

A safe first-line approach to managing skin tears within an acute care setting (part 1)

KEY WORDS

- » Acute setting
- » Lower limb algorithm
- » Pathway
- » Skin tear
- » Upper body algorithm
- » Wounds healing

Skin tears are common in an acute setting. They have a negative impact on patient quality of life and increased healthcare costs. In the first of two articles, the authors describe the ideal first-line approach to managing skin tears. Its application in practice is illustrated using the Doncaster and Bassetlaw Teaching NHS Foundation Trust skin tear pathway, which has been audited and enhanced to incorporate the latest ISTAP definition of skin tears as traumatic wounds and the recommendation to use light compression as a component of treatment in skin tears of the lower limb.

Skin tears are a common type of traumatic wound with major consequences for healthcare providers, carers and patients alike; they cause pain, increase healthcare costs and reduce patients' quality of life (Chang et al, 2016; LeBlanc et al, 2018; Munro et al, 2018). Their prevalence in acute care is similar to or greater than that of pressure ulceration and, like pressure ulcers, skin tears are more common in older people and have been linked to a high Waterlow score or low Braden score (Rafter et al, 2016; Bermark et al, 2018). As such, skin tears are regarded as largely preventable (LeBlanc et al, 2018). Unlike pressure ulceration, however, there is a lack of awareness and research evidence to inform practice (Rayner et al, 2015). Various patient characteristics have been associated with skin tears (*Box 1*) (Rayner et al, 2015; Bermark et al, 2018; Munro et al, 2018).

Skin tears appear to be a hidden and extensive problem. Their prevalence has been reported to be 8.1–11.4% in inpatients (Bermark et al, 2018; Munro et al, 2018) and 6.1% in the acute care setting (Chang et al, 2016). It has been noted that despite a recent focus on the problem, nurses often lack knowledge in relation to skin tears, leading to misdiagnosis and inappropriate management (Chang et al, 2016). Guest et al (2015; 2017; 2018) in the Burden of Wounds study commented that

clear diagnosis, adequate documentation and treatment planning is lacking in wound care, leading to poor healing, increased chronicity and escalating costs.

Several papers (White et al, 1994; Bermark et al, 2018) have identified that skin tears on the upper body are more frequently associated with immobile patients while the lower limb is a common site for skin tears in patients with reduced mobility. Full or partial-thickness skin tears can occur on any part of the body but are most commonly found on the upper and lower extremities, with 70–80% occurring on the hands and arms (LeBlanc et al, 2018). The prevalence of skin tears on the lower limb has been reported to be as high as 36–45%, with the majority occurring over the tibia (Rafter et al, 2016; Bermark et al, 2018).

DEFINING AND CLASSIFYING SKIN TEARS

The 2018 International Skin Tear Advisory Panel (ISTAP) definition of a skin tear is a traumatic wound caused by mechanical forces, including the removal of adhesive, and is distinct from a general laceration. The severity may vary by depth, but in a skin tear the depth does not extend through the subcutaneous layer (LeBlanc et al, 2018).

TRACY VERNON

Lead Nurse, Skin Integrity Team, Doncaster and Bassetlaw Teaching NHS Foundation Trust, Doncaster

KELLY MOORE

Clinical Nurse Specialist, Skin Integrity Team, Doncaster and Bassetlaw Teaching NHS Foundation Trust, Doncaster

KATH VOWDEN

Lecturer, University of Bradford and Honorary Nurse Consultant

PETER VOWDEN

Honorary Consultant Vascular Surgeon, Bradford Teaching Hospitals NHS Foundation Trust and Visiting Honorary Professor Wound Healing Research, University of Bradford

Box 1. Characteristics associated with risk of skin tears (Rayner et al, 2015; Bermark et al, 2018; Munro et al, 2018)

- » Previous history of skin tears
- » Older age
- » Impaired mobility
- » Being bedridden/immobile
- » Impaired cognition/dementia
- » History of falls
- » Ecchymosis
- » High Waterlow score
- » Low Braden score
- » Malnutrition.

