Preventing, assessing and managing skin tears

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Skin tears can become chronic wounds if they are not treated appropriately, and are a growing problem as the number of older people increases.

As well as at the extremes of age, these wounds most commonly occur in people who are critically ill or medically compromised and those who need help with personal care (Beldon, 2008; Carville et al, 2007; Irving et al, 2006). Where possible, prevention should be nurses’ priority; when skin tears do occur, accurate assessment and appropriate management will minimise further trauma and preserve viable tissue.

The evidence on the prevalence and incidence of skin tears is limited and generally dated. A study conducted in a long-term care facility in Australia indicated that 42% of known wounds were found to be skin tears (Everett and Powell, 1994), while an incidence of 0.92 per patient per year was reported in a care facility for older people in the US (Malone et al, 1991). A more recent survey found prevalence was 8-11% in public hospitals in Western Australia (Wounds-West, 2009).

The work carried out in Australia led Carville et al (2007) to conclude that skin tears are perceived to be common wounds and occur more frequently than pressure ulcers.

To date no prevalence data is available for the UK, so the number of patients needing hospital care due to skin tears and their resource impact or cost to patients and the NHS is are not fully known.

The management of skin tears differs between care settings. An international survey to explore their assessment, prediction, prevention and treatment was carried out from June until December 2010 (LeBlanc et al, undated, unpublished data). In total, 1,127 health professionals from 16 countries completed the survey; over two-thirds (70%) reported a problem with assessment and...
documentation of skin tears in their practice settings, while 90% favoured a simplified method of documenting and assessing them. Despite the availability of assessment and classification scales, the majority of responders (81%) admitted they were not used in their practice settings.

There are well-recognised best-practice guidelines incorporating risk assessment, classification and management strategies concerning pressure ulcers. It is clear that practitioners need better information on preventing and managing skin tears.

**Risk factors**
Both intrinsic and extrinsic factors make the skin more vulnerable with advancing age.

The outermost component of the epidermis – the stratum corneum – is composed of corneocytes (formerly known as keratinocytes) and is the main barrier to chemical and microbial invasion. The turnover time of keratinocytes is reduced by 50% during later life (Sibbald et al, 2009), which results in the epidermis thinning. The dermal-epidermal junction also thins and flattens with age, which reduces resistance to shearing forces (Voegell, 2010).

The dermis is composed of connective tissue and components such as blood vessels, lymphatic vessels, macrophages, endothelial cells and fibroblasts. As people age, there is an approximate 20% loss in the thickness of the dermal layer.

Finally, the subcutaneous fatty layer becomes thinner with age. Certain areas of the body, such as the face, neck and hands, lack the cushioning produced by fatty deposits so can become susceptible to skin tears (Resnick, 1993). Vascular capillaries become more fragile leading to ecchymosis and senile purpura (White et al, 1994).

Neonates and infants are also susceptible to skin tears. Neonates have under-developed skin and children have only 60% epidermal thickness (Baharestani, 2007). Neonates also have decreased epidermal to dermal cohesion (Irving et al, 2006).

Other factors not directly related to age, such as immunological status, malnutrition, circulation and oxygen intake may also affect the skin’s fragility (Meuleneire, 2002a).

**Preventing skin tears**
Preventing skin tears should start with early identification of those at risk. Based on evidence, the consensus statement of an international panel suggested the following should be part of prevention:

- Assess for risk on admission to healthcare services and whenever the patient’s condition changes;
- Implement a systematic prevention protocol;
- Ensure those at risk wear long sleeves, long trousers or knee-high socks;
- Upholster or pad sharp borders of bed or surrounding furniture;
- Use aids when moving patients to adopt good manual-handling techniques according to local policy;
- Never use bed sheets to move patients as this can add to damage by causing a dragging effect on the skin. Always use a lifting device or slide sheet;
- Where possible, reduce or eliminate pressure, shear and friction using pressure-relieving devices and positioning techniques.

**Assessing and managing skin tears**
The most important aspect of assessment and management is to minimise further trauma and preserve viable tissue.

It is important to classify the type of skin tear as this will determine its severity and help in planning treatment. Two validated skin-tear classification systems are available to practitioners: the Payne-Martin Classification System for Skin Tears (Payne and Martin, 1993) and the more recently developed STAR Skin Tear Classification System (Carville et al, 2007) (Box 1). Practitioners should know which system is used in their clinical setting.

**BOX 1. STAR SKIN TEAR CLASSIFICATION SYSTEM**

| Category 1a | A skin tear where the edges can be realigned to the normal anatomical position (without undue stretching) and the skin or flap colour is not pale, dusky or darkened. |
| Category 1b | A skin tear where the edges can be realigned to the normal anatomical position (without undue stretching) and the skin or flap colour is pale, dusky or darkened. |
| Category 2a | A skin tear where the edges cannot be realigned to the normal anatomical position and the skin or flap colour is not pale, dusky or darkened. |
| Category 2b | A skin tear where the edges cannot be realigned to the normal anatomical position and the skin or flap colour is pale, dusky or darkened. |
| Category 3 | A skin tear where the skin flap is completely absent. |

**BOX 2. STAR SKIN TEAR GUIDELINES**

- Control bleeding and clean the wound according to protocol.
- Realign (if possible) any skin or flap.
- Assess tissue loss and skin or flap colour using the STAR Classification System.
- Assess the surrounding skin condition for fragility, swelling, discolouration or bruising.
- Assess the person, their wound and their healing environment as per protocol.
- If skin or flap colour is pale, dusky or darkened, reassess in 24-48 hours or at the first dressing change.
CASE STUDY. TREATING SKIN TEARS

A 75-year-old woman stumbled and fell at home, landing with her right arm against a cupboard. She experienced excruciating pain in her right hip and could not stand up. On her right arm, she had two epidermal skin tears. Her daughter placed absorbent dressings on the bleeding wounds.

A few hours later the patient arrived at the emergency ward. After a clinical investigation, she was admitted to hospital with a fractured hip.

The first wound on the forearm measured 3cm x 2cm. The wound was cleaned with saline and the flap eased back into place. A soft silicone dressing (Mepitel) was placed on the wound with an absorbent dressing on top.

At day six, complete wound healing was observed. A new soft silicone dressing was placed on the newly healed wound for protection.

The second wound on the upper arm was much bigger – it was triangular and measured 13cm x 5cm. After cleansing, the skin flap was eased back into place, and 95% closure was achieved. As with the first wound, a soft silicone dressing and absorbent pad were applied. Due to exudate levels, the absorbent dressing was changed at day one and day three.

At day six, the wound had healed with an area of just 5%. Where the epidermis was missing was an open superficial wound. Source: Meuleneire (2002b)

Ongoing management: review and reassess

At each dressing change, the dressing should be gently removed in the direction indicated by the arrow. If it is not removed easily, consider using saline soaks or silicone-based adhesive removers (Mudge and Orsted, 2010). The wound flap may be very friable so care should be taken to prevent it from being disturbed.

The wound should be observed for signs of infection and any changes in the colour of the tissue of the flap, which may indicate that it is becoming non-viable (Stephen-Hayes and Carville, 2011).

Conclusion

Skin tears are common wounds, particularly at the extremes of age. Nurses should be aware of the risk factors associated with them and minimise risks to patients wherever possible.

When a patient develops a skin tear, using a classification system will aid decision-making, and ensure nurses are all using the same language to describe lesions. Treatment regimens should be based on the best available evidence. NT

References


http://tinyurl.com/STAR-skin


LeBlanc K et al (2011) Skin Tear Survey [unpublished data].


