# Skin Changes at End of Life (SCALE)

## SCALE

**Q.** Could skin failing impair absorption of subcutaneous infusions? What are the likely signs and management for this?

**A.** Yes, most definitely. When skin failure occurs, blood is shunted to larger organs of the body, resulting in a decrease in tissue perfusion, impaired skin oxygenation, mottling and necrosis. Skin failure also involves loss of structural integrity and the reduction of soft tissue perfusion.

To ensure absorption of fluids, a large number of healthy, fully working capillaries, is required. If these are not present the result will be poor intolerance and absorption of fluids.

Early signs may be oedema (build-up of fluid) at needle the site.

Increase in shortness of breath, and the patient may become 'bubbly' (respiratory congestion) when fluid builds up on the lungs. Restlessness, nausea and vomiting, pain, erythema.

If any of these symptoms are noted, fluids should be stopped immediately, ensuring that explanations are given to relatives as this may be very distressing for them.

In certain circumstances, it may not be appropriate to even attempt them i.e. if the skin is already showing signs of SCALE: mottling, discolouration, ischaemia, change in temperature, erythema, and simply marking very quickly. Each patient should be assessed as an individual case, and options, pros and cons discussed with them if they are still able, and their relatives prior to commencing sub-cut fluids. Evidence to promote the use of subcutaneous fluids for patient comfort and improved quality of life remains inconclusive.

Mouth care should be performed either by nurses or relatives if they wish. If the patient is still able to swallow, small ice chips help to keep the mouth moist, along with artificial saliva. Pink sponges should be avoided as there has been a health warning regarding sponges coming detached from the stick.

When the patient is unable to swallow, very small drops of fluid can be administered using a 1ml syringe. Ensuring that not too much is given. Lip balms and hydrating toothpaste can also be used to freshen and hydrate the mouth and lips. No product containing liquid paraffin should be used on patients using oxygen therapy.

**Q.** Does the Palliative Team need to document "actively dying" and then any injuries after are SCALE? Is it retrospective, post death?

**A.** Documenting that a patient is "actively dying", "last days of life" is an important part of palliative care. Not only does it inform nursing staff, but it should also indicate that a conversation has been held with the family of the dying person, informing them of the patient's change in condition. After it has been confirmed the patient is actively dying, we can still not attribute all tissue damage to SCALE.

If a pressure ulcer is sustained post "actively dying" phase, and there are no other signs of SCALE in the area, then this would need to be documented as a pressure ulcer.

Post-death, it would be best practice to investigate the incident to help ascertain whether the injury was due to SCALE or pressure damage. You would need to check all aspects of the patient's care, which would include equipment used i.e. mattress, tilting systems, slings, pressure relieving boots etc, mobility/repositioning, concordance (patient & relatives), and any other problems that may have prevented you from giving best care. If you have done absolutely everything to prevent pressure damage and the patient still sustains a pressure ulcer, along with skin changes, then the probability is that SCALE contributed to the pressure ulcer. If there are no signs of SCALE, and for some reason you have not been able to provide all the necessary care as you would have liked, then the tissue damage would probably be caused by pressure alone. It is vitally important that SCALE is not used inappropriately.

**Q.** How could we maintain good skin integrity even though they are dehydrated already?

**A.** Good skin integrity is both from inside and outside. Naturally encourage fluids, complete a risk assessment around dehydration, think of alternative methods of getting fluids in place (ice cubes), favourite drinks etc. but if the patient is no longer drinking then there is little we can do to increase circulating fluid levels as they are in the dying phase of life. Externally we can continue to look after the skin by using gentle cleansing products, putting on emollients lightly but frequently, drying well, managing incontinence promptly and observing for signs of skin changes.

**Q.** Please tell me more about Purpose T

**A.** During the webinar we had many enquiries regarding

Purpose T information and where to find it, therefore we have given the links below to the Leeds University Purpose T website where you can request information directly from the team who created Purpose T.

https://ctru.leeds.ac.uk/purpose/purpose-t/

https://ctru.leeds.ac.uk/wp-content/uploads/2019/01/PURPOSE-T-version-2-User-Manual-V2.pdf

OSKA's webinar on "Purpose T – what, how, why?" is available on request: https://oska.uk.com/peers-under-pressure-webinars/

**Q. I have been told by Training & Development Manager that we have to use both Waterlow and Purpose-T. Is that counterproductive?**

**A.** Regarding the use of Purpose T being used along with another risk assessment tool, we advise that it is best practice to use just one validated risk assessment tool to aid your decision making and subsequent care planning. Using two together may cause confusion, especially if it comes up with different risk scores. We would advise however to use the risk assessment tool that you are most comfortable with, ensuring you are adhering to organisational policy. Also using both your clinical judgement and holistic assessment will enhance your overall decision making and ensure your care interventions are person centred.

## MATTRESSES/EQUIPMENT

**Q. Should we be using pillows for comfort when on an airflow mattress, especially under arms/lower legs?**

**A.** When patients are on an "active" or airflow mattress, anything that sits between the patient and the mattress will lessen the effect of the pressure redistribution on the body. However, there will be times when clinical decisions are made based on patient comfort and positioning that require the use of pillows to support the body. Therefore, often a balance of risk needs to be made based on your overall risk assessment of the patient, skin inspection, repositioning etc. If pillows are being used to support the body, then the advice would be to ensure those areas of the body that are in contact with the pillows are inspected and checked regularly, and the patient is being regularly repositioned.

