When Cure is Not the Goal:

Palliative Care for Chronic Wounds

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Financial Disclosures

None

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Learning Objectives

- State 3 alterations in skin that occur with aging and comorbidities that can lead to chronic and palliative wounds.
- Describe the basic phases of wound healing
- Describe identifying features of a palliative wound
- Identify treatment approaches for palliative wounds

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Introduction

Methods now exist which can ensure the relief of end-of-life suffering through rational implementation of pain relief and palliative care. Despite this, palliative care is not available in many settings. There are many barriers to the efficient and effective delivery of palliative care.

Graham et al. Oxford Textbook of Palliative Medicine (4th ed) 2009

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What is Palliative Care?

Palliative care is focused on providing patients with relief from the symptoms, pain and stress of a serious illness — whatever the prognosis. The goal is to improve quality of life, comfort, and dignity for both the patient and the family as they are the central system for care.

Agency for Healthcare Research and Quality. 2013

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Palliative Care is NOT:

- "Terminal care"
- Hospice care
- "Throwing in the towel"

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Palliative Care for Wounds

- When it becomes clear that there is little/no realistic chance of healing
- Wound is unresponsive to therapy
- The process of achieving healing is inconsistent with overall goals of care

Alvarez, Wounds V 17, #4, April 2005

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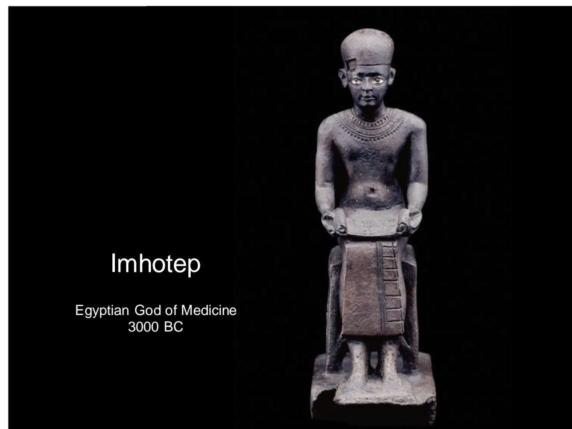

Function of Normal Skin

- Barrier protection against microbes, physical and chemical insults
- Thermoregulation
- Regulation of water loss
- Sensation, signals about our environment
- Immune function
- Endocrine function: Vitamin D3 production, testosterone metabolism

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Key Points of Skin Anatomy

- Epidermis: Cell rich with differentiating keratinocytes, pigment producing melanocytes, antigen presenting Langerhans Cells
- Separation of Epidermis and Dermis by Basement Membrane and interdigitations
- Dermis: Extracellular matrix proteins produced by fibroblasts, vascular supply
- Subcutaneous tissue: Adipose (fat) cells which support a connective tissue framework

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Normal Wound Healing Phase I: Hemostasis & Inflammation

- Fibrin clot
- Platelet activation
- Mediators [Pro-inflammatory cytokines] stimulate influx of inflammatory cells
- Vasodilatation, increased capillary permeability, complement activation
- Migration of neutrophils and macrophages

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Normal Wound Healing Phase II: Proliferation

- Re-Epithelialization
- Granulation tissue formation
- Angiogenesis involving fibroblasts and endothelial cells
- Synthesis of extracellular matrix

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Normal Wound Healing Phase III: Tissue Remodeling

- Involution of granulation tissue
- New scar is formed
- Collagen fibers are rearranged
- Dermal regeneration

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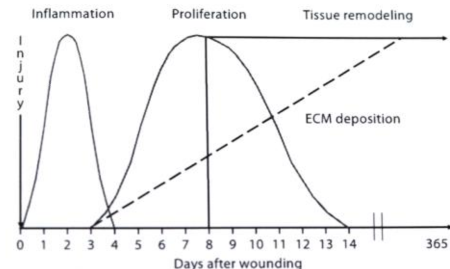
Phases of Normal Wound Healing



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ACUTE vs CHRONIC Wounds

- Little consensus on definition
- Healing time > 6 weeks
- An 'anti-healing environment' at the wound site
  - Presence of chronic inflammation, biofilms, pro-inflammatory cytokines (MMPs), TNF-α
  - Lack of pro-proliferative, or pro-regenerative agents: TGF-β1–3, PDGF, VEGF
- Underlying medical & physiologic factors inhibit healing

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The Palliative Wound

- The cause is not treatable (Seldom a single cause)
- Coexisting irreversible medical conditions or terminal prognosis prevent normal healing
- Healing is not expected

Woo, K. Adv Skin Wound Care. Dec 2013 V 26 #12

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Common Wound Etiology

- Pressure ulcer
- Arterial ulcer
- Venous ulcer
- Diabetic ulcer
- Surgical wound
- Malignancy
- Autoimmune source or vasculitis
- Irritation, trauma, burn, etc.