Box 2. Factors to document during wound assessment (LeBlanc et al, 2018)

- » Cause
- » Anatomical location and duration of injury
- » Dimensions (length, width and depth)
- » Wound bed characteristics and proportion of viable/non-viable tissue
- » Exudate type and volume
- » Any bleeding or haematoma
- » Integrity of the surrounding skin
- » Any signs and symptoms of infection
- » Pain.

Figure 1. ISTAP Skin Tear Classification (adapted from LeBlanc et al, 2018)

Type 1: No skin loss



Linear or flap tear which can be repositioned to cover the wound bed

Type 2: Partial flap loss



Partial flap loss which cannot be repositioned to cover the wound bed

Type 3: Total flap loss



Exposing flap loss exposing the wound bed

Several classification systems for skin tears have been suggested, including: the Payne–Martin system (Payne and Martin, 1990; 1993), which grades tears by the percentage of tissue loss; the skin tear audit research (STAR) classification system (Carville et al, 2017), which extends the Payne–Martin system to include skin colour and has some overlap between categories; and the systematic, standardised ISTAP classification system for skin tears (LeBlanc et al, 2013), which classifies tears as type 1, 2 or 3 based on skin loss (*Figure 1*). The ISTAP classification system has been validated (Chaplain et al 2018; Källman et al, 2019) and is now the preferred system for classifying skin tears.

MANAGING SKIN TEARS

Patients with skin tears should be assessed holistically and the factors in *Box 2* documented during assessment. Pressure should be applied and the limb elevated, if possible, to control bleeding. Gauze can be used to assist with haemostasis if necessary. These injuries have the potential to be closed by primary intention and treatment should aim to preserve the skin flap, maintain the surrounding tissue, re-approximate wound edges without stretching the skin, and reduce the risk of infection and further injury (Wounds UK, 2015). The skin tear should be cleansed to remove any debris, dirt and blood present, and to reduce the risk of infection. Any necrotic tissue should be debrided.

If present and flexible the skin flap should be eased back into position. If realignment is difficult rehydrate the flap with moistened gauze for 5–10 minutes. The tear should be classified as type 1,

2 or 3, using the ISTAP Skin Tear Classification (LeBlanc et al, 2018), and then dressed. A non-adherent mesh dressing, such as lipid-colloid mesh or silicone mesh, is suitable for the management of all types of skin tear as it can be used on dry or exudative wounds, maintains the moisture balance and is atraumatic on removal (LeBlanc et al, 2018). If exudate is present calcium alginates and acrylic dressings can be used, but care should be taken during the removal of acrylic dressings and to ensure that calcium alginate dressings do not dry out the wound bed (LeBlanc et al, 2018). In the UK, ionic silver dressings are recommended if infection is present (LeBlanc et al, 2018). Patients with skin tears often have fragile skin, so adhesive products, sutures and glue should be avoided as they can cause additional damage. Dressings should ideally be left in place for 5 days to minimise disturbance to the wound bed. In order to reduce the chance of disturbing the skin flap the dressing should be marked with an arrow to indicate the direction of removal and with the date the dressing should next be changed.

The updated definition of skin tears as a traumatic wound (LeBlanc et al, 2018) suggests that compression therapy should be considered as a component of treatment in the lower limb. In 2014, Le Blanc et al recommended the application of compression as an adjunct to wound therapy to control peripheral oedema and address local swelling, which is recognised to delay healing. Ewart (2016) suggests that a light tubular bandage or compression be initiated to maximise healing potential when managing skin tears on the lower limbs. The use of compression should therefore



Figure 2. Recommended non-adherent dressing (UrgoTul Absorb Border)

Upper Body Skin Tear Pathway
Emergency/Outpatients Areas

A skin tear is a traumatic wound caused by mechanical forces, including the removal of adhesives. Severity may vary by depth (not extending through the subcutaneous layer). (Le Blanc K et al 2018)

- 1 Stop the bleeding**
 - Apply clean gauze until the bleeding stops
 - Elevate the limb where possible.
- 2 Cleanse the wound**
 - Gently cleanse the wound
 - Remove debris, dirt or haematoma.
- 3 Reapproximate where possible**
 - If a flap is present ease it back into position (reapproximate) without pulling or applying tension
 - If difficult to align, use moistened gauze for 5-10 minutes to rehydrate area.

