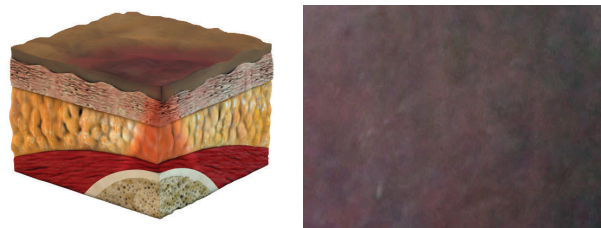


Pressure Ulcers in People with Dark Skin Tones

PAN PACIFIC PRESSURE INJURY CLASSIFICATION SYSTEM FOR DARK SKIN TONES

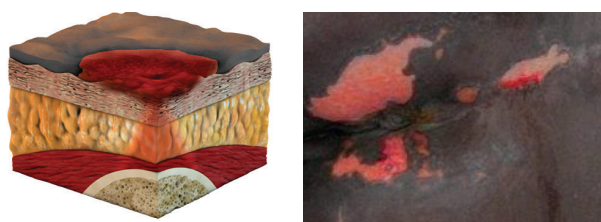
Category/Stage 1:

Intact skin with non-blanchable redness of a localised area usually over bony prominences. Darkly pigmented skin may not have visible blanching; its colour may differ from the surrounding area. The area may be painful, firm, soft, warmer or cooler as compared to adjacent tissue. Stage 1 pressure injuries may be difficult to detect in individuals with darkly pigmented skin tone. May indicate 'at risk' individuals (a heralding sign of risk).



Category/Stage 2:

Partial thickness loss of dermis presenting as a shallow open ulcer with a red/pink wound bed, without slough. May also present as an intact or open/ruptured serum-filled blister. Presents as a shiny or dry shallow ulcer without slough or bruising (bruising indicates suspected deep tissue injury). Stage 2 pressure injuries should not be used to describe skin tears, tape burns, perineal dermatitis, maceration or excoriation.



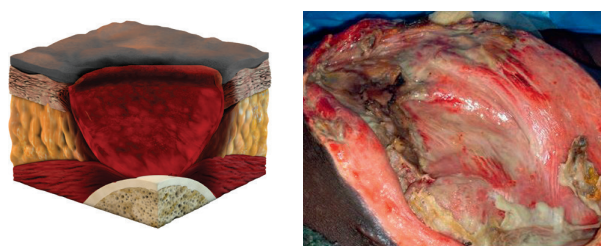
Category/Stage 3:

Full thickness tissue loss. Subcutaneous fat may be visible, but bone, tendon or muscle are not exposed. Slough may be present but does not obscure depth of tissue loss. May include undermining and tunnelling. The depth of Stage 3 pressure injuries varies by anatomical location. The bridge of nose, ear, occiput and malleolus do not have subcutaneous tissue and Stage 3 ulcers can be shallow. In contrast, areas of significant adiposity can develop extremely deep Stage 3 pressure injuries. Bone/tendon is not visible or directly palpable.



Category/Stage 4:

Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed. Often include undermining and tunnelling. The depth of a Stage 4 pressure injury varies by anatomical location. The bridge of nose, ear, occiput and malleolus do not have subcutaneous tissue and these ulcers can be shallow. Stage 4 pressure injuries can extend into muscle and/or supporting structures (e.g. fascia, tendon or joint capsule) making osteomyelitis possible. Exposed bone/tendon is visible or directly palpable.



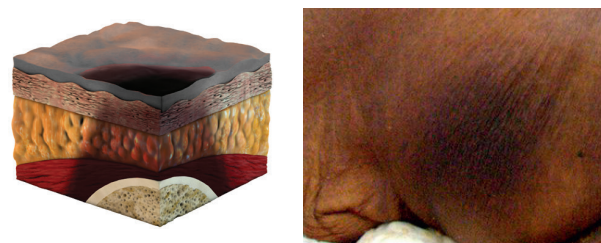
Unstageable:

Full thickness tissue loss in which the ulcer base is covered by slough (yellow, tan, gray, green or brown) and/or eschar (tan, brown or black) in the wound bed. Until enough slough and/or eschar is removed to expose the base of the wound, the true depth, (and therefore Stage) cannot be determined. Stable (dry, adherent, intact without erythema or fluctuance) eschar on the heels serves as 'the body's natural (biological) cover' and should not be removed.



