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Palliative Wound Care

Case Studies

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Patients with advanced illness may present to palliative care or hospice with unmanaged symptoms that may be exacerbated by the presence of a wound. The wound can be a constant reminder to the patient and caregiver of the underlying illness. Distressing symptoms such as wound pain, odor, bleeding, and/or excessive exudate may impede the patients' ability to spend quality time with loved ones when they need them the most. Although patients may present with wounds of varying etiologies, the most common wounds seen in this patient population are pressure-related injuries. However, there is a shortage of both wound and palliative specialized clinicians. Telehealth and the use of other technology can be a way to address this shortage. This will grant access to a broader number of patients to ensure appropriate wound care plans are in place to meet the goals of care. Although wound healing may not always be possible in this patient population, having access to specialized wound and palliative experts can improve the quality of life for patients and their caregivers.

KEY WORDS

home care, hospice wound care, palliative wound care, wound care

Ithough wound healing may not always be possible in the patient with advanced illness, there is much we can do as clinicians to alleviate patient and caregiver suffering. Kelechi et al¹ report that 47% of patients referred to hospice present with wounds, with up to half of those being pressure-related injuries. Jakobsen et al² found a pressure ulcer/injury incidence of 17.3% in cancer patients admitted to hospice. Other wound etiologies often seen in this patient population include malignant wounds, skin tears, vascular ulcers, Kennedy terminal ulcers,³ autoimmune-related wounds such as bullous pemphigoid, and, more recently, COVID-19–related skin changes, to name a few.⁴ Tilley et al⁵ report that 14% of advanced cancer patients in the United States present with malignant

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DOI: 10.1097/NJH.00000000000821

fungating wounds. Skin tears are also commonly seen in the palliative and hospice patient population, especially with the older adults, because of risk factors such as age-related skin changes, mobility issues, medication side effects, and impaired nutrition.⁶ The wound is often a reflection of an underlying disease entity such as with venous leg ulcers in the setting of advanced heart failure and lower extremity edema. See Figure 1 for a snapshot of typical wound etiologies consulted on by the certified wound, ostomy, and continence nurse practitioner (CWOC NP) during a course of a month at the author's home hospice facility.

Wound healing may not always be possible because of several factors including advanced disease, multiple comorbidities, poor nutrition, poor tissue perfusion, advanced age, and frailty.⁷⁻¹⁰ Palliative wound care shifts the focus from healing to symptom management and uses an interdisciplinary team approach to address the whole person. This includes psychosocial and spiritual elements in addition to addressing the physical symptoms to improve the quality of life for patients and caregivers. The distressing wound symptoms may include pain, bleeding, odor, pruritis, and/or excessive wound exudate, which can lead to anxiety, embarrassment, and social isolation. It is important to set realistic expectations to avoid disappointment when wound healing may not be possible. Examples of this include, but are not limited to, a malignant wound where curative treatment is no longer appropriate or with a gangrenous limb where the patient is not a candidate for surgical intervention to restore the blood flow.⁸

Caregivers may feel overwhelmed and have a sense of guilt if their loved one develops skin breakdown despite meticulous care and need the support of the whole team including the CWOC nurse/NP. The development of skin breakdown may reflect skin organ failure due to intrinsic versus extrinsic factors as the patient nears the end of life.⁹⁻¹¹ The skin being the largest organ of the body may fail along with other organs such the heart, lungs, and kidneys. It is important to keep the wound dressing regimen as simple as possible, so that more time can be spent with loved ones than on complicated wound care treatments. As Dr Beers¹¹ points out, less is more.

There may, however, be limited access to both specialized wound clinicians and specialized palliative care clinicians, and telehealth may be a way to increase access to these services.^{12,13} The use of telehealth became more



FIGURE 1. Snapshot of typical monthly wound etiologies seeking consults at the author's hospice.

prevalent than ever during the COVID-19 pandemic.¹⁴⁻¹⁶ Telehealth allows prioritization of necessary in-person specialist wound care visits. This includes visits to provide bedside sharp debridement, where appropriate, to quickly palliate symptoms of odor and excessive exudate that may result from the presence of necrotic tissue. Other necessary in-person visits may include assisting with complicated ostomy/ fistula pouching situations and supporting overwhelmed care-givers and clinicians new to the field. Telehealth also allows for more timely consults while reaching a broader number of patients to ensure appropriate wound care plans are in place to meet the goals of care.

The telehealth consult can be initiated by sending wound pictures via secure emails or text messages to the wound specialized clinician, or the clinician may evaluate the wound in real time via platforms such as Zoom, FaceTime, and WhatsApp while other interdisciplinary team members are at the bedside.

