Differentiating between a pressure ulcer or foot ulcer

With the reporting of pressure ulcers high on the agenda for NHS Trusts, it became apparent within Birmingham Community Healthcare Trust there were discrepancies when reporting ulcerations on the foot, and clinicians were finding it difficult differentiating between a foot ulcer and a pressure ulcer. Collaborative working between Podiatry and Tissue Viability resulted in the creation of a poster and pathway to aid the decision-making process for what was considered a foot ulcer and what constituted a pressure ulcer. The poster has images and lists of possible causes to aid assessment and diagnosis, along with direction on appropriate referral for further management.

KEY WORDS

- Foot ulcer
- Pressure ulcer

Both pressure ulcers (PUs) and foot ulcers (FUs) are conditions in their own right. PUs are defined as "localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear. A number of contributing or confounding factors are also associated with pressure ulcers; the significance of these factors is yet to be elucidated" (National Pressure Ulcer Advisory Panel et al [NPUAP], 2014).

FUs have no firm definition, except that they are related to diabetic foot ulceration. Ulceration is generally defined as a breakdown in the skin that may extend to involve the subcutaneous tissue or even to the level of muscle or bone. Foot ulceration is further clarified as being below the ankle and is predominantly chronic in nature (Lazarus et al, 1994).

PUs have been making increasing headway onto political agendas since the National Institute for Health and Care Excellence ([NICE], 2005) and European Pressure Ulcer Advisory Panel (EPUAP) and NPUAP (EPUAP/NPUAP, 2009) guidelines were launched. This has gathered pace recently, with new guidelines from NICE (2014) and, jointly, from the EPUAP, NPUAP and the Pan Pacific Pressure Injury Alliance (PPPIA) (EPUAP/NPUAP/PPPIA, 2014), all identifying a reduction in harm from hospital- and community-acquired PUs as one of their top ten ambitions.

Furthermore, the NHS has suggested adopting a zero-tolerance approach to PUs, supported by the government's agenda intending to eliminate all avoidable PUs (National Patient Safety Agency [NPSA], 2010). Commissioning for Quality and Innovation initiatives have been established in the majority of Trusts, placing a financial reward on improving outcomes through improved data collection and robust baseline data. As part of the national Safety Express programme, NHS Trusts have worked jointly to improve patient safety, developing and using 'Your Turn' (www.your-turn.org.uk) and 'SSKIN' (nhs.stopthepressure.co.uk) campaigns to raise public awareness and increase involvement.

From a podiatry and tissue viability nurse (TVN) perspective, when assessing a foot wound, the underlying aetiology/aetiologies must be considered. The identification and reporting of PUs has become an essential part of the clinician's role in caring for high-risk and vulnerable patients. However, there is little assurance that frontline staff are making the distinction and referring to the appropriate service and reporting correctly (Edwards et al, 2005).

Similarities do exist between PU and FU assessments, in that they both identify patients' risk status for developing ulceration. Examination would involve neurovascular status or foot screening to ascertain risk of foot ulceration, and the Waterlow score to ascertain pressure ulceration risk. There is NICE guidance available for both PUs (NICE, 2005; 2014) and diabetic foot problems/ulcerations (NICE, 2004; 2011), both national and internationally agreed guidelines (EPUAP/NPUAP, 2009; Bakker et al, 2012; EPUAP/NPUAP/PPPIA, 2014) and government-set agendas (Department of Health, 2008) to significantly reduce the numbers of PUs and diabetic foot ulcers (DFUs) in line with the reduction of lower limb amputations.

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However, on review of the literature and published guidance on foot ulceration in relation to diabetes and PUs, when signposting professionals to each of these specific areas, there are no links made between them. This contributes towards different professions viewing them as separate entities.

Research by McIntosh and Ousey (2008) suggested that diagnosis and treatment of heel ulcers is dependent on which clinician completes the initial assessment. In their study, a picture of a wound on the heel of a patient with diabetes was shown to a cohort of nurses and podiatrists. The results indicated that the nurses were of mixed opinion, with 46% managing the wound as a PU and 54% as a DFU. By comparison, 85% of the podiatrists opted for managing the wound as a DFU and only 15% of this group as a PU. This suggests diagnosis is dependent on which discipline completes the first assessment.

