

Should a lower leg skin tears be treated as a potential leg ulcer from the starting point?

Introduction

A skin tear is defined as a traumatic wound caused by mechanical forces, including removal of adhesives (International Skin Tear Advisory Panel (ISTAP) 2018). LeBlanc K et al (2013) states that skin tears are acute wounds due to the causation being shear, friction or trauma, resulting in separation of the skin layers. LeBlanc and Baranoski (2011) state how skin tears are often under-recognised and misdiagnosed in clinical practice and highlight how an accurate definition of skin tears is crucial from the starting point in order for skin tears to receive optimal treatment. However, confusion can arise to when it comes to defining whether a skin tear on the lower limb is a skin tear or a leg ulcer. National Institute for Health and Care Excellence (NICE) (2020) stated a leg ulcer is a break in the skin below the knee, which has not healed within 2 weeks, which the Vascular Society defines as a chronic leg ulcer. Whereas ISTAP (2018) states a skin tear becomes chronic if it does not heal within 4 weeks.

Method

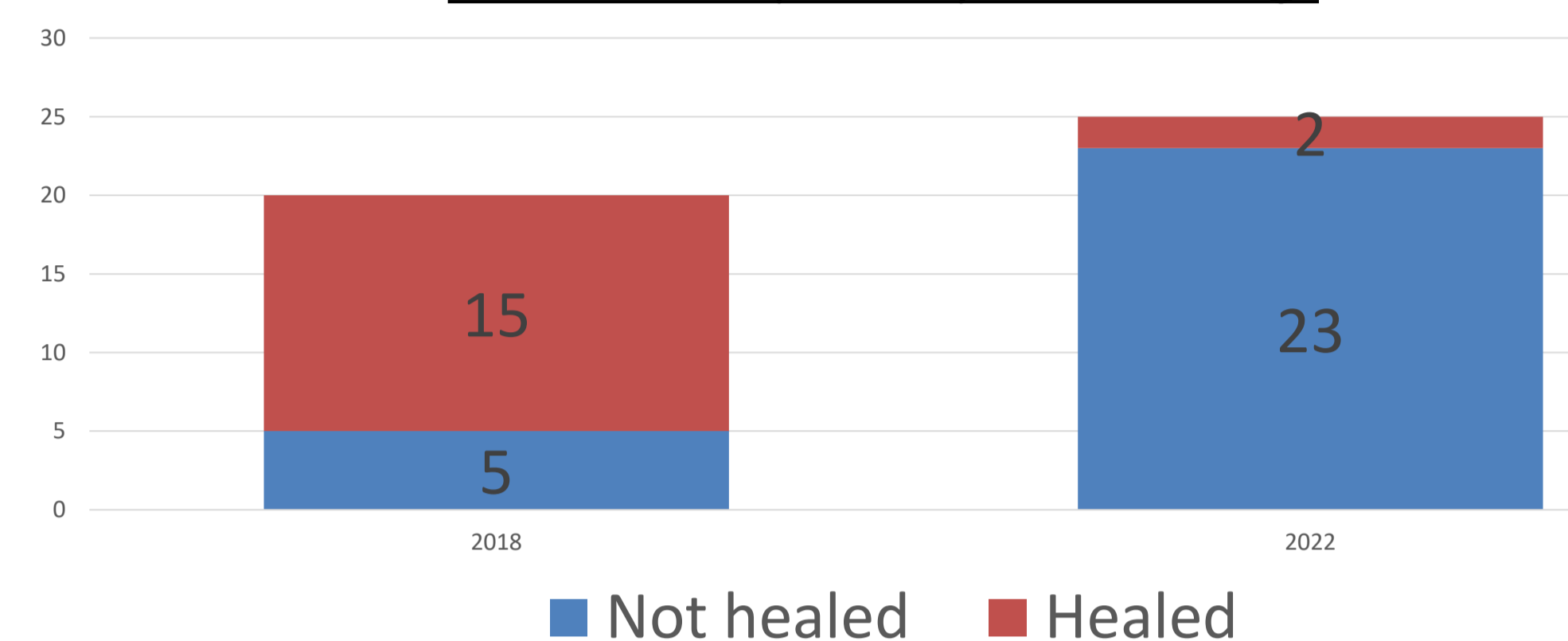
An evaluation was undertaken in 2018 and 2020 for patients referred to the skin integrity team, with a skin tear on their lower leg (knee to malleolus). The Skin Tear Pathway for Lower Legs was implemented with 72 hours of the referral being received and the healing rates were monitored for patients that remained in hospitals or discharged into the Doncaster community. In 2018, they were monitored between November and December for a 28 day period. A 28 day period was selected due to the definition of a chronic skin tears as stated by ISTAP (2018) - A complicated skin tear is more complex, particularly on the lower extremities and/or in patients with multiple comorbidities; if it does not heal within 4 weeks, it becomes a chronic wound. In 2022, they were monitored between November and December for a 14 day period. A 14 day period was selected due NICE (2020) stating a leg ulcer is a break in the skin below the knee which has not healed within 2 weeks.