Technology is also a way to put the necessary educational tools in the hands of the generalist clinician providing wound care to the frail patient with poor healing potential. The palliative wound educational gap prompted the author to launch a wound app. The app is currently named "Palliative Wound Pro" (with consideration of renaming it simply "Wound Pro" for it to be more inclusive). Although the goals of wound care may be different, the same general wound principles apply to all wounds. The wound etiology is addressed where feasible, and a clean, moist wound bed is maintained to increase the healing potential. An exception to this is dry, intact eschar in the frail patient with a poor healing potential. The dry eschar is considered a "protective shell" and is maintained dry to avoid opening it up.¹⁷ The app is currently available as a free resource for clinicians to access wound care treatment options. It provides an overview of 8 wound etiologies commonly encountered in the palliative care and hospice patient population. It offers wound picture examples, wound treatment and symptom management options, case studies, documentation guidelines, and more.

The following 5 case studies demonstrate a palliative approach to wound care in the patient with advanced illness receiving home hospice care. These consults were completed via a combination of in-home CWOC NP visits along with telehealth consults initiated by the nurse, nurse practitioner, or physician visiting the home. These case studies demonstrate both healing in the first 3 case studies and improved symptom management in the last 2 case studies where healing was not possible, because of factors mentioned previously in this article.

CASE STUDY 1: SACRAL PRESSURE INJURY

A 96-year-old widowed woman with New York Heart Association class IV heart failure and multiple comorbidities, including diabetes mellitus type 2, hypertension (HTN), atrial fibrillation, and a chronic unstageable sacral pressure injury, presented to the hospital from a local nursing home because of heart failure exacerbation, pneumonia, and anoxic respiratory failure. Because of her heart failure exacerbation, multiple infections, worsening sacral pressure injury, and a decreased functional status, she was referred for hospice services. The patient and her daughter preferred her to return to her home of 60 years for end-of-life care. She was mainly bedbound and required total care. She enjoyed music therapy as provided by a volunteer.

The hospice intake nurse contacted the wound, ostomy, and continence (WOC) NP for an initial consult via FaceTime. The sacral pressure injury was considered an unstageable pressure injury because of the presence of necrotic tissue obscuring the full depth of injury. Her daughter was concerned that there was an odor.

The initial recommendations were to cleanse the sacral wound and periwound thoroughly with a wound cleanser spray, pat dry, and apply quarter strength (0.125%) sodium hypochlorite solution—moistened gauze to the area of necrosis. This was suggested to promote debridement of the necrotic tissue and to manage the odor by decreasing the



microbial count.¹⁸ Sodium hypochlorite solution is made from diluted bleach and has been used since World War I.¹⁸ Wound cleanser sprays make it easy to thoroughly cleanse/irrigate a wound. The nozzle delivers the right amount of pressure to give the wound/periwound a good cleaning, without being too forceful, particularly if there is a cavity present. An alcohol-free skin barrier wipe was recommended to protect the periwound. Gauze was used to pad over the site, and an absorbent, waterproof, gentle silicone foam dressing was recommended to secure the dressing. This was completed 3 times weekly and as needed if it became soiled and was recommended shortterm until the wound contained less necrotic tissue.

The WOC NP scheduled a home visit, within a few days of her hospice admission, to perform conservative bedside sharp debridement of the remaining necrotic tissue with patient/caregiver consent. The goal was to further palliate the symptoms of odor and excessive exudate. The patient was premedicated an hour before the visit with morphine 0.25 mL (5 mg) orally with good effect. The primary dressing was then changed to a calcium alginate 2 times weekly and as needed to manage the moderate amount of exudate and for its hemostatic properties due to bleeding episodes reported.^{17,19}

After a few weeks of using the calcium alginate, the exudate amount decreased, and the wound treatment was changed to a hydrogel 2 times weekly and as needed to maintain a moist wound bed to increase the healing potential. This was used until the wound healed. Once it healed, the caregivers were encouraged to use a moisture barrier agent to the site with incontinent care and to continue to offload pressure to decrease the risk of a recurrence. As the wound characteristics changed, the treatment was changed (see Figure 2).

Pressure injury prevention measures were continually reinforced to address the underlying etiology. This included placing a support surface on her bed (a group 1 support surface was used; eg, an alternating pressure pad overlay). She was not receptive to an external catheter to manage her urinary incontinence. In addition to the nursing and medical staff, the interdisciplinary team included a physical therapist, a social worker, a spiritual care counselor, the registered dietician, a volunteer support, and a home health aide. The patient and her daughter appreciated the support from all the team members to make home hospice possible for her.

