REVIEW ARTICLE

Ethical Consideration in Wound Treatment of the Elderly Patient

Prachi Shah^a, Thet Han Aung, MD^{b,f}, Richard Ferguson, MD^{c,g},
Gerardo Ortega, MD^{d,h}, Jayesh Shah, MD^{e,*}

^aDepartment of family and community medicine, UTHSCA. Medical Director, NE Baptist Wound Healing Center, 8811 Village Drive, San Antonio, TX 78205, USA

^bGeriatric Medicine, Wellmed at Bulverde, 32665 Hwy 281 N, Suite 100, Bulverde, TX 78163, USA

^cEmbrace Hospice, 8 Rue charles, San Antonio, TX 78217, USA

^dPrivate Practice Peripheral Vascular Associates, 111 Dallas St., Ste. 200A, San Antonio, TX 78205, USA; and

^eNE Baptist Wound Healing Center, 8811 Village Drive, San Antonio, TX, 78217, USA

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Abstract Today, an advance in clinical medicine and public health has given patients the opportunity to live longer and more productive lives despite progressive illnesses. For some patients, however, this progress has resulted in prolonged dying which is associated with huge emotional and financial expenses. A review article is written based on proceedings of panel discussion on Ethical Consideration in wound treatment of the elderly patient on July 25, 2015, Baptist Wound Symposium at Marriot Northwest, San Antonio, Texas.

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Introduction to the Problem (Dr. Jayesh Shah)

Today, an advance in clinical medicine and public health has given patients the opportunity to live longer and more productive lives despite progressive illnesses. For some patients, however, this progress has resulted in prolonged dying which is associated with huge emotional and

financial expenses.¹ Cost of elderly care continues to increase in USA (Fig. 1).

Incidence of Ulcers and Cost of Wound Care in Elderly Patients (Dr. Jayesh Shah)

It is estimated that the aging population in USA will continue to increase with chronic illness from 132 million in 2005 to over 170 million in 2030.² Care for chronic wounds costs about \$10 billion annually. Wound care in adults aged 65 and older, accounts for majority of these costs.² Also, there is disproportionate and increasing number of older adults undergoing surgery and they are at a risk for developing wound complications.² Studies indicate that the incidence of chronic wounds increases with age even into late life.² Elderly

Proceedings of panel discussion on Ethical Consideration in wound treatment of the elderly patient on July 25, 2015, Baptist Wound Symposium at Marriot Northwest, San Antonio, TX, USA.

^f Tel.: +1 830 980 8433. ^g Tel.: +1 210 669 4441. ^h Tel.: +1 210 225 1486.

* Corresponding author. Tel.: +1 2102972520.

E-mail address: wounddoctorshah@gmail.com

Fischbeck, Paul, "US-Europe Comparisons of Health Risk for Specific Gender Groups," Carnegie Mellon University, September, 2009

Figure 1 Cost of health care of elderly patient in USA.

is defined in this article as any patient who is above 65 year of age.

CMS data shows that there are high costs of treatment during the last chapter of life to patient, family and society.³ 1 out 4 health care dollars is spent in the last year of life.³

Alarming statistics was gathered from Northeast Baptist wound healing center in San Antonio between 2010 and 2015 (Fig. 2). 1 in every 10 new patients seen at NE Baptist wound healing center was above 90 years of age. Every second patient seen at NE Baptist wound healing center was above 65 years of age. Most common diagnoses in patients who were over 90 years old were skin tears, venous stasis ulcers, pressure ulcer, and arterial insufficiency ulcers.

General Practice Research Database in the United Kingdom showed that the incidence of venous leg ulcer was three to four times higher and the incidence of pressure ulcer was five to seven times higher in people of 80 years of age compared to people aged 65–70 years of age.² Also there is more incidence of chronic ulcer in elderly because elderly skin is different.

As skin ages, following changes take place in the skin. There is a decrease in dermal thickness, fatty layers, collagen and elastin fibers, size of rete ridges, sensation and metabolism, sweat glands, subcutaneous tissue, and circulation. There is an increase in time for epidermal regeneration. There is increase in damage to the skin from sun and radiation burns.⁴

Assessing Functional Status in Elderly Patient: (Dr. Aung)

All elderly patients should get functional assessment in following four domains in a wound care setting. These domains are physical, cognitive, psychological/psychiatric and social.