Results

In 2018, 75% (15 out of 20) of the lower leg skin tears had healed by 28 days. Therefore concluding in 2018 that the Skin Tear Pathway for Lower Legs safely implemented timely treatment in a hospital setting to prevent skin tears becoming chronic. At this time, there was no leg ulcer pathway for the 25% chronic wounds to transfer to. In 2022, only 8% (2 out of 25) of the lower leg skin tears had healed by 2 weeks. Therefore concluding in 2022 that the Skin Tear Pathway for Lower Legs was no longer implementing effective and timely treatment in a hospital setting to prevent skin tears becoming chronic. The remaining 23 chronic wounds should have been transferred to over to the pathway for leg ulceration which was launched in 2021. However, this was not the case and 0% were transferred.

Figure A

Lower leg skin tears referred to skin integrity and healed at the follow up point following the implementation of for skin tears pathway for lower legs



Discussion

In 2018, the Skin Integrity Team at Doncaster and Bassetlaw Teaching Hospitals NHS Foundation Trust implanted a pathway for lower body skin tears to assist with the recommendations from LeBlanc and Baranoski (2011) to achieve an accurate definition of a skin tear from the starting point to prevent skin tears being under-recognised and misdiagnosed in clinical practice. A pathway would also assist with the skin tears receiving optimal treatment.

Figure B

Figure B: Skin Tear Pathway - Lower Leg

A skin tear is a traumatic wound caused by mechanical forces, including the removal of adhesives. Severity may vary by depth, blood extending through the substantivum layer. (Le Blanc K et al 2018)

1. Stop the bleeding
 - Apply direct pressure to the bleeding site.
 - Elevate the limb where possible.
 - Follow the pathway for wound cleaning.
 - Reapproximate where possible.
 - If a flap is present ease it back into position (reapproximate) without pulling or applying pressure.
 - If difficult to align, use increased pressure for 5-10 minutes to rehydrate area.

2. Dress the wound
 - Apply Urgent Absorb Border ensuring a 5cm border around the wound margins.
 - Leave in place for 5 days (as a minimum).
 - Wound time will be determined by wound/exudate levels.
 - Mark the dressing with an arrow to indicate direction of removal to reduce risk of flap disturbance along with the date of dressing change.

3. Assess the patient
 - Measure the patient's leg to determine the appropriate hosiery liner. Advise the patient to wear the liner.
 - Monitor for changes in infection, redness, swelling, pain, or discharge.
 - If there is no improvement after 14 days, or if infection is present, refer to the Vascular Team.

4. Refer to the Skin Integrity Team
 - Refer to the Skin Integrity Team for patients with skin tears that are not healed within 2 weeks.

5. Refer to the Vascular Team
 - Refer to the Vascular Team for patients with skin tears that are not healed within 4 weeks.