CASE STUDY 2: RIGHT ARM SKIN TEAR

The patient was an 81-year-old married woman with small cell lung cancer, coronary artery disease, and vascular dementia. She was a retired teacher and enjoyed her spouse reading to her. During her months on hospice, she developed a mass behind her right ear that continued to grow and developed skin tears at her extremities. The skin tears at her arms were described as "opening and closing." The skin tear shown here was reported as occurring when a family member was assisting her from the bed to the chair and she bumped her arm (see Figure 3). The patient and caregiver agreed to discontinue her oral aspirin 81 mg taken daily because of the extensive bruising at her skin and bleeding from her wounds. This symptom was very frightening for them, and the burden likely outweighed the benefits of aspirin at this stage. Both the patient and her son became anxious as they saw her skin bruising easily and the episodes of profuse wound bleeding. It had become a constant source of worry for them. Furthermore, although they understood she had been taking aspirin for many years as a preventative measure for a cerebral vascular accident and myocardial infarction, they preferred to discontinue it to decrease her bleeding risk.

The skin tear was cleansed gently with a wound cleanser spray and patted dry, the partial skin flap was approximated where possible, and a petrolatum gauze with bismuth was applied to the site. This was covered with an abdominal pad and secured with a gauze wrap twice weekly. This dressing was chosen for its nonadherent²⁰ and antibacterial properties and because it could be left in place for several days. Meticulous skin care was reinforced. Bumper pads were provided for her hospital bed side rails to decrease the risk of further injury. Her skin tear went on to heal, and the malignant mass bled less. She was very spiritual and felt great solace with regular spiritual care support.

Sacral Pressure Injury

FIGURE 2. Sacral pressure injury.

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Right Arm Skin Tear



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FIGURE 3. Right arm skin tear.

Her son felt less anxious and more able to cope with her illness, seeing her more relaxed and at peace.

CASE STUDY 3: VENOUS LEG ULCERS (BILATERAL LOWER EXTREMITIES)

The patient is a 95-year-old widowed woman with New York Heart Association class IV heart failure, HTN, and extensive osteoporosis. Because of decreased functional status, worsening heart failure, renal failure, chronic nonhealing bilateral lower extremity venous leg ulcers, and increased frailty, she was referred to hospice. Her symptoms included pain at the wound sites exacerbated with wound care and dyspnea with minimal exertion. She was receiving supplemental oxygen 3 L/min via nasal cannula as needed for shortness of breath. Her legs were edematous (about 3+ nonpitting edema). Because of a typical low blood pressure of 88/60 mm Hg, she was unable to tolerate increasing her diuretics despite the edema and bilateral pulmonary crackles. Methadone 2.5 mg (0.25 mL) orally twice daily worked well to manage her pain and dyspnea. Her son lived out of town but visited and called frequently. She had a 24-hour live-in aide as she became more debilitated. She enjoyed pet therapy as provided by the volunteer department. She always had dogs, and this brought her tremendous joy to be able to interact with the therapy dog.



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Wound cleanser spray was used to cleanse the lower extremity wounds and periwounds, and ammonium lactate lotion was used to her dry skin. Initially, a calcium alginate was used to the sites for increased absorbency along with abdominal pads secured with a gauze wrap. A tubular compression bandage was applied over the dressing from the base of her toes up to about an inch below her knees for light compression therapy. This was used to manage the edema, to increase the healing potential, and to decrease the risk of cellulitis while avoiding sending excess fluid back to her heart and exacerbating her heart failure. This treatment was performed 3 times weekly for a few weeks. Compression therapy is the standard of care for the treatment of venous leg ulcers when tolerated.²¹

On a follow-up CWOC NP visit, honey wound gel was added for its antimicrobial effects and to promote autolytic debridement of the yellow fibrin slough tissue at her right leg ulcer as the area had become tender. Over time, as the exudate decreased further, the primary dressing was changed to a petrolatum gauze with bismuth twice weekly, which is also antimicrobial but nonadherent now that the exudate amount was minimal.

The wounds and the edema decreased greatly during the course of about 2 weeks. She was not open to podiatry services for nail care. Meticulous skin care and the importance of ongoing compression therapy, as tolerated, were reinforced

Venous Leg Ulcers



10-29-20





Right Foot Gangrene

12-29-20



FIGURE 5. Right foot gangrene.

because of the high risk for cellulitis with the presence of edema. Her wounds went on to heal, and this treatment helped keep her as functional as possible in her home (see Figure 4).

CASE STUDY 4: RIGHT FOOT GANGRENE

The patient is an 88-year-old widowed man with advanced Alzheimer disease, atherosclerosis, type 2 diabetes mellitus, HTN, renal failure, and peripheral vascular disease with gangrene to his right foot. He had 1 daughter who was very devoted. He was referred to hospice from a certified home care agency for end-of-life care. His daughter wanted comfort care per her father's known wishes and refused an amputation. Initially, the right great toe and right fifth toe were gangrenous, but over time as the disease progressed, it included all his right foot toes and his instep. The area was painful with wound care as noted by nonverbal cues and had a faint odor at times. Pain was managed with oral methadone 2.5 mg twice daily and oxycodone/ acetaminophen 5/325 mg administered 2 to 3 times daily for breakthrough pain.