Important - if the bleeding does not stop after 10 minutes of pressure please seek medical assistance.

Important - the use of paper adhesive strips, sutures or glue may cause additional damage. DO NOT use due to fragility of the skin.

4 Categorise the skin tear

<p>Type 1 Skin tears without tissue loss</p>	<p>Type 2 Skin tears with partial tissue loss</p>	<p>Type 3 Skin tears with entire skin loss</p>
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For inpatients

- 6 Report**
 - Complete Skin Integrity Dashboard
 - Report via DATIX Web System
 - Document accordingly using Skin Integrity IPOC.
- 7 Handover**
 - Handover to ward/department receiving area
 - Ward/department staff to follow Skin Tear Pathway for In-patient Areas.

For discharge home

- 8 Record**
 - Document accordingly via Symphony System.
- 9 Refer**
 - Refer to District Nurse/ Practice Nurse for a dressing change.

Leave in place for 5 days (as a minimum) to minimise disturbance to the wound bed. Wear time will be determined by wound conditions eg. exudate levels.

Skin Integrity Team

Developed February 2017. Updated Jan 2019 - Review Jan 2021. LeBlanc K et al. Best practice recommendations for the prevention and management of skin tears in aged skin. Wounds International 2018.

Figure 3. The 2019 Doncaster and Bassetlaw Teaching Hospitals Skin Tear Pathway for the Emergency and Outpatient Areas

be considered after dressing selection. Local documentation should be completed so that reports can be produced and audits performed to monitor treatment and outcomes.

Skin tears typically proceed to closure in 14–21 days (LeBlanc et al, 2018), so the wound should be reassessed within a week and specialist advice sought if there is no improvement after 7 days. At review, the dressing should be lifted gently and worked away from the attached skin flap. The wound edge should be observed, and the local area checked for any changes, such as discolouration or signs of infection.

ASSESSING AND IMPROVING TREATMENT IN PRACTICE

It is important to assess treatment provided to patients on a regular basis to ensure it is consistent and is both clinically effective and cost-effective. Pathways need to be reviewed and updated

regularly to ensure that they reflect current recommendations and evidence-based practice, and their application in practice promoted to minimise unwarranted variations in care (NHS RightCare, 2017). Here, we detail the steps taken by the Skin Integrity Team in Doncaster and Bassetlaw Teaching NHS Foundation Trust to monitor and improve their skin tear pathway.

ENHANCING THE PATHWAYS

In 2017, the Doncaster and Bassetlaw Skin Integrity Team implemented a skin tear pathway that referenced the 2011 ISTAP guidelines as they wanted to improve compliance and outcomes across the Trust. In 2018, the Skin Integrity Team decided that they need to revise this pathway to reflect the current ISTAP definition (LeBlanc, 2018), which combines skin tears and traumatic wounds. In addition, to reflect different treatment needs, they decided to split the algorithms into upper



Figure 4.
Recommended
10mmHg
hosiery liner

body and lower body skin tears, and to make them relevant to each individual healthcare setting.

