Skin Care at End of Life

Freda Cowan, FNP
Friday
April 27, 2012

OBJECTIVES

• Explain basic skin care assessment.
• Discuss common skin issues pertaining to patients at end of life.
• Describe wound care treatment options for patients at end of life.

FUNCTION

• Protection from bacterial invasion and against external elements such as excessive water, chemicals, mechanical forces, bacterial or viral infection and UV radiation.
• Prevents excessive loss of fluids and electrolytes. The body strives for a homeostatic environment.

Skin is the largest organ of the body.
Skin is 3000 square inches.
Receives 1/3 of the body’s blood volume.
Every minute of the day we lose about 30,000-40,000 dead skin cells off the surface of our skin which is about 1.5 pounds a year.

• Immunological response – WBC capture and destroy bacteria.
• Produces sebum, a lipid-rich oily surface
• Sebum – secreted by the sebaceous glands, provides and acidic coating that retards growth of microorganisms
• Melanocytes – serves as protection against UV rays. These levels are race dependent

• Hold the body in “shape”
• Sense the environment -(pain, touch, temperature, pressure)
• Retain water - provide protection against water loss.
• Thermoregulation – primary mechanisms of this regulation is circulation and sweating
• **Thermoregulation** – primary mechanisms of this regulation is circulation and sweating
  - Temperature up = vasodilation to dissipate heat.
  - Temperature down = vasoconstriction to retain heat.

• **Expression** of emotions – identification of a person, plays a role in internal and external assessments of beauty and body image

• **Metabolism** – when exposed to ultraviolet B radiation from sunlight, cells in the epidermis convert a cholesterol-related steroid to vitamin D. The general result is maintenance of calcium and phosphorus levels in the bone and blood.

**BASICS**

- Thin outer layer (called the **epidermis**) and a thicker outer layer (called the **dermis**). Subcutaneous tissue, which contains fat. Buried in the skin are nerves that sense cold, heat, pain, pressure, and touch. Deep within the skin sweat glands, which produce perspiration. **Fascia** - white shiny sheath like covering for muscles, nerves and blood vessels that give support to the muscle fibers – keeping them in tight bundles so that they can act as a single unit. **Muscles** – dull red color, attached to skeleton.

**BASICS**

- Complete medical history and physical exam
- Medications - Rx and OTC, Allergies
- Nutritional assessment
- Social history – tobacco/alcohol use
- Cause of wound – pressure, trauma, venous, diabetes
- Treatment history to date

**Basics**

- Wound duration – acute vs. chronic
- Environmental factors that may affect healing (bedridden, decreased activities, shearing during transfer, tight shoes, tubing or lines, history of travel/epidemic exposure such as fungal/parasite cause
- **Expectations for wound healing** – to heal or palliate (comfort only)
Factors that impede wound healing

- Inadequate nutrition (vitamins/minerals), tissue hypoxia (low blood flow, exudate, eschar), wound infection, wound exudate, wound trauma (toxic chemicals, environmental insult, traumatic dressing changes)
- Inadequate wound blood volume and oxygen delivery, loss of lean body mass, systemic infection

Common skin conditions

- Pressure ulcers
- Wounds associated with malignancy
- Venous/Arterial ulcers

Common sites of pressure ulcers

Stage 1 ulcers do not have any visible skin cuts. However, the skin covering the wound can be remarkably different from the surrounding area. The differences may be changes in temperature, firmness, or color of the skin. The wound may also be pain or itchy.

Stage 2 ulcers are deeper than stage 2 wounds. They typically go down to the "fat" layer (subcutaneous), but do not extend any further. There may be dead tissue and drainage.

In a Stage 2 ulcer the topmost layers of skin is severed (epidermis and dermis). There may be some drainage.
Stage 4 ulcers extend to the bone and muscle. Dead tissue and drainage are almost always present.

Deep tissue injury may be characterized by a purple or maroon localized area of discolored intact skin or a blood-filled blister due to damage of underlying soft tissue from pressure and/or shear. Presentation may be preceded by tissue that is painful, firm, mushy, boggy, and warmer or cooler as compared to adjacent tissue. In these wounds, the outer skin layer is breached only in the late phases of the wounds development.

Unstageable. Full-thickness tissue loss in which the base of the ulcer is covered by slough (yellow, tan, gray, green or brown) and/or eschar (tan, brown or black) in the wound bed may render a wound unstageable.
WOUNDS WITH MALIGNANCY

Malignant wounds are necrotic areas caused directly by cancer. Fungating tumors are rapidly growing external tumors.

Malignant wounds are caused by infiltration of the epidermis by a primary or metastatic tumor, cutaneous infiltration via the lymphatics or bloodstream, or as a result of direct invasion from a primary lesion. Once the fungating wound develops, perfusion of tissues is altered and the mass expands. The center of the tumor then becomes hypoxic leading to tumor necrosis.

Left chest wall malignancy

Squamous cell carcinoma of head
Head and neck cancer

Right breast cancer with firm, vascular nodular masses

Left breast cancer with excoriation and satellite lesions

Kennedy Terminal Ulcer (KTU)

• OMG
• The (KTU) is a pressure ulcer that some (not all) get as they are dying. Onset: can be sudden, usually on the sacrum or coccyx but can appear in other areas. Appearance: shape of a pear, butterfly, or horseshoe, edges are usually irregular, red, yellow, and black color as the ulcer progresses.