Physical domain assessment should include the following:

- Location of patient (ambulatory/hospital/nursing home)
- Ambulatory status (strength, gait/balance)
- Presence of co-morbidities (peripheral arterial disease, neuropathy, etc.)
- Trajectory of recent decline, if any
- Nutritional status: low albumin, vitamin deficiency
- Physical limitations: prior amputations, contractures, etc.

Figure 2 Age of new patients at NE Baptist Wound Healing Center in San Antonio from 2010 to 2015.

Cognitive domain assessment should include the following:

- History, type, and degree of dementia
- Alzheimer's: loss of insight
- FTD: loss of judgment, behavior issues etc.
- Executive function (EXIT-25)⁵
- Assess ability to self-manage or comply with treatment
- Capacity evaluation
- Understand the basic facts of treatment options
- Appreciate current situation and repercussions or outcomes
- Provide reason for the decision/choice
- Communicate the choice

Psychological/psychiatric domain assessment should include the following:

- Presence and degree of depression
- Apathy, self-neglect, anorexia with nutritional deficits
- Delirium/psychosis
- High mortality
- Management difficulties with dressings etc.
- History of personality disorders – affects compliance

Social domain assessment should include the following:

- Advanced directives
- Next of kin vs. medical power of attorney's vs. guardianship
- Goals of care
- Level of health literacy
- Level of family support
- Conflicts among family

When do We consider Revascularization in elderly Patients? (Dr. Ortega)

Revascularization vs. Amputation vs. Palliative Care

Vascular and surgical treatment choices in elderly patients will depend on the following factors:

- Physiologic age
- Patient's wishes
- Mental state
- Ambulatory status
- Pain
- Quality of life
- Physical exam results
- Anatomy of lesion
- Classification of lesion(s)
- Probability of healing
 - Time
 - Dressing changes
 - Debridement

- Requirement of advance wound modalities principle
- Cost

How do We Determine Which Advance Treatment in Wound Care is Appropriate in Elderly Patients? (Dr. Jayesh Shah)

Several novel therapeutic agents and devices have been used for wound healing, but there is need for more specific research on effectiveness of these products in elderly patients. Although data from randomized controlled trials and metaanalyses suggest that negative pressure wound therapy (NPWT) is effective in older adults,⁶⁻¹² there are only few studies that focused just on older adults. In clinical experience, most elderly patient will accept tissue-engineered products that can be applied in clinic than going through general anesthesia and surgery but potential influences of patient age for cellular and tissue-engineered products are poorly characterized.² HBO therapy has several randomized trials showing effectiveness in diabetic wound patients but none of these studies focused on older adults.²

What Ethical Principles Should a Physician Remember Before Considering Treatment Choices in Elderly Patients? (Dr. Ferguson)

All physicians who are taking care of elderly patient's should be familiar with following five ethical principles: Patient preference, beneficence, nonmaleficence, justice and surrogate decision maker. Respect patient's autonomy. The patient has the right to make decisions regarding the health care that is recommended by his or her physician. Accordingly, patients may accept or refuse any recommended medical treatment.¹³ Beneficence means always act in the best interest and welfare of the patient, and health of the society. Nonmaleficence is the duty to do no harm to the patient. Justice is the quality of impartiality or fairness.¹⁴ Competent adults can make decisions and can make their wishes for their treatment choices in advance. If a patient is not competent and unable to make decisions, then patient's advance directives with patient's wishes should be used to make substituted judgment. If patient has durable power of attorney delineating their health care proxy, then decisions concerning the patient's care should be made by substituted judgment by health care proxy. If a physician is not able to reasonably interpret how a patient would have decided, then physician should respect decisions made by appropriately designated surrogate, substituted judgment or best interest of the patient.¹⁵ In cases where there is a dispute among family members, a physician should consult state law²² and involve ethics committee.

When do We Consider Palliative Care in Elderly Patients? (Dr. Ferguson)

“The decision to move a patient from a curative to a palliative treatment plan requires that the clinician has determined that the wound is ultimately non-healing rather than undertreated.”¹⁶

Case Studies

Case Study-1

94 y/o male with history of dementia, contractures, and with multiple co-morbidities, presents in the clinic for further evaluation. On examination, multiple decubitus ulcers on knees, heels, and sacral area are noted. Patient's nephew has durable power of attorney for health care that requests comfort care. But the son says he is next to kin and would like aggressive treatment (Fig. 3).

Ethical Issues

Is Amputation an Option? Dr. G. Ortega

Patient with severe resting pain and contractures, amputation as a treatment to decrease pain could be considered.

