Module: Wound Care

Learning Objectives

Attitudes

- Recognize the importance of adapting wound care regimens to patient and caregiver goals and capacity
- Recognize the interdisciplinary nature of palliative wound care
- Center patient and caregiver goals of care in all aspects of care
- Assess and address both physical and psychosocial repercussions of wounds in patients with life-limiting illness

Knowledge

- Describe principles of an ideal palliative wound care regimen
- Describe the role of various healthcare professionals in palliative wound care
- Describe common wound-related concerns of patients and caregivers receiving palliative wound care
- Explain aspects of expectations management that should be included in palliative wound care

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Definitions:

- Palliative wound care focuses on patient's relief of symptoms and quality of life, rather than a primary intention of curing the wound. It is often indicated when a wound is not expected to fully heal or be cured using standard surgical or bedside treatments due to factors such as patient's advanced illness, comorbidities, or inability to tolerate treatment. Palliative wound care can help with symptoms such as pain, odor, bleeding, and exudate.
- Curative-intent wound care aims for ultimate resolution of the wound and restoration of a healthy skin barrier. Such wound care may involve repeated surgical debridement, frequent dressing changes that may exacerbate pain, invasive treatments aimed at underlying etiologies such as revascularization or eradication of malignancy, or complex reconstructive operations.

Principles of Palliative Wound Care

Palliative wound care is by nature interdisciplinary. Examples of involved staff include surgeons, nursing team, palliative care providers, wound and ostomy nurses, physical therapists, massage therapists, mental health providers, and social workers. Staff is encouraged to be mindful of patients' and families' hopes, preferences, and concerns on a personalized basis. Wound care regimens should be adapted to patient and caregivers' goals and capacity. Simple, practical, and predictable wound care that minimize pain and restriction of movement while effectively managing exudate, odor, and bleeding are ideal.

Wound care focuses:

Prevention:

Wounds of chronic illness may arise from many etiologies including pressure, malignancy, venous insufficiency, arterial insufficiency, neurologic deficits, trauma, and burns. Most wounds associated with advanced illness arise from pressure injury and advanced cancer. The presence of pressure ulcers in addition to the varied pathologies can be a marker of poor performance and palliative outcomes such as symptom relief and quality of life. While prevention of wounds may be difficult in patients with progressive life-limiting illnesses, many principles of standard wound care prevention can be applied. This includes offloading bony prominences with frequent turns, keeping wounds clean of fecal and urinary soiling, and minimizing friction during wound care and avoiding excessive scrubbing during wound debridement. In addition to frequent turns, pressure offloading can be augmented depending on the degree of immobility using equipment such blankets or foam wedges as well as specialized pressure reduction mattresses.

Kennedy terminal ulcers (KTU) and "3 o'clock ulcers" can signify rapid development and progression of palliative wounds. Though not sensitive, the presence of these wounds can provide prognostic information regarding patient's shorter-than-expected life expectancy. Despite these preventive techniques, many patients with end-stage conditions can still develop wounds refractory to management. Thus, counseling patients and caregivers should be centered on the Palliative Triangle – the dynamic relationship between patients, families, and surgeons – in addition to preventive techniques. It may be helpful to provide reassurance that the wounds are often not a result of caregivers' fault or shortcomings but the progression of underlying illness itself.

Rather than aggressive operative debridement down to healthy bleeding tissue, a combination of bedside debridement methods may be used in select patients to minimize necrotic tissue and slough while avoiding excess pain and injury that can increase the risk of a larger wound bed due to poor wound healing. Gentle debridement may include mechanical during dressing changes, enzymatic via collagenase, focused sharp debridement, and larval therapy.

Psychosocial:

As Beers (2019) writes, "wounds externalize the disease process to the point of forced confrontation with the illness", wounds can have multifaceted impact on patients and loved ones. The concept of total pain captures the range of ailments each patient and family may experience, including physical painful stimuli and pruritus, emotional distress arising from physical symptoms, underlying illnesses, and pervasive social and spiritual distress stemming from their life-limiting conditions.

Psychosocial distress and may arise from altered body image and social isolation because of pain, odor, or wound appearance. This can deeply affect intimacy and patient's sense of self. These impacts further underscore the need for the Palliative Triangle and a focus on patient and caregiver-directed goals, such as relief of symptoms, comfort, preservation of dignity, and quality of life. It is also paramount to acknowledge the critical role that caregivers play in patient's palliative wound care, which can provide a sense of control and empowerment for both patients and caregivers in the midst of progressive illness.

Sezgin et al. writes that altered body image can contribute to dissociation from one's body and a resultant "emotional or spiritual death preceding physical death". Expectations management is important in alleviating fears such as "bleeding out" from a wound or "nothing left to be done" for a patient. Providing clear guidelines is an important aspect of patient counseling, such as highlighting when to call a hospice or wound nurse or present to the hospital according to each patient's goals of care.

Exudate:

An ideal wound dressing provides a balance of moist environment and optimal absorption of excess exudate with antimicrobial properties, and feasible and simple daily regimen without exacerbating pain, limiting mobility, or creating financial difficulties.

Using non-adherent dressings and wet dressings with warm saline prior to removal can help reduce pain and unnecessary trauma to the peri-wound skin. Wounds with exudates may benefit from silver alginate dressings that combine antimicrobial properties of silver ions and the substantial absorbent capacity of seaweed-derived alginate. Similarly, carboxymethylcellulose ("hydro fiber"), polyurethane, or silicone-based dressings can help manage exudates. Wound managers can help quantify fluid losses from highly exudative wounds, protect skin, and facilitate exudate drainage. Lastly, negative pressure wound therapy can help manage exudate by providing suction and increased perfusion, seal associated odor as well as reduce frequency of dressing changes and accompanying pain.