Kennedy Terminal Ulcer (KTU)

• Often looks like abrasion, blister, or darkened area and may develop rapidly to a Stage II, Stage III, or Stage IV ulcer.
• Karen Kennedy Evans, NP, 1983 at the Byron Health Center, a 500-bed, long-term care institution in Fort Wayne, IN. The skin care team started to investigate the data regarding how long individuals lived after the onset of a pressure ulcer; data showed 55.7% of the people who died with a pressure ulcer expired within 6 weeks of the onset of their pressure ulcer.

Kennedy Terminal Ulcer (KTU)

Calciphylaxis

• Rare syndrome of vascular calcification, thrombosis and skin necrosis.
• It is seen almost exclusively in patients with end stage renal failure, but can be seen in obesity, diabetes mellitus, hypercalcemia, hyperphosphatemia, and secondary hyperparathyroidism.
• Wound is chronic non-healing wounds and fatal.
• Lesions typically develop suddenly and progress rapidly. May be singular or numerous, and they generally occur on the lower extremities however, lesions also may develop on the hands and torso.
• Calciphylaxis begins as surface purple-colored mottling of the skin then bleeding occurs within the affected area. There may be blood-filled blisters. The skin goes black in the center with star-shaped purple lesions. The skin cells die because of lack of blood supply. This causing deep and often extensive ulcers.
• Intense pain

Calciphylaxis
• Treatment – pain management, palliative wound care, discontinuation of parenteral iron therapy, calcium supplementation, and vitamin D supplementation, low-calcium bath dialysis, Bisphosphonates (Fosamax/Actonel po, Pamidronate IV) which inhibit osteoclasts —breakdown of bone thereby slowing down of bone loss.

Venous stasis ulcers
Venous ulcers - located below the knee, primarily found just above the ankle. The base is usually red, may be covered with yellow fibrous tissue or there may be a green or yellow discharge if the ulcer is infected. Fluid drainage can be significant with this type of ulcer. The borders are usually irregularly shaped and the surrounding skin is often discolored and swollen. It may even feel warm or hot. The skin may appear shiny and tight, depending on the amount of edema (swelling).
Very common in patients who have a history of leg swelling, varicose veins, or a history of blood clots in either the superficial or the deep veins of the legs. Ulcers may affect one or both legs.

Venous ulcer

Venous status
Ulcer of lower leg
Arterial ulcers
Complete or partial arterial blockage may lead to tissue necrosis and / or ulceration. Signs include: pulselessness of the extremity, painful ulceration, Usually small, punctate ulcers that are usually well circumscribed, cool or cold skin, delayed capillary return time (briefly push on the end of the toe and release, normal color should return to the toe in 3 seconds or less), atrophic appearing skin (shiny, thin, dry), loss of digital and pedal hair, can occur anywhere, but is frequently seen on the dorsum (top) of the foot.

Arterial ulcers

Braden Scale
Assess 6 Clinical Factors
—Activity
—Dietary Intake
—Friction and Shear
—Mobility
—Sensory Perception
—Moisture

The ideal dressing and treatment
• Provides protection from further injury or infection
• Permits movement of joints and body parts proximal to the wound
• Exercises some compression on the wound site to control bleeding and scarring
• Absorbs fluids draining from the wound
• Ultimately contributes to an improved esthetic outcome for the resulting scar

Wound care options
• Ointments
• Impregnated gauze
• Gauze packing
• Hydrocolloids
• Hydrogels
• Alginates
• Adhesive films
• Medihoney
• Vacuum assisted closure (VAC)
“See the whole person - not the hole in the person.”

NICE dressing method
• N – necrotic tissue
• I – infected or inflammation
• C – characteristics (LxWxD, comfortable for patient, ease of use pt/family, staff
• E – exudate control

Necrotic tissue
• Protect and support
• Maintain dryness
• Wet to dry dressing
• Autolytic debridement
• Surgical debridement
• Chemical debridement

Infection/Inflammation
• Consider antimicrobial dressings (silver or iodine.
• More frequent dressing changes
• Oral antibiotics

Characteristics
• Location (LxWxD), waterproof dressings
• Comfort and pain relief
• Ease of use for patient, family, staff

Exudate
• Match absorbency of dressing to exudate
• Assess surrounding tissue and protection
• May need more frequent dressing changes
Matching the dressing to the wound

- Gauze (sterile and non-sterile)
- Impregnated gauze/ strips
- AMD dressings, Kerlix
- Wound cleansers
- Clear transparent adhesives
- Alginites, Collagens
- Skin prep, Foams
- Hydrocolloids
- Silver products
- Wound VAC
- Maggot therapy
- Medihoney
Matching the dressing to the wound

- Gauze/sterile and non-sterile
- Impregnated gauze/ strips
- AMD dressings, Kerlix
- Wound cleansers
- Clear transparent adhesives
- Alginates, Collagens
- Skin prep, Foams
- Hydrocolloids
- Silver products
- Wound VAC
- Maggot therapy
- Medihoney