EUROPEAN PRESSURE ULCER ADVISORY PANEL

EPUAP Statement

PRESSURE ULCER CLASSIFICATION
DIFFERENTIATION BETWEEN PRESSURE ULCERS AND MOISTURE LESIONS

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Pressure Ulcer is an area of localised damage to the skin and underlying tissue caused by pressure or shear and or a combination of these. The identification of pressure damage is an essential and integral part of clinical practice and pressure ulcer research. Pressure ulcer classification is a method of determining the severity of a pressure ulcer that is also used to distinguish pressure ulcers from other skin lesions. A classification system describes a series of numbered grades or stages each determining a different degree of tissue damage.

The European Pressure Ulcer Advisory Panel (EPUAP) defined four different pressure ulcer grades (see Table 1). Non blanchable erythema should be considered as an alarm signal that pressure and shear are causing tissue damage and preventive measures should be taken without delay to prevent the development of pressure ulcer lesions (grade 2, 3 or 4).

Table 1: EPUAP Classification (1)

Grade	Short Description	Definition
Grade 1	Non-blanchable erythema of intact skin	Non-blanchable erythema of intact skin. Discolouration of the skin, warmth, oedema, induration or hardness may also be used as indicators, particularly on individuals with darker skin.
Grade 2	Blister	Partial thickness skin loss involving epidermis, dermis, or both. The ulcer is superficial and presents clinically as an abrasion or blister.
Grade 3	Superficial ulcer	Full thickness skin loss involving damage to or necrosis of subcutaneous tissue that may extend down to, but not through, underlying fascia.
Grade 4	Deep ulcer	Extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structures with or without full thickness skin loss.

The diagnosis of the existence of a pressure ulcer is more difficult than one commonly assumes. There is often confusion between a pressure ulcer and a lesion that is caused by the presence of moisture, for instance because of incontinence of urine and/or faeces. The differentiation between the two is of clinical importance since prevention and treatment strategies differ largely and the consequences of the outcome for the patient are of imminent importance. This statement on pressure ulcer classification is limited to the differentiation between pressure ulcers and moisture lesions. Obviously there are numerous other lesions that might be misclassified as a pressure ulcer (e.g., leg ulcer, diabetic foot). Previous experience has shown that, due to the location of moisture lesions, these lesions are the ones most often misclassified as pressure ulcers (2–3). Wound related characteristics (causes, location, shape, depth, edges, and colour) and patient related characteristics are helpful to make a differentiation between a pressure ulcer and a moisture lesion (see Tables 2 and 3).

Table 2: Wound Related Characteristics

	Pressure Ulcer	Moisture Lesion	Remarks

Causes	Pressure and/or shear must be present.	Moisture must be present (e.g. shining, wet skin caused by urinary incontinence or diarrhoea)	If moisture and pressure/shear are simultaneously present, the lesion could be a pressure ulcer as well as a moisture lesion (combined lesion).
Location	A wound not over a bony prominence is unlikely to be a pressure ulcer.	A moisture lesion may occur over a bony prominence. However, pressure and shear should be excluded as causes, and moisture should be present. A combination of moisture and friction may cause moisture lesions in skin folds. A lesion that is limited to the anal cleft only and has a linear shape is no pressure ulcer and is likely to be a moisture lesion. Peri-anal redness / skin irritation is most likely to be a moisture lesion due to faeces.	It is possible to develop a pressure ulcer where soft tissue is compressed (e.g., by a nutrition tube, nasal oxygen tube, urinary catheter). Wounds in skin folds of bariatric patients may be caused by a combination of friction, moisture and pressure. Bones may be more prominent where there is significant tissue loss (weight loss).
Shape	If the lesion is limited to one spot, it is likely to be a pressure ulcer. Circular wounds or wounds with a regular shape are most likely pressure ulcers, however, the possibility of friction injury has to be excluded.	Diffuse, different superficial spots are more likely to be moisture lesions. In a kissing ulcer (copy lesion) at least one of the wounds is most likely caused by moisture (urine, faeces, transpiration or wound exudate).	Irregular wound shapes are often present in a combined lesion (pressure ulcer and moisture lesion). Friction on the heels may also cause a circular lesion with full thickness skin loss. The distinction between a friction lesion and a pressure ulcer should be made based on history and observation.
Depth	Partial thickness skin loss is present when only the top layer of the skin is damaged (grade 2). In full thickness skin loss, all skin layers are damaged (grade 3 or 4). If there is a full thickness skin loss and the muscular layer is intact, the lesion is a grade 3 pressure ulcer. If the muscular layer is not intact, the lesion should be diagnosed as a grade 4 pressure ulcer.	Moisture lesions are superficial (partial thickness skin loss). In cases where the moisture lesion gets infected, the depth and extent of the lesion can be enlarged/ deepened extensively.	An abrasion is caused by friction. If friction is exerted on a moisture lesion, this will result in superficial skin loss in which skin fragments are torn and jagged.
Necrosis	A black necrotic scab on a bony prominence is a pressure ulcer grade 3 or 4. If there is no or limited muscular mass underlying the necrosis, the lesion is a pressure ulcer grade 4. Necrosis can also be considered present at the heel when the skin is intact and a black/blue shimmer is visible under the skin (the lesion will most likely evolve into a necrotic escar).	There is no necrosis in a moisture lesion.	Necrosis starts without a sharp edge, but evolves into sharp edges. Necrosis softens up and changes colour (e.g. blue, brown, yellow, grey), but is never superficial. Distinction should be made between a black necrotic scab and a dried up blood blister.
Edges	If the edges are distinct, the lesion is most likely to be a pressure ulcer. Wounds with raised and thickened edges are old wounds.	Moisture lesions often have diffuse or irregular edges.	Jagged edges are seen in moisture lesions that have been exposed to friction.
Colour	*Red skin:*	*Red skin:*	*Red skin:*