How to Deal With Conflicting Family Choices? Dr. Aung

In cases where there is a dispute among family members, physicians should work to resolve the conflict through mediation. Physician should consult ethics

Figure 3 Case study 1.

committee and should try to uncover the reasons that underlie the disagreement. In general, physician should respect decisions of health care proxy (durable power of attorney).²² In some cases, court interventions might be necessary to serve in the best interest of the patient.¹⁵

Is Palliative Care an Option for This Patient? Dr. Ferguson

Palliative care is the best option for this patient but because of conflict in the family, it is important for the physician to sit down with patient's family and follow “S-P-I-K-E” strategy.⁶

The S-P-I-K-E-S protocol is a strategy and not a script. It highlights the most important features of a bad news interview (S-Setting, P-Perception, I-Invitation, K-Knowledge, E-Empathize, Emote, and Evaluate, S-Summarize, Strategy).

Setting:

- Family meeting should be done in a quiet setting with no distractions.
- Involving whole family and friends in meeting but identifying the spokesperson acceptable by the patient is very important.
- Sit down and have good eye level contact.
- Look attentive and calm. It is best to sit down, placing feet on the floor and ankles together, and putting hands down on your lap with palms facing downward and with good eye contact. Sometimes, breaking eye contact to support patient's emotion and holding hand may make patient more comfortable.
- Practicing communication skills of silence and repetition allows patient to know that the physician is in a listening mode.
- Make sure patient gets physician's uninterruptible attention and time.

Perception

Before breaking the bad news, it is important to accurately assess patient's perception of the medical situation.

Invitation

Ask for the patient's permission on how much in detail does the patient want to know about the diagnosis and treatment choices.

Knowledge

- Prepare the patient mentally before delivering the bad news.
- Present information in a non-technical and simple language so that the patient can understand easily.
- Give information in small chunks.

Empathize, Emote, and Evaluate

Responding to patient's emotions by giving “the empathetic response” which includes:

- Listen for and identify the emotion
- Identify the cause or source of emotion

- Let the patient know that you understand the emotion and the source of emotion validate or normalize patient's feeling.

Summarize, Strategy

- Ensure that the patient understands the information that has been provided.
- Summarize the information before interview ends.
- Give patient the opportunity to ask questions.

What are the Wound Care Options in This Patient? Dr. Jayesh Shah

Goals of Palliative Wound Care⁶⁻⁹ should include the following:

- Pain
- Odor
- Exudate
- Bleeding
- Self image
- Dignity
- Quality of life

Following skin care needs should be addressed in a palliative care patient:

A low pH skin cleanser is useful, along with a moisture barrier, to minimize the effects of excess moisture (gently cleanse the skin). Avoid massage over a reddened area. Manage incontinence. Individualize the patient's turning and positioning schedule based on patient's pain, tolerance, and comfort level. Protect the skin. To protect the buttocks and sacral areas, use a lift sheet or an overhead trapeze. Keep elevation of bed at the lowest possible elevation, preferably 30° or lower to minimize friction and shear to the sacrum and buttocks. When turning side to side, the angle should only be 30°.

Positioning the Palliative Care Patient

Nutrition and hydration should be maintained in a palliative care patient:

Fluid and food requirement generally decrease at end of life. Lessening of oral intake can occur weeks to months before death. Nutrition and hydration status worsens because of draining wound. Swallow reflex decreases, which causes increased risk of aspiration (Figs. 4 and 5).

Following wound dressings consideration should be taken for a palliative wound care patient:

Consider a dressing that can stay for several days, and a dressing that can protect the wound from incontinence. Non-adherent dressings are usually the best.

Choice of dressing based on exudate:

For wounds with minimal or no drainage, consider hydrogel, transparent film, hydrocolloid or composite dressings. For wounds with moderate exudate, consider hydrogel, hydrocolloid, foam, calcium alginates, cadexomer iodine, silver dressings or silver foam dressings. For wounds with severe exudate, consider composite foam, or calcium alginate dressings with combination of calcium.

Figure 4 Patient to have 30° bend in the knee to relieve sacral pressure (Ref: Defloor T. The effect of position and mattress on interface pressure. Appl Nurs Res. 200;13(1):2–11. From Sussman & Bates-Jensen Wound Care 4th Edition).

Debridement in Palliative Care Patient

Autolytic/enzymatic debridement is preferred to prevent “seeding” of malignant cells in fungating and radiation wounds. Non-surgical debridement is usually preferred in palliative care wound patient. Sometimes, a combination of calcium alginate and honey can be useful as it will allow absorption of drainage and allow autolytic debridement to happen at the same time.