A hosiery liner (10mmhg) was choice as it was felt in 2018 generalist practitioners in the acute setting lack knowledge and competencies around lower limb assessments and compression.

An evaluation was undertaken which showed promising results concluding that the pathway for lower body skin tears safely implements and incorporates timely treatment in an acute setting to prevent skin tears becoming chronic.

In 2021 whilst the skin integrity team were developing a pathway for leg ulceration they noted the definition of a leg ulcer as, a break in the skin below the knee which has not healed within 2 weeks (NICE, 2020). This pathway for leg ulceration had different recommendations to the pathway for lower body skin tears. To support the transition between a skin tear or a leg ulcer lower limb guidance document defining different wound types was made, specifying a leg ulcer a break in the skin below the knee which has not healed within 2 weeks (NICE, 2020).

Figure C

Figure C: Leg Ulcer Pathways - Secondary Care

Work down the pathway to guide you through the assessment, management and onward referrals required for Leg Ulceration. A Leg Ulcer is defined as skin loss that originates between the knee and malleolus (ankle).

1. Red Flags
 Leg ulcer with systemic/venous infection / signs with tachycardia, pyrexia, hypotension, patient feeling unwell, spreading cellulitis, crepitus, significant deterioration over a short period of time.
 Clinical evidence of acute limb ischaemia (acute pain, pallor, pulsesless, perching sign, pain on elevation / acute sensory change, paralysis / acute motor dysfunction for >2 weeks).

Emergency Actions Required
 Refer urgently to the Vascular Team via switch board.

2. Leg Ulcers with spreading infection (cellulitis).
 Obtain a wound swab and arrange for antibiotics to be commenced. Dress with a non-adherent dressing, absorbent pad (if required) and follow the Safe Soft Bandaging Pathway. Ask the managing clinician to consider if a Vascular referral is required.

3. Suspected acute deep vein thrombosis.
 Follow the Venous Thromboembolism (VTE) - Prevention and Treatment of VTE in Patients admitted to Hospital - (NICE 2020).

4. Suspected Skin Cancer.
 Refer to the Dermatology Department as per the 2 week wait protocol.

5. Urgent Action Required
 Do you suspect poor arterial blood supply because the patient has with:
 - Constant pain in the foot (especially relieved by dependence and worse at night).
 - A non-healing wound of more than 2 weeks duration and / or gangrene on the foot.
 Does the patient have any risk factors or visual signs for venous disease on the lower limb including with either:
 - Ulceration that is static or deteriorating despite optimum compression therapy.
 - Acute venous thrombosis from the leg requiring first aid treatment.

Assessment and Treatment
 1. Follow the Pathway for Wound Cleaning and undertake a wound assessment.
 2. Apply resultant to treat skin as per local policy and change the dressing as per episode either 3 days or 7 days.
 3. Identify the suspected Leg Ulcer type using the Lower Leg Wound Guidance and follow below guidance.
 4. **1. Suspected Venous or Mixed Leg Ulceration**
 50% or more granulation WITHOUT active infection. 50% or more slough or necrosis present AND/OR active infection. 50% or more slough or necrosis present WITHOUT active infection. 50% or more slough or necrosis present AND/OR active infection.
 UrgoStart Plus Pad to broken skin. UrgoClean AG. UrgoStart Plus Pad to broken skin or UrgoStart Plus Border. UrgoClean AG.
 Ribaband Super Absorbent (if required). Ribaband Super Absorbent or Bariatric Silicone (if required). Compression Bandage/Stocking/Recovery Wrap as combined by a tier 3 or 4 service. If you don't have to compression follow the Suspected Venous or Mixed Leg Ulceration plan.
 Actional Plus 3 or 7 to broken skin. Ribaband Super Absorbent. Bandage as per the pathway for Safe Soft Bandaging. Refer specified differently by the Vascular Service.