	If redness is non-blanchable, this is most likely a pressure ulcer grade 1. For people with darkly pigmented skin persistent redness may manifest as blue or purple. *Red in wound bed:* If there is red tissue in the wound bed, the wound is either a grade 2, a grade 3 or a grade 4 pressure ulcer with granulation tissue in wound bed; *Yellow in wound bed:* Softened necrosis is yellow and not superficial; it is either a grade 3 or a grade 4 pressure ulcer. Slough is a creamy, thin and superficial layer; it is a grade 3 or a grade 4 pressure ulcer. *Black in the wound bed:* Black necrotic tissue in the wound bed indicates a pressure ulcer grade 3 or grade 4.	If the redness is not uniformly distributed, the lesion is likely to be a moisture lesion *Pink or white surrounding skin:* maceration due to moisture.	If the skin (or lesion) is red and dry or red with a white sheen, it could be a. o. a fungal infection or intertrigo. This is often observed in the anal cleft. *Green in wound bed:* Infection. Be aware that zinc oxide ointments may result in whitened skin. Whilst eosine is not recommended, it is still used in some areas. It will turn the skin red/brown and obstruct the observation of the skin.

Table 3: Patient Related Characteristics

Try to find out the causes of the lesion:
Check the (wound) history in the patient record • If the lesion commenced as a large and deep lesion, it is unlikely that it is a moisture lesion. • If the lesion developed after a long period of pressure and/or shear (e.g., surgery, emergency department, radiology), even if the pressure and/or shear are not currently present, it is likely the lesion is a pressure ulcer.
Which measures are taken/ what care is provided? • Superficial linear lesions are often caused by removing sticking plaster and are neither pressure ulcers nor moisture lesions. • If the pressure ulcer does not improve despite pressure relieving measures and suitable dressings for more than 7 to 10 days, and moisture is present, consider the possibility that the lesion is a moisture lesion. • If the moisture lesion does not improve despite the use of skin barrier products and incontinence/moisture management for more than two days, and pressure and/or shear is present, consider the possibility that the lesion is a pressure ulcer. Exclude the possibility of contact sensitivity (e.g., latex allergy). A dermatological consultation is recommended when in doubt about the diagnosis of contact allergy.
What is the skin condition at the different pressure points? • If a pressure ulcer is present at another pressure point, it is likely this new lesion is also a pressure ulcer
Check whether the movements, transfers and position (changes) of the patient, may have caused the lesion. • If the affected area is a pressure point, a pressure ulcer is likely. • If the affected area is not a pressure point, it is unlikely that the lesion is a pressure ulcer. • If friction is exerted on a moisture lesion, this will result in superficial skin loss in which skin fragments are torn and jagged • Continuous friction causes abrasions • If shear deforms the superficial and deeper tissue layers, a pressure ulcer may be the result. • If a lesion occurs on the heel, check if the lesion was caused by: a) pressure and/or shear => likely a pressure ulcer, b) movement/transfer/shoes => likely a friction lesion/abrasion not pressure ulcer.
If a patient is incontinent, consider whether the lesion is a moisture lesion or not. • If skin barrier products are used in patients who are incontinent, then the chance that a new lesion is a moisture lesion

is limited.
• If diapers or incontinence pads are often saturated, consider possibility of a moisture lesion.

Exclude other possible causes.
• Sometimes it can be difficult to differentiate between a moisture lesion and an infection (e.g., candida intertrigo), also characterised by irregular edges and satellite lesions ('islands in front of the coastline'). In these cases the clinical picture (fever, leucocytosis) should differentiate from moisture lesions.
• Other dermatological conditions should be considered when in doubt about the diagnosis of pressure ulcer or moisture lesion. A dermatological consultation is then recommended.

Additional parameters

Texture of the skin
• Dead tissue feels dry / leathery and not pliable.

Temperature of the skin
• Compare the temperature of the skin at the pressure point with the temperature of the surrounding skin.
This may also be an indicator for detecting grade 1 pressure ulcer in patients with a darkly pigmented skin.
a) If the temperature is higher than that of the surrounding skin, hyperaemia is present and the lesion is recent.
b) If the temperature is lower than that of the surrounding skin, the blood flow is limited and the lesion is not recent.

Pain
• Pain is described in 37% to 87% of the patients with pressure ulcers.4
Therefore pain is not a discriminating characteristic for pressure ulcers.
• Pain is caused:
a) by irritation of the sensory nerve endings in and around the ulcer;
b) when the wound is debrided;
c) when aids are applied too tightly (e.g., tubes, drains);
d) when dressings rub against the surface of the wound;
e) when dressings that stick to the wound surface are removed.
• Patients with pressure ulcers experience both acute and chronic pain and describe the sensation as burning, stinging, sharp, stabbing and tingling.

References

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