In the instance of using pillows to offload heels, the advice is to try to use other proven methods of heel offloading such as booties or a wedge/inbuilt heel offloader etc. instead of pillows, as pillows will often go flat quickly, where as a product that is specifically designed to off load heels, will not.

**Q. Patients have asked about lamb's / sheep's wool - are there any studies about using this?**

**A.** The use of sheep's wool as a method to prevent pressure damage has been strongly advised against for several years now. A Cochrane Review in 2015 found that Sheepskin/wool for the use of preventing pressure ulcers has very limited evidence and the evidence found was based on Australian medical grade sheepskin only.

**Q. What are the contraindications please for each type of mattress?**

**A.** The main contraindications for any "static" support surface would be:

- patients over the maximum weight limit
- Patients under the minimum weight limit

**A.** The main contraindications for an "active" support surface would be:

- patients with an unstable spinal injury/fracture
- patients over the maximum weight limit
- patients under the minimum weigh limit

However, we strongly advise you always check a company's guidance and instructions for use to ensure you are aware of all contraindications before using a mattress for a patient. Contraindications will not always be limited to the above set out.

**Q. Are tilting mattress more advisable than tilting beds?**

**A.** Please see the link below to our clinical blog on lateral tilting devices:

https://oska.uk.com/understanding-the-different-types-of-tilting-devices-and-their-intended-uses/

**Q. Is there something similar that can be placed between the legs when laying on side?**

**A.** Please see link below for our snuggle cushion: https://oska.uk.com/product/oska-snuggle-cushion/

**Q. Is there a device that can off-load the lateral malleoli when on side lying?**

**A.** There are some devices on the market that can offload the lateral malleoli when side lying, example below: https://www.ulcersolutions.com/product/ankle-keeper

However, if this is something you cannot access, but the patient is on an air mattress, if their malleolus is against the mattress, this will provide some pressure reduction over the area and/or offloading. Alternatively, the use of a gel pad such as Kerrapro or Dermis Plus Prevent, may also be used to reduce peak pressures over these areas. Regular skin inspection of an area that is not completely offloaded however, would be essential to closely monitor for signs of pressure damage.

**Q.** What is the best mattress for an individual who does not like continence pads? The individual is living with dementia. She pulls her continence pads off each time she is assisted to wear a pads.

**A.** Unfortunately there is no specific mattress for an individual that does not like wearing continence pads. We would advise that you contact your local Continence Advisory Service to discuss alternative products for your patient.

## NUTRITION

**Q.** Apart from pressure ulcers, does having poor nutrition cause breakdown in the skin especially if the person is not having the right amount of protein?

**A.** Poor nutrition can most definitely contribute to tissue breakdown.

The skin relies on macronutrients (carbohydrates, proteins and lipids) and micronutrients (vitamins and minerals) to maintain functions of the skin. Lack of vitamins, particularly vitamin B can result in dry, flaky, cracked sensitive skin, which can result in irritation. This may result in tissue damage. Protein deficiency is a contributory factor in poor wound healing and is a major nutrient for maintenance of body tissue.

Rather than the signs of SCALE which we may see in end-of-life patients, lack of nutrients would probably manifest as skin disorders, rather than mottling, ischemia, and damage that we associate with SCALE.

Having said that, we are all aware that research is confident in stating that malnutrition is in fact a major cause of skin breakdown, and it would be safe to say that most end-of-life patients suffer with malnutrition, including those who may be overweight due to oedema, ascites etc. Many end-of-life patients are also cachexic.

## OTHER

**Q.** It was mentioned originally that there were seven categories - are you able to elaborate on this?

**A.** The EPUAP (European Pressure Ulcer Advisory Panel) set the 6 main categories of PU – which you know are Cat 1-4, unstageable and SDTI.

In 2018 NHS improvement recommended that "device related pressure damage" was a category of pressure ulcer. However, this was just to ensure that device related pressure damage was highlighted as the "cause" in documentation. Essentially you would still categorise a device related PU as per the EPUAP categories but document it as a "device related category 1 -4, unstageable or SDTI".

**Q.** Any suggestions for body moisturisers that can be used safely with patients on oxygen therapy?

**A.** All emollients have some form of oil in them, some have paraffin, and some have vegetable or olive oil, and most will still need to do a risk assessment around fire risk.

A good web page is:

https://www.cqc.org.uk/guidance-providers/learning-safety-incidents/issue-3-fire-risk-use-emollient-creams

https://www.gov.uk/guidance/safe-use-of-emollient-skin-creams-to-treat-dry-skin-conditions

Following a number of fatal fires in the UK, Anglia Ruskin University, De Montfort University and the National Fire Chiefs Council, (NFCC), Emollient Group confirmed that emollient creams that contained both paraffin and non-paraffin ingredients can be absorbed into clothing and react to an exposed naked flame or heat source, causing the clothing to ignite.

## REFERENCES

**Q.** Can we have the full reference for Livesey 2023 please?

**A.** Livesey, J. (2023). The role of the nurse in providing wound management at the end of life. Expert Comment. Wound Care Today. Available at. https://www.woundcare-today.com/journals/latest-issue/wct (Accessed 24/07/23)

**Q.** Can I ask about the Matzo and Sherman (2019) reference - is there a way I can access this document? Mainly, I'd like to know how they demonstrated death by malnutrition.

**A.** Matzo, M. Sherman, D.W. (2019). Palliative Care Nursing: Quality care to the end of life. 5th Ed. Springer Publishing Company, New York. This is a book which I accessed via the university library. Staff may be able to access contents via their Athens account online.