective?
3. With excess drainage, will there be dilution of the antimicrobial?
4. Combination of dyes

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## Dressing Resource

- WOCN Society
- Consultant 360
- Medscape
- Wound Source (publication)

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## Palliative / Hospice Wound Management

### Recommendations for palliative management of chronic wounds

- Identify patient at risk
- Correct underlying cause of tissue damage, if possible (manage pressure, shear, friction, moisture, co-morbidities, etc.)
- Ensure adequate perfusion
- Assess clinical indications to help determine healable – vs. – maintenance – vs. – palliative
- Determine wound etiology and implement appropriate management strategies
- Develop strategies for pain and symptom management
  - Pain
  - Odor
  - Exudate

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### Palliative / Hospice Wound Management

- Skin tears: Keep clean and covered without adhesives
  - Manage drainage
- Pressure injuries: Manage pressure and shear
- Malignant wounds: Manage odor, exudate, bleeding
- Venous wounds: Manage edema compression
- Arterial wounds: Manage necrotic tissue / bioburden and keep dry
- Vascular assessment if consistent with goals of care

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### Cause of Pressure Wounds

- Highest point of pressure is where muscle and bone contact
- Subcutaneous tissue damage is more significant than skin damage
- Friction wound: partial thickness
- Shearing: Gravity plus friction; results in undermining and tunneling

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### Pressure Injuries On Mucous Membranes

- Not staged using the pressure injury staging system
- GI tract
- Tongue
- Nasal passage
- Urinary tract
- Vaginal canal
- Glans penis
- Glans clitoris
- Urethra
- Foreskin
- Clitoral head

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### Common Challenges On Hospice

- Pain with dressing change
- Infections in wound
- Bleeding
- Wound prevention

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### Pain Management

- Pre-medicate the patient 30 minutes prior to a dressing change
- Use of topical lidocaine dabbed *gently* onto wound using a cotton swab
- Use non-stick dressings
- If copious exudate, use absorbent dressings that allow for fewer dressing changes – easier on the patient

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### Odor Management

- Lavender / eucalyptus oil / rosemary in the room
- Coffee grounds in the room
- Oral metronidazole
- Wound treatments

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### Challenging Situation

- 75 year old man with advanced lung cancer with metastases to the brain and bone, with poor oral intake, arrives on hospice with a 6X3 cm<sup>2</sup> stage IV sacral wound. The wound has a foul odor with purulent discharge, no granulation tissue with 4 cm undermining from 2 o'clock to 6 o'clock, residual slough canopy over parts of the wound bed, which is grey muscle with visible bone. How do we manage the patient's plan of care?
- What would you do?
  - A. Order the exact same wound products that were used in the aggressive care setting
  - B. Check what wound supplies are on hand
  - C. Develop a plan based on cost effective supplies that addresses the concerns for the patient and family
  - D. Other - discussion

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### Optimal Conditions For Wound Healing

- Moist wound bed
- Thin soupy layer of exudate
- Wound bed at normal body temperature
- Up to 4 hours to return to body temperature after dressing change
- Oxygen
- Protein intake

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### Kennedy Terminal Ulcer

- Pressure wound as patients are dying
- Rapidly progressing, sudden onset
- Pear-shaped
- Irregular borders
- Red to yellow to black
- Larger at onset
- Prognosis hours to day

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## Additional Techniques

- Low Frequency Ultrasound via NS Mist
- Sound Waves
- **VOODOO**
- Vacuum Assisted Closure

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## Hyperbaric Oxygen

- Exposes the body to 100% oxygen at a pressure that is greater than what you normally experience
- Delivered by a chamber or gas mask.
- Adequate circulation is needed. Determined by Trans Cutaneous Measurement (t-com)

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## Reasons for Hyperbaric

- Delayed radiation injuries
- Soft tissue infections
- Thermal burns
- Certain skin grafts and flaps
- Crush injuries
- Diabetes related wounds

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## Risks of Hyperbaric

- ◉ Pressure-related injuries to the ears or nose
- ◉ Nearsightedness (usually resolves)
- ◉ Non-life threatening convulsions related to oxygen toxicity
- ◉ Decompression sickness
- ◉ Severe CHF
- ◉ Claustrophobic

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## CENTURY OLD TREATMENT

### MAGGOT THERAPY

The maggots have 4 principal actions:

- Debridement
- Disinfection of the wound
- Stimulation of healing
- Bio-film inhibition and eradication

#### Debridement

In maggot therapy, large numbers of small maggots consume necrotic tissue far more precisely than is possible in a normal surgical operation, and can debride a wound in a day or two. The area of a wound's surface is typically increased with the use of maggots due to the unbridged surface not revealing the actual underlying size of the wound. They derive nutrients through a process know as "extracorporeal digestion" by secreting a broad spectrum of proteolytic enzymes that liquify necrotic tissue, and absorb the semi-liquid result within a few days. In an optimum wound environment maggots molt twice, increasing in length from 1 - 2 mm to 8 - 10 mm, and in girth, within a period of 48 - 72 hours by ingesting necrotic tissue, leaving a clean wound free of necrotic tissue when they are removed.

#### Disinfection

Secretions from maggots believed to have broad-spectrum antimicrobial impact.

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## NOTES:

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