

What drives pressure ulcer classification – scientific knowledge or fear of litigation?

Prior to around 1990 there were a wide variety of tools available to help clinicians describe the appearance of pressure ulcers.

Some of these tools were based on the perceived involvement of different tissues within the pressure ulcer (for example Shea in 1975¹), while others attempted to describe the evolution of pressure damage (for example Torrance in 1983²).

However, over the past 15 years there has been a general consensus that pressure ulcers can be classified using four grades (or stages) marking the anatomical limits to tissue damage for example the National Pressure Ulcer Advisory Panel (NPUAP³) and the European Pressure Ulcer Advisory Panel (EPUAP⁴).

In such classification systems grade 1 and 2 pressure ulcers are often described as being superficial and grades 3 and 4 as severe wounds (for example Clark et al 2004⁵).

The broad agreement regarding the four groups of pressure ulcer would appear to be a relatively innocuous matter, but in recent years new debates have emerged.

By and large these new views upon pressure ulcer classification have started in the US and then spread to other countries.

First of these debates was the issue of 'reverse staging', where healing pressure ulcers should not be documented as travelling from a grade 4 to a grade 3 to eventually a grade 1 wound before complete healing occurred.

The arguments against reverse staging are summarised on the NPUAP website (located at www.npuap.org/positn5.html) as follows: 'Pressure ulcers heal to progressively more shallow depth, they do not replace lost muscle, subcutaneous fat, or dermis before they re-epithelialize.'

'Instead, the ulcer is filled with granulation (scar) tissue composed primarily of endothelial cells, fibroblasts, collagen and extracellular matrix... When a Stage IV ulcer has healed it should be classified as a healed Stage IV pressure ulcer not a Stage 0 pressure ulcer. Therefore, reverse staging does not accurately characterize what is physiologically occurring in the ulcer.'

'The progress of a healing pressure ulcer can only be documented using ulcer characteristics or by improvement in wound characteristics using a validated pressure ulcer healing tool.'

While there is a biological basis for this caution against the use of grades of pressure ulcer to mark healing, it is important we should not overlook that the statement derived from a healthcare environment in which reimbursement for resources (such as special beds and mattresses) can be strongly influenced by the documented grade a pressure ulcer is assigned.

For example, home use of an air-fluidised bed can be reimbursed if the patient has a grade 3 or grade 4 pressure ulcer (see the website www.cms.hhs.gov/manuals/pm_trans/R148CIM.pdf) – but is there then a risk that if the pressure ulcer is documented as a grade 2 wound rather than a healing grade 4 that the intervention will be withdrawn, or if used will not be reimbursed?

It is clear that when assessing any proposed changes to pressure ulcer classification the regulatory environment in which those proposing the change in practice must be borne in mind.

While reverse staging has been a prominent issue over the past ten years fundamentally it does not alter the four-stage classification.

However, a recent meeting of the US National Pressure Ulcer Advisory Panel opened debate upon a fundamental reform of the accepted classification

scheme. The meeting from 25-26 February 2005 discussed grade 1 and 2 pressure ulcers and could potentially have significant consequences for practice in the UK.

For example, the NPUAP considered whether many grade 1 pressure ulcers marked deep tissue injury that was relatively invisible at the skin surface. If this is the case then an important question to consider is how are deep tissue injuries to be discriminated from more superficial tissue damage?

In discussion groups the meeting recommended three potential strategies for the future classification of grade 1 pressure ulcers:

- To revise the current definition to only mention non-blanchable erythema that persists for 9-10 days and include a new category of 'deep tissue injury'.
- To eliminate grade 1 altogether, either beginning classifications from grade 2 or calling them 'closed' or 'unstageable' wounds.
- To eliminate all four grades and call pressure ulcers either 'partial' or 'full-thickness' wounds.

This brief summary of the discussions around grade 1 pressure ulcers indicates the extent of any potential revision of the commonly accepted four-grade classification of pressure ulcers.

However, it is important to consider what is driving this reform. Is it based on new understandings of the detailed mechanisms of pressure-induced injury or is it merely a response to US reimbursement and litigation issues?

In an ideal world this potential change would flow from new research – but sadly it appears to be a response to the growing pressures of litigation and emerging introduction of fiscal penalties for the occurrence of pressure ulcers within healthcare institutions.

If the NPUAP discussions result in a revised classification excluding grade 1 and perhaps even grade 2 pressure ulcers then the occurrence of pressure ulcers would fall dramatically given that many wounds would no longer be counted as pressure ulcers.

If such a new classification does appear in the US should we here in the UK rush to implement it? This is likely to be an increasingly important question over the coming years, but it can only be answered appropriately through a considered reflection of what we already know about the pathophysiology and natural history of pressure ulcers, coupled with a renewed interest in these topics in our research laboratories.

The *Journal of Tissue Viability* has played its part in guiding discussions upon pressure ulcer pathophysiology and the classification of these wounds. Indeed, the NPUAP conference made several references to the work of Arao and

colleagues previously reported in this journal⁶.

However, other important contributions to this debate were not mentioned during the NPUAP conference – for example, how can we debate changes to the classification of pressure ulcers without considering the pioneering work of Barton and Barton?

This issue of the *Journal of Tissue Viability* seeks to help prepare readers to respond to the challenges raised during the NPUAP conference by reproducing seminal work on pressure ulcer aetiology and classification that is now hard to find using electronic databases.

In this way we hope that anyone wanting to radically amend the four grade classification of pressure ulcers will be able to access important data that would otherwise be overlooked due to the challenge of locating pressure ulcer references that have appeared prior to the inclusion of this title in Medline and other electronic databases.

We also include a list of key references on pressure ulcer classification systems to allow readers to retrieve and read for themselves the details of the debates that helped to forge the current four-grade pressure ulcer classification.

To supplement this reference list a series of electronic slides summarising pressure ulcer classification is also available via the Tissue Viability Society website at www.tvs.org.uk.

It is only through remembering how the four-grade classification emerged, along with revisiting the limited body of work on the detailed mechanisms of pressure induced injury, that clinicians and researchers here in the UK can reach an informed conclusion over the merits of any radical revisions of the currently accepted pressure ulcer classification schemes.

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References

- 1 Shea JD. Pressure sores: classification and management. *Clinical Orthopaedics & Related Research* 1975 112: 89-100.
- 2 Torrance C. Pressure Sores: Aetiology, Treatment and Prevention. 1983 Beckenham, Kent: Croom Helm.
- 3 National Pressure Ulcer Advisory Panel. