

Are All Pressure Ulcers Preventable? Kennedy Terminal Ulcers (KTUs) versus Pressure Ulcers

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Presentation Overview

- What is the Kennedy Terminal Ulcer?
- Review of the Literature
- What are the 5 characteristics of a KTU?
- How do I know the difference between KTU and PU?
- Review Goals of Care for KTU
- Review of case studies

What are we talking about?

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Kennedy Terminal Ulcers (KTU)

- ❑ Unavoidable skin breakdown or skin failure that occurs as part of the dying process (Schrank, 2009).
- ❑ History: First noted by Karen Lou Kennedy in 1983.
- ❑ Started a Skin Care Team and noticed some people got pressure sores that had a similar look and two weeks later they had died.
- ❑ 1989 First described at the National Pressure Ulcer Advisory Panel (NPUAP).

Skin Failure:

- ❑ “An event in which the skin and underlying tissue die due to hypoperfusion that occurs concurrent with severe dysfunction of other organ systems” (Langemo & Brown, 2006)
- ❑ Skin integrity is dependent on the function of all other organ systems for nutrition, circulation and immune function.
 - ❑ For example, although our skin is approximately 10-15% of total body weight, it requires approximately 25 – 33% of cardiac output.
 - ❑ Unlike other failing organs, skin changes are visible

Etiology:

- Further research is needed;
 - Very little evidenced based research; use expert consensus.
- Occurrence of KTU is hypothesized to be shunting blood away from the skin to the other organs during the process of dying.

Why should I be concerned?

□ Pressure Ulcer Facts:

- In general, are more common in cancer patients
- Up to 24% prevalence in PCH residents
- Among those developing a PU in hospital, more than half will die in the next 12 months
- Recent discussions: "As all Stage III PU are considered preventable, should they be reported as a critical incident?"
- Pressure Ulcer care and documentation seem to be subject to increasing regulatory scrutiny.

Literature on Pressure Ulcers:

- Kennedy (1989) 5 year retrospective study:
 - Approx. N = 500 found 55.7% of persons with PU in long-term care facility died within 6 weeks of onset
- Hason et al (1991):
 - 62.5% of patients in hospice developed pressure ulcer in the final 2 weeks of life.

**Theoretically these PUs could have been KTUs

Literature continued

Study by Brennan & Trombley (2010):

Findings on PCU; n = 22:

- Mean age = 73 years
- *Time frame for development of PU ranged from 2 hours to 6 days prior to death; most were within one day*
- Nurse noted reddish-purplish discoloration, DTI
- Stage II developed rapidly to full thickness
- Size of ulcer expanded rapidly

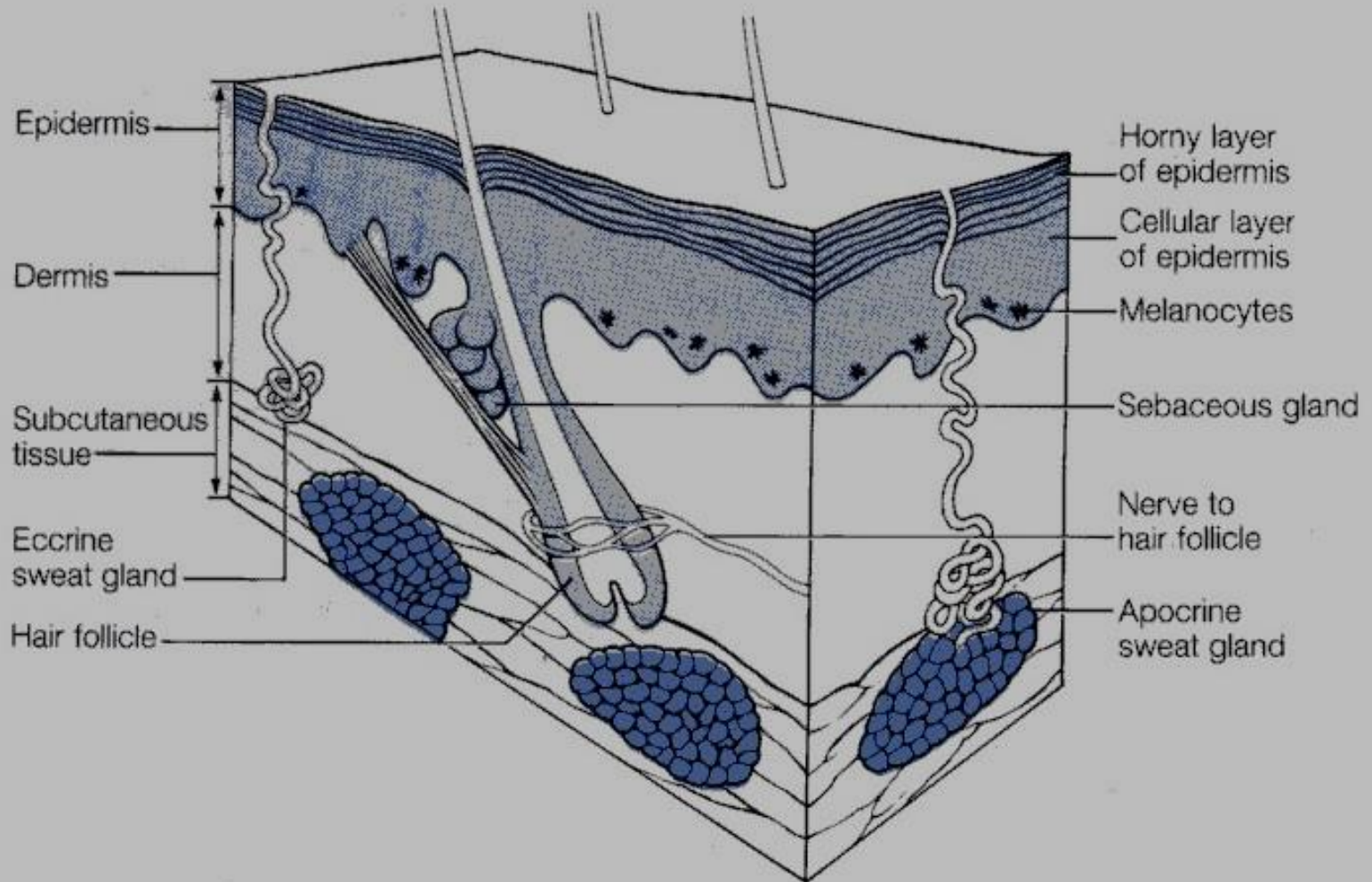
5 Essential Characteristics:

- 1) It is usually located on the sacral/coccygeal area
 - known to appear on heels, posterior calves, arms and elbows
- 2) Appears as a discoloration of the skin in the shape of a pear, butterfly or horseshoe;
- 3) Ulcer has irregular borders;
- 4) Sudden Onset – Progress rapidly;
- 5) Purple, red, yellow, blue or black in color, similar in appearance to an abrasion or blister.

Prominent in:

- ❑ Geriatrics
- ❑ Frequently reported in Hospice and Palliative Care Patients.
- ❑ Does NOT seem to be prominent in pediatric patients.

Normal skin



Pathophysiology:

Pressure Ulcers:

- Caused by *unrelieved pressure*, resulting in local ischemia and tissue damage.
- Assumes vascular system is able to provide circulation to maintain adequate oxygen and nutrients.

KTU:

- Caused by *deficiency in blood flow* that deprives skin of oxygen and nutrients, leading to ischemia unless circulation is restored.
- As end of life nears, hypoperfusion and multi-organ failure inevitably occur.
- Changes in the skin are visible signs of what is happening below the surface (tissue death).

What do they look like?



Kennedy Terminal Ulcer in sacral area of MS patient

Source: Schank, J. (2009). Kennedy Terminal Ulcer: the "Ah-Ha!" Moment and Diagnoses. *Ostomy Wound Management*, 55(9), 40-44.



Terminal Kennedy Ulcer



Three:Thirty Syndrome

3:30 Syndrome

- ❑ 3:30 syndrome describes the surprisingly sudden onset of the KTU.
- ❑ Usual scenario: skin is observed to be intact with no discoloration when the patient gets up in the morning. At 3:30 pm when patients are placed in bed for a nap, skin shows blackened discoloration.
- ❑ Develop quickly, appear like little specks of dirt.
- ❑ Caregivers try to wash it away and find it is under the skin not on the skin.
- ❑ After several hours, it is the size of a quarter.

Presence of KTU must be differentiated from a PU to provide optimal care and establish realistic goals of care for the patient and family.

How do I know the difference between PU and KTU?

Comparison of Pressure Ulcer and Kennedy Terminal Ulcer

	Pressure Ulcer	Kennedy Terminal Ulcer
Progression	Slow and Steady	Rapid (3:30 syndrome)
Color	Persistent redness	Yellow/purple/blue/black
Tissue consistency	Firm, boggy	Firm
Shape	Round, mirroring bony prominence below area	Pear or butterfly, extends from centre out
Treatment	Based on wound characteristics	Based on wound characteristics
Prognosis	Non-infective= excellent	Poor

Wound Prognosis and Realistic Outcomes

Can the cause be treated?

Factors to take into consideration:

- Widespread metastasis
- Co-existing medical conditions
- PPS (Palliative Performance Scale)
 - Changes at end of life such as:
 - Decreased nutritional intake
 - Incontinence
 - Immobility
 - Sensory Loss
 - Change in circulatory status
 - Dehydration

Treatment of KTU

- ❑ Similar treatment to PU
- ❑ “Palliative” – non-healable
- ❑ Documentation: co-morbidities, PU risk factors, clinical interventions consistent with patient’s goals of care.
- ❑ Complete Wound Care Assessment & Braden Scale forms
- ❑ Documentation of patient/family education regarding KTU’s

Repositioning, Activity, Mobility...

- In final days activity, repositioning should be based on patient's comfort
 - Families often may wish for increased activity
 - This will NOT improve outcome
 - It will fatigue patient more rapidly

- Must balance importance of repositioning with comfort

Goals of Care for KTU's

- Educating caregivers and family members:
 - Recognition that KTU occurs because patient is nearing end of life, not from lack of care.
 - Use of preventative measures, such as pressure relieving devices or frequent repositioning will not reverse the tissue damage.
 - 'Palliative' wound care means comfort and limiting the extent of the wound without intent of healing.

Case Study Example Mrs. A

- ❑ Miss A: Breast Ca with bone & liver metastases
- ❑ PPS 40%
- ❑ Issues with pain to right hip and pain on movement
- ❑ Seen by VN end of November
 - ❑ Coccyx ulcer noted (firm, butterfly shaped, purple, irregular borders, occurred suddenly) and dressing applied
 - ❑ Nurse noted how quickly the ulcer developed
 - ❑ VN discussed KCI mattress with patient
 - ❑ Decreased mobility
 - ❑ Husband very concerned about skin breakdown

Mrs. A continued

- WCBT saw patient beginning of December:
 - Coccyx ulcer measures 7x4x4 cm with bone exposed
 - 100% necrotic tissue, Pressure Ulcer Stage 4
 - Wound being packed with 24 – 50 cm of buttered iodisorb gauze
 - PPS 20%
 - On-going issues with pain control to right hip, ulcer not painful: Palliative Care Physician consulted for home visit
 - Educated husband on KTU, patient condition very poor
 - Died a few days later
- * Ulcer development to patient death = within 1 week

Case Study Example Mrs. B

- ❑ Mrs. B: 80 year old at Grace Hospice
- ❑ Cervical cancer with mets to pelvis and abdominal lymph nodes
- ❑ PPS 40%
- ❑ Wheelchair bound
- ❑ Issues with neuropathic pain to left leg & prosthetic hip (sepsis)
- ❑ Abrupt change in her condition with confusion and less responsive (nurses thought she was dying)

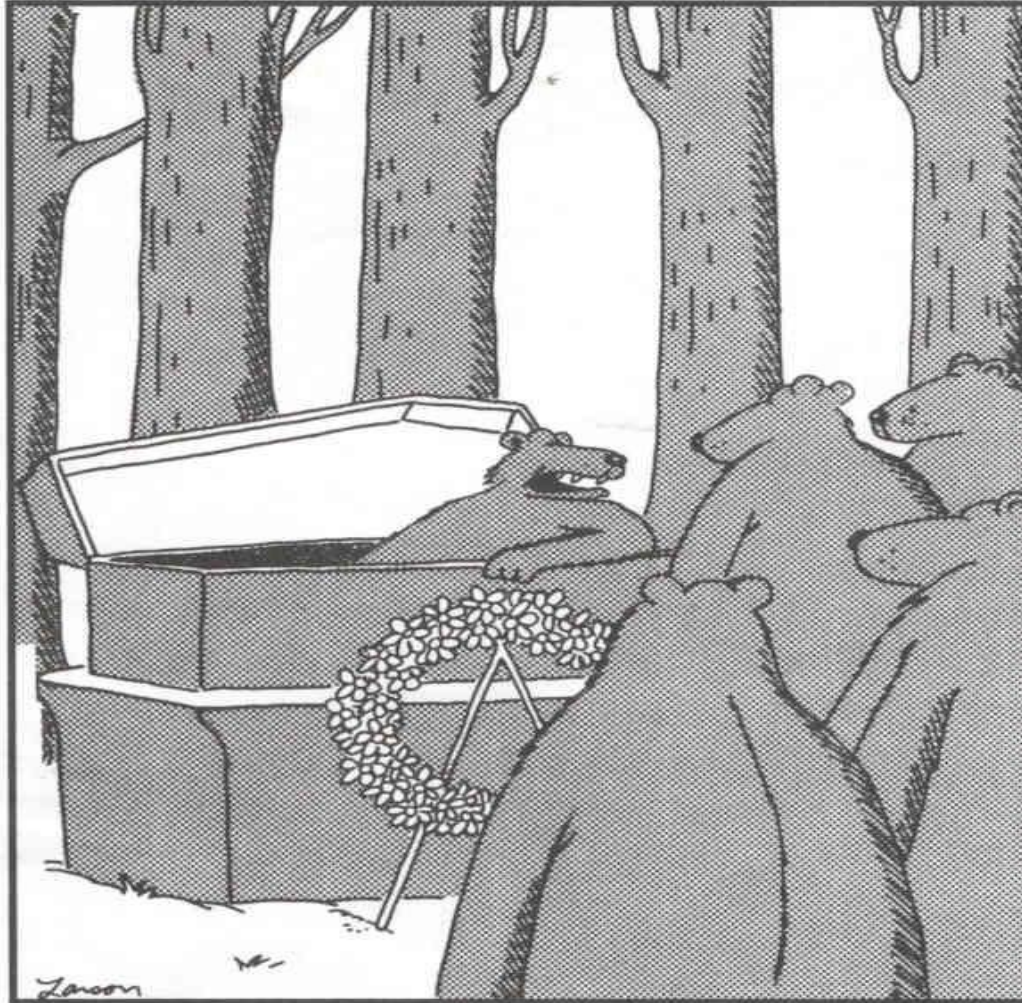
Mrs. B continued

- So CNS consulted for wound
- Two open areas:
 - Right buttock 4 cm x 6cm
 - Left buttock 3cm x 5 cm
 - Firm area in centre of coccyx measures 2 cm in diameter, area is dark purple with yellow areas and skin is intact over area
 - Unable to stage right and left buttock ulcer as completely covered with necrotic tissue
 - No complaints of pain to ulcers

Mrs. B continued

- ❑ Discussed with Mrs. B importance of relieving pressure off buttocks and transferring back to bed throughout day.
- ❑ Explained consequences of pressure not relieved and not debrided and infection of wound likely take her life rather than her other health problems.
- ❑ Once Mrs. B stabilized, the ulcer was surgically debrided so wound healing process could begin.
- ❑ Mrs. B was transferred to long term care.