The impact of this on clinical practice is a disjointed assessment process, resulting in poor wound management from both specialties. There needs to be acknowledgement of the key aspects of guidance and integration into their own assessments. An improved wound assessment process is essential from both specialties to appreciate each other's role in wound management and identify the initial and predominant cause.

As with all wounds, finding the direct cause is the primary factor to address. This is paramount to actively providing the right treatment and avoiding re-occurrence of ulceration at a later date. From a podiatric viewpoint, for most FUs it is often difficult to ascertain the specific cause when there are multiple factors involved, particularly with diabetes and complications such as neuropathy and ischaemia.

TVNs take a holistic approach of the patient, with completion of comprehensive risk assessments. Risk factors addressed include: pressure, shearing, friction, level of mobility, sensory impairment, continence, level of consciousness, illness, comorbidity, posture, psychosocial status, previous pressure damage, extremes of age, nutritional and hydration status, and moisture to the skin (NICE, 2005; 2014). Once completed, patients can be stratified according to their risk status and an individual management plan formulated and agreed. Specific, formulated assessments, such as Waterlow score (Waterlow, 1985) and elements of the SSKIN bundle, are used to define the level of risk. The key assessment is identifying where the pressure has come from, looking at whether there has been any external pressure, how prolonged the duration of pressure has

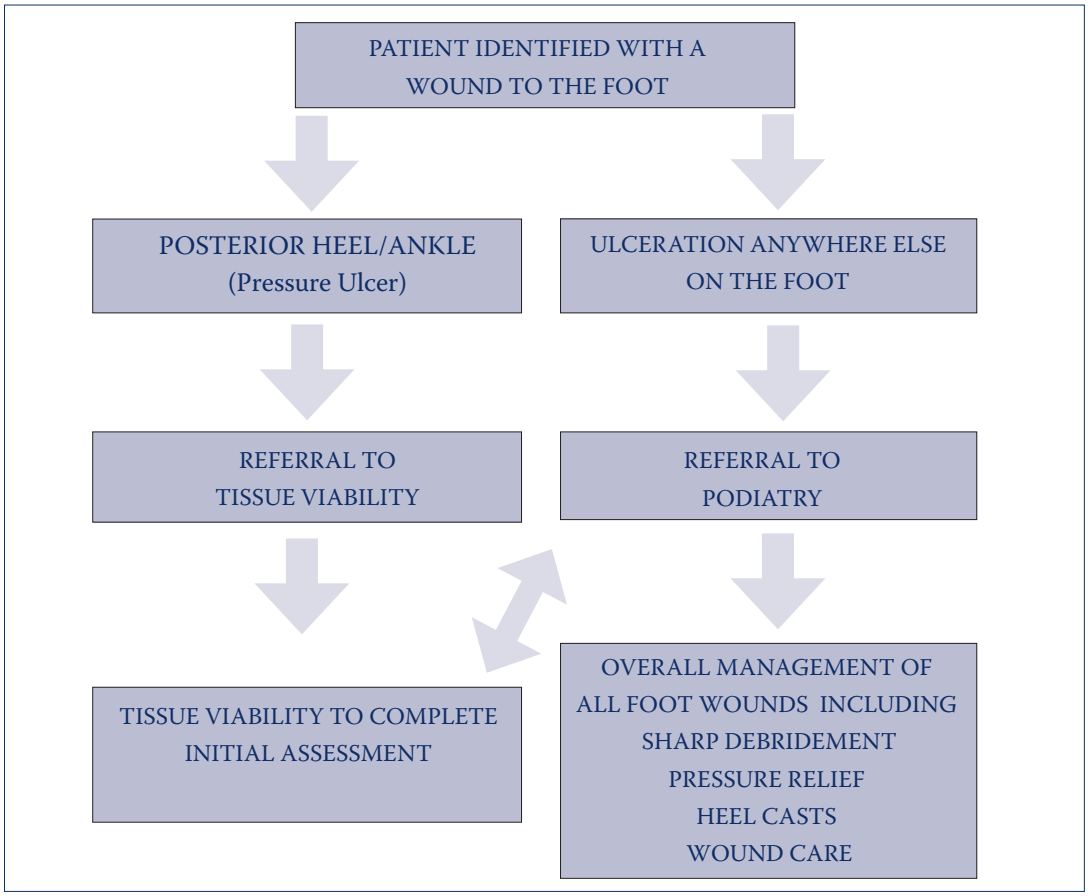

Figure 1: Ulceration of the foot pathway.

been and the intensity of that pressure.