The Trust's first decision was to continue using UrgoTul Absorb Border (*Figure 2*) to dress skin tears on both upper and lower limbs, as this non-adherent mesh dressing was already firmly embedded within the local treatment pathway. Among others, this dressing type is advocated by the 2018 ISTAP Best Practice Recommendations for the Prevention and Management of Skin Tears in Aged Skin (LeBlanc, 2018) because it has a number of benefits (Vernon, 2018). Namely:

- » It creates a moist healing environment
- » It encourages new tissue formation through fibroblast proliferation
- » It prevents the dressing adhering to the wound bed, facilitating atraumatic removal without damaging newly formed tissue
- » It allows pain-free dressing changes
- » It protects and improves the periwound skin and surrounding skin.
- » It is safe for use on patients with fragile and sensitive skin.

THE NEW UPPER BODY SKIN TEAR PATHWAYS

Implementing the new rationale, the Skin Integrity Team at the Doncaster and Bassetlaw Teaching NHS Foundation Trust was able to launch the 2019 Skin Tear Pathway for the Upper Body for the following settings:

- » Emergency/Outpatient areas (*Figure 3*).
- » Inpatient Areas
- » Primary Care.

As with the previous skin tear pathway,

clinicians need to complete the skin integrity dashboard, report skin tears via the DATIX system and document details of the wound, using the Integrated Pathway of Care (IPOC).

DESIGNING THE PATHWAY FOR THE LOWER LIMB

The audit

To design a new skin tear pathway for lower body, the Trust decided to conduct a lower leg wound audit in spring 2018, as anecdotal evidence suggested a chaotic approach was being taken to treatment. The audit identified 132 patients in hospital with lower leg wounds over a 4-week period. Focusing on skin tears and traumatic wounds, the audit revealed excellent (83%) compliance with the 2017 skin tear pathway but found that a range of dressings were being used in skin trauma patients. At the time, it was common practice to apply a twice-weekly bandaging regimen which consisted of Viscopaste, Softban and K-Lite.

The Skin Integrity Team recognised that in the acute care setting, vascular assessments and Ankle Brachial Pressure Index (ABPI) were not common place and explored the options of achieving compression in order to maximise the healing potential for skin tears and traumatic wounds on the lower limbs (Ewart, 2016).

A Training Needs Analysis was undertaken in order to establish the underpinning knowledge of generalist practitioners in the acute setting with relation to basic vascular risk assessment. The results of which have led the authors to adopt an approach that includes a 10mmHg hosiery liner (Altipress, Urgo Medical) being recommended as the first-line approach (*Figure 4*). The rationale for this approach was taken as it:

- » Provides a consistent level of compression
- » Is easy to apply
- » Improves patient outcomes
- » Results in cost savings compared to previous treatments used for traumatic wounds
- » Improves patient quality of life
- » Reduces waste
- » It safe to use.

The Skin Integrity Team is currently in the process of updating the pathway for the lower limbs in the equivalent settings. These are due to

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be launched in June 2019 and will be presented in the authors' second article. There they will detail the reasons why generalist practitioners in acute settings may lack knowledge on how to carry out ABPI assessments and apply compression bandaging, which led to the recommendation of using hosiery liners. The team will also describe their newly launched Skin Integrity Champion Programme, which comprises of a baseline knowledge assessment, training day presentation and post-training day knowledge assessment. Once in place for 6 months, these new algorithms will enable the Skin Integrity Team to monitor care provided across the Trust and identify any training needs.

CONCLUSION

Skin tears are common, acute traumatic injuries that should have a healing trajectory of 14–21 days. Clinicians should aim to preserve the skin flap, maintain the surrounding tissue, re-approximate the wound edges and reduce the risk of infection and further injury. The first-line approach to managing skin tears in the hospital setting consists of cleansing and re-approximation of the skin flap, categorisation using the ISTAP Skin Tear Classification system, and treatment with a non-adherent mesh dressing and light hosiery liner as a method of applying compression, where appropriate. In their next article, the authors will introduce their new 2019 lower limb pathways as well further explain their rationale for using hosiery liners to apply compression in clinical areas where vascular assessments, ABPI and knowledge of compression bandaging are not common place. WUK

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