 5. Ensure all wounds are referred to The Skin Integrity Team.
 If the patient remains an inpatient for 14 days the Skin Integrity will arrange for a lower limb assessment to be undertaken to provide diagnosis and identify if compression therapy can be commenced.
 Discharge Referrals and communications should follow the DSBH Pathway for Discharge Communication and Referral for patients living with Wounds.
 If the named product on this pathway is not available a temporary second line product is available to use. This can be found within the main text of the Doncaster Wide Wound Care Formulary Document.

National Wound Care Strategy Programme 2020, Lower Limb Recommendations for Clinical Care.
 Developed by Tissue Viability and Lymphoedema Service, The Vascular Surgery, Vascular Nurse Specialist 2021. Updated September 2022. For Review June 2024.

On review of the pathway for lower body skin tears it was not clear that the patient required transferring to the pathways for leg ulceration if the wound has not healed at day 14, despite the definitions on the leg wound guidance document. This has posed another question:

- Should lower limb skin tears be treated as a potential leg ulcer from the starting point?

Lower Leg Wound Guidance

To establish the potential wound type for wounds below the knee to the malleolus (ankle).

Definitions

- Red Legs:** Presents as redness, warmth and tenderness of the lower limbs, without signs of infection, in patients with a history of venous disease, chronic oedema and dermatological conditions. (Salmon 2016; Wounds UK 2019).
- Chronic Oedema (Lymphoedema):** Includes all forms of swelling, including lymphoedema, that has been present for more than three months. (Best practice in the community Chronic oedema 2019).
- Wet legs / Lymphorrhoea:** Discharge of lymph fluid through the skin, caused by acute infection of the skin, characterised by a superficial, diffuse, spreading collection of pus. Bilateral leg cellulitis is very rare. (NICE 2015).
- Cellulitis:** An inflammatory skin condition caused by acute infection of the skin, characterised by a superficial, diffuse, spreading collection of pus. Bilateral leg cellulitis is very rare. (NICE 2015).
- Haematoma:** A bruise or collection of blood in the tissues. They appear as a dark red/black collection of blood standing proud of the skin. (Bosdon 2011; Collins et al. 2002).
- Skin Tear:** 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 substantivum layer). (Le Blanc K et al 2018). Refer to the Guidance for Identifying Cellulitis or Red Legs if required.
- Leg Ulcer Venous:** A break in the skin that has been present for more than 14 days, in the presence of Venous Disease. (NICE 2020).
- Leg Ulcer Mixed:** A break in the skin that has been present for more than 14 days, in the presence of Venous Disease and Peripheral Arterial Disease. (Hartley 2015).
- Leg Ulcer Arterial:** A break in the skin that has been present for more than 14 days, as a result of reduced arterial blood flow, in the presence of Peripheral Arterial Disease. (Hartley 2015).

If the named product on this pathway is not available a temporary second line product is available to use. This can be found within the main text of the Doncaster Wide Wound Care Formulary Document.

Reference: NICE (2020) Leg Ulcer Pathway. Long, J. et al (2006) Venous and arterial leg ulcer. ABC of wound healing. British Medical Journal. Newton, H. (2011) Leg ulcers: Differences between venous and arterial. Wounds International. National Wound Care Strategy Programme 2020, Lower Limb Recommendations for Clinical Care. Developed by Tissue Viability and Lymphoedema Service and The Skin Integrity Team. Update June 2022. For Review June 2024.

Conclusion

A standalone pathway for a particular diagnosis can be an effective way to safely implement and incorporate timely treatment. However having a transition through relevant pathways can be made confusing due to the different and conflicting definitions and time lines for when a chronic wound occurs and what the diagnosis should be, which can lead to a delay in the appropriate pathway of care being implemented. By combining some pathways of care together this will remove the confusion of definitions and reducing the need to transfer to a different pathway of care, this may result in between compliance of care and improve healing rates.

References

- NICE (2020). Leg Ulcer <https://cks.nice.org.uk/topics/leg-ulcer-venous/>
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Statement of Interest

This piece of work has no conflict of interest.