When assessing the foot, a risk assessment is completed by examining the feet and lower limbs, testing foot sensation using a 10g monofilament and/or vibration perception using a 128-Hz tuning fork, palpation of foot pulses, inspection for any foot deformity, identifying callus present, ulceration and inspection of footwear (NICE, 2004; 2011). Additional risk factors, such as poor vision, smoking status, social deprivation or living alone, increasing age and duration of diabetes or other high-risk medical conditions will also need to be identified. Risk assessment should be completed at initial presentation or diagnosis of a foot wound to provide baseline data for reassessment to be compared against.

Many patients who develop a typical PU tend to be dependent on care. If a PU develops, a datix clinical incident report is completed and, if it is category III or IV, a root cause analysis is carried out to determine whether the PU was avoidable, a potential case of neglect or a safeguarding issue, or unavoidable? By contrast, people with diabetes that develop foot ulceration often tend to self-manage. If an FU develops, it is often associated with trauma, poor care or lack of access to foot care services in some areas, individual concordance or compliance issues.

If an FU or PU is present, a comprehensive wound assessment needs to be completed and supported with photography or tracings and clear documentation. For both PUs and FUs, there is a need to assess the aetiology to include the site/location, shape, pressure history and wound bed in conjunction with wound assessment. Typical locations of PUs on the foot, compared to FUs, generally differ. Foot ulcers generally are more common on the plantar aspect of the foot and dorsal and apex of the toes. PUs are found on prominent places of pressure such as the heels and borders of the feet. However, both PUs and FUs can occur over bony prominences but with differing aetiologies.

PUs and FUs are often recognised to be chronic in nature due to the prolonged healing times associated with either condition. They both greatly affect an individual's quality of life and have potentially life-threatening consequences if managed inappropriately.

For both PUs and FUs, it is all about managing the risks. Primary prevention is about risk assessment, risk classification and coordination of care to prevent ulceration in the first instance. Secondary prevention focuses on education, intense management and onward referral to specialist care to prevent further re-ulceration.