The wound treatment had been daily application of silver sulfadiazine cream to the gangrenous toes. This was discontinued to avoid converting the dry gangrene to a wet gangrene from the application of a moist agent, which would promote autolytic debridement (use of the body's own natural enzymes). Instead of this, a drying antimicrobial agent, povidone iodine, was used to paint the necrotic tissue to decrease the microbial count.¹⁷ The area was gently cleansed with a wound cleanser spray, or if any odor was present, 1/4-strength sodium hypochlorite solution was used to cleanse the affected areas. It was then covered with abdominal pads secured loosely with a gauze wrap 2 times weekly. This regimen worked well in managing the odor and keeping the necrotic tissue intact. His daughter also wanted to trial a course of antibiotics to see whether it would help the odor and slow the disease progression. He was initially tolerating aspirin 81 mg daily orally as an antiplatelet agent in the hopes of improving the blood flow. Although the disease progressed despite the interventions, the distressing symptoms were managed at home through the support of the interdisciplinary team until his death a few weeks later. The CWOC NP consults were completed both

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FIGURE 6. Left anterior and posterior chest/shoulder malignant wounds.

in-person and via secure texts sent by the nurse visiting the home (see Figure 5).

CASE STUDY 5: LEFT ANTERIOR AND POSTERIOR MALIGNANT CHEST WOUNDS

This patient is an 82-year-old single woman with endometrial cancer diagnosed about a year ago. She underwent a hysterectomy and received chemotherapy at that time. Her comorbidities included type 2 diabetes mellitus and HTN. She was alert and oriented $\times 3$ and tried to maintain her independence as much as possible. She was a retired accountant and took pride in being very organized. Her sister was her main caregiver, and the local chaplain was very supportive. She had volunteered in her church for many years after retirement. She had a recent hospitalization for wound bleeding, and at that time, her aspirin was discontinued. She had been receiving certified home care agency services for wound care, but after this hospitalization, she was referred to home hospice. She presented to hospice with extensive chest cutaneous metastases from the endometrial cancer. She denied pain, but she and her caregivers were distressed by the odor and bleeding. The WOC NP provided both in-person and telehealth consults. The wound care was initially to cleanse with wound cleanser and apply abdominal pads daily.

With the initial WOC NP consult, the treatment was changed to gently cleanse with wound cleanser spray or hypochlorous acid solution as needed odor, pat dry, and apply a petrolatum gauze with bismuth to the sites to prevent adherence to the friable tissue. This was recommended as the current dressing was adhering and causing bleeding with dressing changes. A skin barrier film was recommended to protect the periwounds. Abdominal pads were recommended as the secondary dressing, and a gentle silicone tape was suggested to secure the dressing 2 times weekly and as needed (she was not interested in a mesh net dressing retainer). Less frequent dressing changes were suggested to decrease the risk of bleeding and potential pain with dressing changes. Metronidazole 1% spray was ordered to the site as needed for odor management with dressing changes with good effect. 17,19,22 For the bleeding, oxymetazoline nasal spray, off-label, was sent from the hospice pharmacy to apply to the site as needed for bleeding with dressing changes.¹⁷ It works as a vasoconstrictor within approximately 10 minutes and lasts up to 12 hours. Because of several areas of bleeding and the potential for burning pain with the use of silver-nitrate sticks, this option was chosen. The odor and bleeding improved, but over time, there was some strike-through exudate soiling her garments. The treatment was then changed to a silicone foam dressing with silver for increased absorbency and odor management twice weekly and as needed. The WOC NP also considered a calcium alginate, a hydrofiber, or a chitosan-based gelling fiber with silver for odor management, hemostasis, and increased absorbency. The patient wished to trial the silver foam option first when samples were shown to her. This regimen worked well for her and her caregivers. With her family around her, she was able to maintain her independence at home until she passed away peacefully 3 weeks later (see Figure 6).

In conclusion, although patients with advanced disease and wounds may present with poor healing potential, there is much we can do as clinicians to ease the suffering that may be brought on by wounds. Although the same general wound principles apply to all wounds, the goals of care may differ when it comes to palliative wound care. Although there is a scarcity of wound and palliative specialized clinicians, educational technology in the hands of the generalist clinician is one way to empower them to care for these patients. Telehealth is another effective way for specialized clinicians to reach a broader, underserved population, in addition to serving as a resource for colleagues to provide wound consults and the education necessary to meet the goals of care.

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