Lessons Learned:



“For crying out loud, I was *hibernating!* ...
Don’t you guys ever take a pulse?”

Lesson Learned:

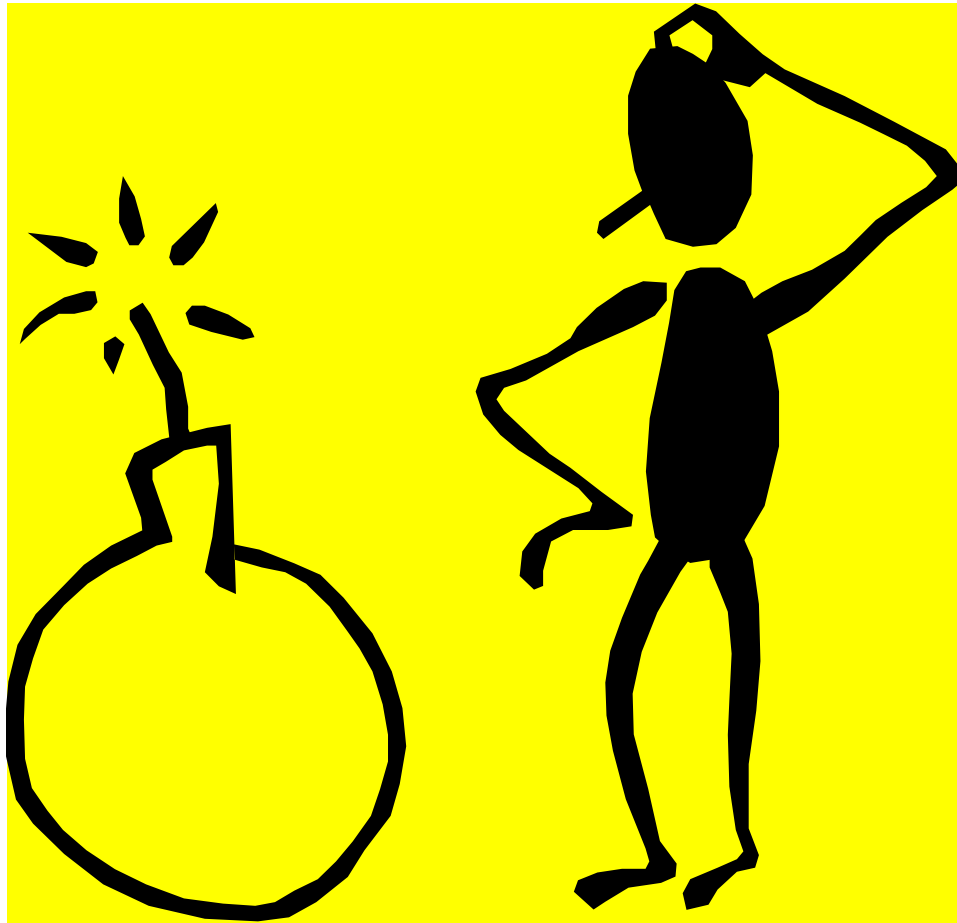
- ❑ Challenge to help patient and staff understand importance of relieving pressure and the potential of healing
 - ❑ This was not a KTU
- ❑ Care setting and prognosis influenced goals of care for wound outcomes
- ❑ Collaboration with all team members regarding realistic wound care management and care planning

Patient/Family Education

“By educating the patient/family, they are empowered with the knowledge that should reduce the chances of emotional reactions if end of life skin conditions occur. With the recognition that these skin conditions are sometimes a normal part of the dying process, there is less potential for assigning blame, and a greater understanding that skin organ failure may be an unavoidable part of the dying process.”

2008 SCALE Expert Panel

Questions ??



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