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Recognizing the Palliative Wound

- Intrinsic and Extrinsic Aging
- Multiple untreatable comorbidities
- Wound bed issues
- Nutritional deficiencies
- The dying process

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Changes in Aging Skin

INTRINSIC vs
EXTRINSIC causes

Both have profound genetic and ethnic differences

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Intrinsic Changes of Aging Skin

- Increased oxidative stress
- Decreased immunity
- Altered anatomy
- Reduced regenerative capacity
- Reduced vascularity
- Drying, loss of lipids, change in pH
- Altered sensation
- Decreased hair, sebum, sweat glands

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Extrinsic Causes of Aging Skin

- Environmental insults through oxidative stress
- Generation of free radicals and reactive oxygen species (ROS)
- Most important:
  - UV radiation (photo aging)
  - Cigarette Smoke
  - Ozone (O_3)
  - Airborne particulate matter

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Comorbidities that Impact Healing (I)

- Altered hormone levels (Estrogen, Testosterone, GH, cortisol, thyroid)
- Anemia
- Atherosclerosis, decreased perfusion
- Venous insufficiency
- Diabetes with microvascular and neurologic changes
- Any source of edema: CHF, Venous stasis, hypoalbuminemia
- Organ failure: Kidney, heart, liver

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Comorbidities that Impact Healing (II)

- Any source of hypoxia: COPD, OSA
- Low cardiac output state: CHF, shock
- Incontinence with Moisture Associated Skin Damage (MASD)
- Colonization with fungus and pathogenic, multiple resistant bacteria
- Pharmacologic compromise with corticosteroids, immunomodulators
- Obesity, lymphedema, anasarca

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Wound Bed Issues

- Slough, bioburden
- Critical colonization, or Biofilm
- Necrosis
- Foreign body
- Cellulitis
- Edema, maceration
- Chronic contamination

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Nutritional Deficiencies

- Metabolic demand exceeds intake
- Conditions affecting nutrition:
  - Poor POI
  - Gastroparesis
  - Malabsorbtion
  - Intestinal pathology and H/O bowel surgery
- If metabolic demands for wound healing are unmet, wounds have less chance of healing

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Skin and the Dying Process (I)

- Skin is the largest organ
- Physiologic changes with the dying process may affect skin and soft tissues and manifest as changes in skin integrity. These changes can be unavoidable and may occur with the application of appropriate interventions that meet or exceed the standard of care.

2009 SCALE Expert Panel

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Skin and the Dying Process (II)

- Skin changes at life's end are a reflection of compromised skin (reduced soft tissue perfusion, decreased tolerance to external insults, and impaired removal of metabolic wastes).
- Expectations around end of life goals should be communicated among the members of the team and the patient's circle of care. The discussion should include the potential for SCALE including skin breakdown and pressure ulcers.

2009 SCALE Expert Panel

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Basic Principles of Wound Care

1) Assess the Wound
2) Address Infection
3) Remove Debris and Necrosis
4) Address Moisture Balance
5) Recognize the Palliative Wound

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1) Assess the Wound

- Describe it (This entails looking at it)
- Document it
- Diagnose the cause
- Rule out malignancy
- Assess for infection

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2) Assess for Infection

- Remember the spectrum: colonization, critical colonization (biofilm), superficial infection, deep infection
- Eliminate biofilms
- Control infection that can be superficial or deep
- Don't forget fungus!

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3) Eliminate Debris & Necrosis

- Address wound periphery
- Debridement
  - Autolytic
  - Chemical/Enzymatic
  - Mechanical
  - Surgical

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4) Address Moisture Balance

- Wounds should be moist…
- …but not too moist!
- Healing is accelerated in moist wounds
- Peri-wound maceration is not good
- Exudate of chronic wounds has higher MMPs than acute wounds

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4) Recognize the Palliative Wound

- When it becomes clear that there is little/no realistic chance of healing
- Wound is unresponsive to therapy
- The process of achieving healing is inconsistent with overall goals of care
- Understand that palliation is not "giving up"

Alvarez, Wounds V 17, #4, April 2005

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The Palliative Approach (I)

- Identify the goals of care: cure vs comfort
- Consider AD's, values, and ethical issues
- Educate the patient and family
- Emotional support
- Promote comfort
- Prevent further skin deterioration and infection
- Optimize pain mgmt and other symptoms
- Key word: INTERDISCIPLINARY

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The Palliative Approach (II)