Topical Dressings for Odor Control

Some of the methods used to control odor are topical metronidazole, activated charcoal dressings, sugar paste and honey, room deodorizer and frequent dressing changes.

Dressing's useful for infected wounds in palliative care elderly patient.

Following dressings are useful for infected wounds in palliative care elderly patient. Dressings like acetic acid (0.5%–2%) and hydrochloric acid can help as they have lower pH and are effective against pseudomonas but not staph aureus and they may cause local stinging and

Figure 5 Patient in sidelying position with the 30/30/30 rule. (Ref: Defloor T. The effect of position and mattress on interface pressure. Appl Nurs Res. 200;13(1):2–11. From Sussman & Bates-Jensen Wound Care 4th Edition).

burning. Dressings like chlorhexidine (2% alcohol solution or 0.5% aqueous solution) are useful against gram positive and gram-negative organisms. They have water-based formulation and have low tissue toxicity. Povidone iodine dressing (10% aqueous solution delivers 0.9% iodine at wound bed) is useful as it has broad-spectrum activity and can debride autolytically but it might be toxic to thyroid. Dressings like crystal violet and methylene blue are useful as it has broad-spectrum antimicrobial activity with low tissue toxicity and can be used along with enzymatic debridement.

How to Manage Pain in a Palliative Wound Care patient?^{6-12,17-21,23,24}

End of life patient may have persistent pain occurring even when wound is not manipulated. Following recommendations may help for pain management in a palliative wound care patient. Know and avoid, where possible, pain triggers. Know and use, where possible, pain reducers. Avoid unnecessary manipulation of wounds. Explore simple patient-controlled techniques, such as counting up and down, focusing on the breath entering and leaving the lungs or listening to music. Topical that contain local anesthetic agent such as lidocaine gel, EMLA Cream, Regencare can be used to reduce pain. Using warmed products such as normal saline or gauze pads can also help with pain relief. Pre medicating the patient with pain medication 20–30 min prior to changing the dressing should be a standard of care for a patient on palliative care.

Case Study-2

97 year old female patient with past medical history of peripheral artery disease, bilateral iliac artery angioplasty in 11/2009, COPD, compression fracture lumbar spine, s/p kyphoplasty, HTN, rheumatoid arthritis, bilateral stage 4 trochanteric ulcers worsening and now infected, Patient also has severe protein caloric malnutrition, and urinary incontinence. Patient was progressively getting worse and patient continued to develop multiple wounds. Son was not able to take care of her at home but did not want hospice and did not want to admit her to hospital or acute long-term care. Patient's son finally instead of hospice decided to admit her to acute long-term care facility. Son had medical power of attorney. Patient had dementia but did not want to go to the hospital. Son decided to admit the patient to acute long term care. During hospitalization, patient developed sepsis and respiratory failure requiring ICU care and ultimately died during this hospitalization (Fig. 6).

Ethical Issues

1. A functional/competence assessment in all four domains-physical, cognitive, psychological/psychiatric

Figure 6 Case study 2.

and social should be performed on all elderly patients as discussed earlier in the article.

2. Ethical treatment decision in a demented patient? Dr. Aung/Dr. Ferguson

Most important aspect in this case is to have a non-anxious communication with the son. What is the ultimate goal of the son for the patient should be discussed. Discussion with son should be done with discernment, compassion, truthfulness and integrity. Following S-P-I-K-E-S strategy for interview could help the son understand some of the end of life issues and treatment choices better.

3. Patient's son was not comfortable with hospice as his prior experience was that he would not get any wound care? Dr. Ferguson

Discuss with patient's son what aspect of hospice care he was uncomfortable with and discuss his fears.

4. Appropriate wound care in elderly patient? Dr. Shah

Wound care treatment plan should be tailored to this patient based on same principles of palliative wound care discussed above. As described in case 1, this patient was put on daily Dakin's solution to decrease odor and control infection.

Summary

Cure is not always realistic but relieving symptoms and compassionate care is always possible. It is recommended to discuss with patient and family about palliative care early. Elderly patient may need customized management based on functional and cognitive assessment of patient. Age alone cannot determine therapy choices. Further research and studies are needed to see if some advances in wound care may be better served in elderly, i.e. (i) Skin substitutes over skin grafts requiring anesthesia? (ii) HBO therapy over amputations? (iii) Angioplasty over revascularization?

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