Proper exudate management should limit oversaturation and maceration of skin around the wound while avoiding xerosis and excessive drying of the wound bed. Low quality evidence exists to support existing topical barrier products for skin protection such as 3M™ Cavilon™ or zinc oxide though the latter can interfere with silver based anti-microbial dressings. Stoma powder in conjunction with skin prep sprays can be used to form a protective crust on top of denuded skin to both improve wound manager appliance adhesion and protect skin from exudate.

Bleeding:

Bleeding from wounds can pose challenges and fears in patients and caregivers especially with recurrent episodes. As with any bleeding, palliative surgical management begins with applying direct pressure for 10-15 minutes. Smaller areas of bleeding may respond to topical carafate paste, chemical cautery with silver nitrate or Mohs' paste (zinc chloride), or topical vasoconstrictive agents like oxymetazoline or epinephrine. For moderate to heavy bleeding, calcium alginate dressings can help stimulate clotting and absorb sanguinous drainage. In select patients, endovascular embolization or radiation may be beneficial, in the case of tumors with abnormal vasculature.

Odor:

Malodor is often due to bacterial proliferation in the wound, thus may warrant antimicrobial agent, such as sprinkling crushed metronidazole tablets or applying metronidazole gel over the wound with dressing changes. Due to patients' immunosuppression, wound infection may be occult and only present with delayed wound healing. Silver nanoparticles or Medihoney may also be used for their antimicrobial effects. Negative pressure wound therapy with continuous instillation of dilute hypochlorite or saline can also help keep wounds clean and moist. Similar to previously mentioned silver alginate, cadexomer iodine (Iodosorb™) combines exudate absorbing properties with the antimicrobial effect of iodine. Some evidence suggests the use of acetic acid for addressing pseudomonas colonization as well as topical phenytoin which can improve wound healing with limited systemic absorption. External odor absorbers such as cat litter or activated charcoal can also help manage odors.

Pain and Pruritus:

Pruritus can be especially difficult to manage and provide discomfort to patients. Unfortunately, systemic antihistamines are often not helpful due to involvement of non-histaminergic pathways. Topical doxepin cream, menthol cream and cooled hydrogel sheets have been shown to be helpful. Low quality evidence suggests transcutaneous electrical nerve stimulation (TENS) may also be an option.

Wound associated pain may be somatic, peripheral neuropathic, or central neuropathic depending on which nerve roots are involved. Thus, multimodal pain management should be performed to address these sources. Dressing changes often induce pain thus must be considered when deciding on dressing materials and frequency of changes. Premedication with intravenous short acting opiates just before dressing change or oral opiate 30 minutes prior can be useful in addition to topical local anesthetic ointments applied for 45-60 minutes. Of note, local anesthetic ointments have the potential to cause hyperinflammatory responses and interfere with wound healing. Benzodiazepine premedication may help manage anxiety associated with dressing changes. Peripheral neuropathic pain may respond to gabapentinoids as well as duloxetine, which may additionally address central pain. Nonpharmacologic adjuncts include music, massage therapy, guided imagery, hypnosis, and biofeedback.

Nutrition:

Optimized diet is crucial in palliative wound care. All macronutrients including protein, lipids, and carbohydrates consumed in an appropriate balance contribute to optimal wound healing. Depending on life expectancy and patient goals, patients with diabetes should be mindful of hyperglycemia which can hinder wound healing. Select patients may benefit from dietary supplements such as Juven. For patients with sufficient life expectancy, nutritionists can help

assess potential benefits of appetite stimulants and supplements. Highly selected patients with good functional status and longer life expectancy who may succumb first to malnutrition rather than the underlying malignancy may benefit from enteral or parenteral nutrition. However, such decisions should be made in a multidisciplinary manner and recognize the potential challenge for families deciding whether to cease artificial nutrition.

Assessment Tools:

Various assessment tools have been developed to monitor patients receiving palliative wound care. Some are more extensive and designed for the research setting while others are more focused and easier to use in the clinical context. Such tools include the Skindex-16, Malignant Wound Assessment Tool - Clinical (MWAT-C), Toronto Symptom Assessment System for Wounds (TSAS-W), and Edmonton Symptom Assessment System Revised (ESAS-r). Using a validated assessment tool designed for clinical care can help characterize wounds and ensure functional and emotional impacts of wounds are captured and addressed. In addition to documenting the wounds themselves, these tools help document holistic wound care assessments, including medical risk factors, psychological wellbeing, functional status, relevant medications, and goals of care.

Communication:

As with any palliative surgical efforts, communication is central to palliative wound care. As mentioned earlier, the Palliative Triangle is a simple and evidence-based principle that can facilitate communication among patients, families/caregivers, and surgical teams. This palliative surgical framework is founded upon the dynamic, interpersonal relationships centered on patients' goals, hopes, and values which ensure that palliative wound care continues to remain patient-centered and surgically sound. Best Case/Worst Case tool from vascular surgical literature can also facilitate practical and patient-centered communication by clearly delineating realistic expectations and prognosis leading to shared surgical decision-making. Overall, palliative wound care involves complex, interdisciplinary collaborations. Thus it is paramount to focus on palliative surgical principles such as clear and earnest communication between patients, families and surgical team and palliative outcomes including symptom relief and improved quality of life.

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Pre/Post Test

Questions

1. Define Palliative wound care
2. Palliative wound care is a multidisciplinary field that may involve which healthcare professionals?
3. Name six common symptoms that palliative wound care focuses on managing.
4. Describe two palliative communication frameworks important in palliative wound care.
5. Identify the core tenets of palliative surgical principles

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