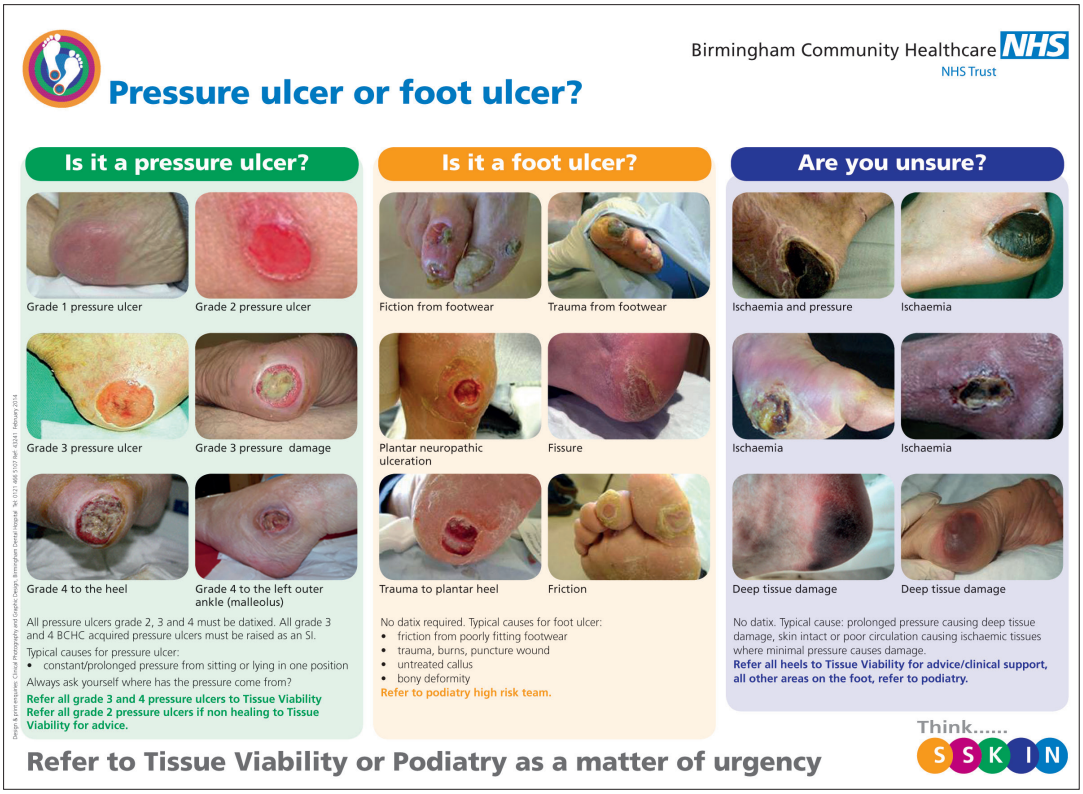

Figure 2: Tool developed by Birmingham Community Healthcare Trust using descriptors and images to aid diagnosis for all grades of clinical staff to follow.

REASONING FOR DEVELOPING A DIAGNOSIS PATHWAY

The author's Trust asked why podiatrists do not report all ulcerations of the foot. From a podiatric perspective, the answer is clear: not all FUs are PUs. On scrutinising datix reports, discrepancies were identified in their completion by integrated multidisciplinary community teams on diagnosing PUs affecting the foot. It was evident that this was due to a lack of knowledge and understanding of the differences between PUs and FUs, which was exacerbated if the patient had diabetes. The need to acknowledge professional roles and skill mix was also apparent.

Such confliction in diagnosing PUs and FUs called for a collaborative approach in tackling the issue. This involved understanding the differences between PUs and FUs from a podiatry and TVN viewpoint, in relation to diagnosis, referral and wound management. There was a need to devise a pathway to ensure appropriate referrals between the specialities in clarifying roles (*Figure 1*). This was required not only for management and treatment, but also due to the required assessment and necessary information to be completed when a PU arises, particularly category III and IV PUs. Integrated, collaborative working was essential, with an appreciation for each other's specialty and clear guidance for frontline staff to follow.

As previously mentioned, a holistic assessment is essential. Failings at this stage can result in non-optimal wound healing with potential for deterioration. By comparing certain characteristics to distinguish between PUs and FUs, the diagnosis and, therefore, treatment pathway can be made easier.

EDUCATION, EDUCATION, EDUCATION

Although referrals did improve at Birmingham Community Healthcare Trust, it was still apparent that FUs were being misdiagnosed as PUs. Following implementation of the pathway, it was felt that more education was required in a simple manner. The outcome of the discussions and planning between podiatry and tissue viability resulted in a poster being created to be displayed in team and ward offices. It simply asks: "Is it a pressure ulcer? Is it a foot ulcer? Are you unsure?" (*Figure 2*). Images of wounds were considered valuable as a visual aid, rather than purely text and description. The wound images in each section are explained fully with a supporting list of possible causes. To aid a decision on wound diagnosis, the poster encourages the clinician to think of the underlying cause and clinical presentation as displayed in the photographs. Each category then clearly indicates whether datix reporting is required and to which service the patient should be referred.

CONCLUSION

Valuable joint working between podiatry and tissue viability has continued to positively develop

and progress at Birmingham Community Healthcare Trust. Referrals between podiatry, tissue viability and nursing teams have improved, with a more unified approach to patient care. Access to specialist community services is improving greatly as teams are structured to accommodate urgent referrals.

At a time when NHS services are increasingly stretched following reorganisation and there is increasing scrutiny on quality of care, clinicians cannot afford to be discipline-precious: Collaborative working is essential. Clinicians need to work together, sharing skills in terms of assessment and management to provide the best outcomes for patients. WUK

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