Suspected Deep Tissue Injury:

Purple or maroon localised area of discoloured intact skin or bloodfilled blister due to damage of underlying soft tissue from pressure and/or shear. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue. Deep tissue injury may be difficult to detect in individuals with dark skin tones. Evolution may include a thin blister over a dark wound bed. The wound may further evolve and be covered by thin eschar. Evolution may be rapid, exposing additional layers of tissue even with optimal treatment.



A pressure ulcer (PU) can be defined as:

"Localised damage to the skin and/or underlying tissue, as a result of pressure, or pressure in combination with shear. Pressure injuries/ulcers usually occur over a bony prominence but may also be related to a medical device or other object" ¹

Pressure ulcers are categorised by their severity and may be limited to the superficial tissues of the epidermis and dermis or extend to deeper tissue exposing and/or involving muscle, tendon and bone.

Early detection of pressure related skin damage is essential, as it allows for appropriate intervention which can prevent progression to more severe ulceration ². Therefore, the ability to accurately identify and confirm Category 1 pressure ulcers in all skin types is of significant importance for clinical staff, carers and healthcare providers.

Health care professionals and carers are typically taught to look for redness (erythema) as a first sign of pressure damage and whilst this is relatively simple to identify in Caucasian skin it can prove to be difficult to diagnose accurately when assessing individuals with darker skin tones. It is likely that Category 1 PUs are under-reported in individuals with dark skin tone due to failure to identify early differences in skin colour as a result of pressure related tissue injury ¹.

Skin pigmentation can mask the visual indication of erythema and Category 1 pressure ulcers are more likely to go undetected and deteriorate to full thickness pressure ulcers (Category 3 and 4) in darkly pigmented skin ^{2,3}.

To reduce the risk of erythema (redness) and Category I pressure ulcers developing into full thickness wounds in patients with dark skin tones, it is essential for clinical staff and carers to recognise the other signs and symptoms than can be observed on the skin as early indicators of pressure related tissue injury ^{4,5}.

REFERENCES

1. European Pressure Ulcer Advisory Panel, National Pressure Injury Advisory Panel, and Pan Pacific Pressure Ulcer Injury Alliance. Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline. The international Guideline 2019.
2. Springle S, Shang L, Duckworth M. Detection of skin erythema in darkly pigmented skin using multispectral images. Adv Skin Wound Care. 2009; 22(4):172-9.
3. Bennet A. Report of the task force on the implications for darkly pigmented intact skin in the prediction and prevention of pressure ulcers. Adv Wound Care. 1995; 8(6):34-5.
4. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Quick reference Guide. Australia; 2014
5. Baker M. Detecting pressure damage in people with darkly pigmented skin. Wound Essentials. 2016;11(1):28-31.
6. Pan Pacific Pressure Injury Classification System for Dark Skin Tones. 2020. Pan Pacific Pressure Injury Alliance (PPPIA). Available online at <https://pppia.org/static/pdfs/pppia-classification-system-dark-skin-tones.pdf>. Accessed 21st September 2020.
7. MacGregor L, Calne, S, Day K. International Review: Pressure ulcer prevention: Pressure, Shear, Friction and microclimate in context. A consensus document. Wounds International. 2010. London.

These important additional indicators of pressure related tissue injury to the skin include;

- Purple/bluish discoloration
- A purple hue where ischaemia is present
- Localised oedema/swelling due to the inflammatory response
- Temperature change – initial warmth due to the inflammatory response which will become cooler as tissue death occurs
- Pain and discomfort
- Alteration in sensation in response to either inflammation or ischaemia
- Change in tissue consistency in relation to surrounding tissue. For example, induration (hardness) due to excessive inflammation and necrosis. May also become soft and boggy.

Whilst these additional signs and symptoms are applicable to all skin tones, they can be particularly useful when caring for patients with dark skin tones when obvious pressure-related redness on the skin can be more difficult to identify.

CONSIDERATION FOR CLINICAL PRACTICE

Skin should be carefully inspected for any discoloration over pressure areas. Areas of discoloration in relation to surrounding skin should be assessed more closely for temperature changes, oedema, changes in tissue consistency and pain ¹.

Note: This is a guide only, signs and symptoms of pressure ulcers may present differently on different skin tones. Education is a critical factor in ensuring that all members of the clinical team can strive to prevent and treat pressure ulcers according to the best evidence available ⁷.



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