- Engage the entire care team, including physician and family
- Reconsider futile, heroic, measures:
  - Repeated hospital transfers
  - Sharp debridements
  - Operative procedures
  - Skin grafts
  - Ancillary approaches such as HBO, NPWT
- Burdens vs benefits of procedures

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Palliative Care of Wounds: "SPECIAL"

S = Stabilize the wound
P = Prevent new wounds
E = Eliminate odor
C = Control pain
I = Infection prophylaxis
A = Absorbent wound dressings
L = Lessen or reduce dsg changes

Wendelken. Podiatry Today, V22 #7 July 2009

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Pain Management (I)

- Wound Pain is known to be under-assessed and undertreated
- 2 Types of Wound Pain:
  - Nociceptive (from damage to tissue)
  - Neuropathic (from damage to nerves)
- Pain from wound treatment:
  - Dressing changes
  - Turning and positioning

Alvarez et al. J Palliative Med 10:5, 2007

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Pain Management (II)

- Choose least-painful treatment strategy
- Pharmacologic approaches:
  - Nociceptive pain: NSAIDS, Opiates
  - Neuropathic pain: Tricyclics,
  - Topical anesthetics: Lidocaine
- Complementary approaches:
  - Massage, touch, acupuncture, E-stim, etc.

Alvarez et al. J Palliative Med 10:5, 2007

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Odor Control

- Silver dressings
- Charcoal dressings
- Chlorophyllin dressings
- Metronidazole gel (off-label)
- Cadexomer Iodine

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Benefits of Palliative Wound Care

- Avoid rehospitalization
- Avoid painful procedures
- Avoid futile treatments
- Avoid unnecessary suffering and prolongation of the dying process
- Improve quality of life
- Decrease costs

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Barriers to Palliative Care for Wounds

- Physician reluctance
- Association of palliation with death
- Family reluctance
- Lack of information about the severity and/or irreversibility of illness
- Cultural/political attitudes toward death, terminal care, and pressure ulcers (which are commonly viewed as a failure of the caregivers)

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The Kennedy Terminal Ulcer (KTU)

- Currently **NOT** recognized by CMS in LTC, home care, or hospitals
- Recognized by CMS in LTCH's:
  - When the ulcer is part of the dying process it is not coded as a PU
- A palliative wound is not necessarily a KTU!

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In Summary

- The rise in chronic nonhealing wounds are a result of prolonged life expectancy with increased burden of chronic illness
- Many wounds we care for have reduced or no chance of healing
- Recognition of the palliative wound has the potential to curtail suffering and decrease healthcare costs

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Case #1

A 71 year old female with metastatic breast cancer is admitted to your SNF on hospice. You are asked to see this lesion which is malodorous and draining.

- How is it treated?

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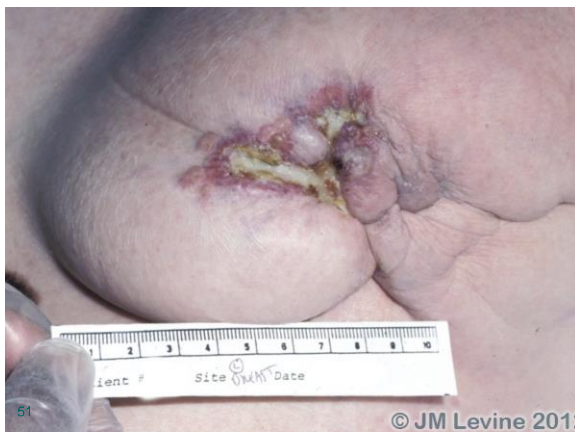

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Case #2

An 81 year old man has had Type II DM for the last 25 years and is on hemodialysis for the last 6 months. Other problems include vascular dementia, severe anemia with Hb 8.2 and CHF with EF of 30%. He eats poorly and his albumen is 2.3. He was transferred to your SNF with this wound. The family found on the internet that plastic surgery can close this wound.

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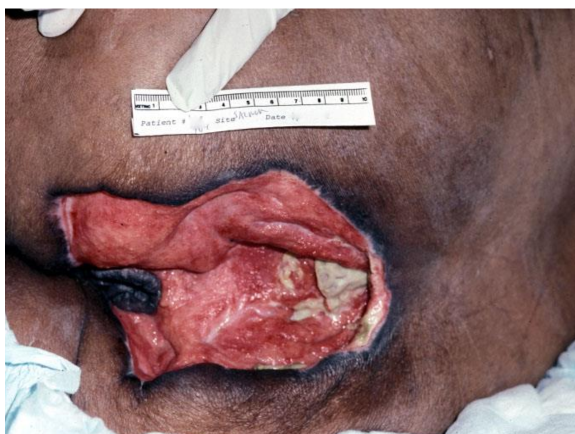

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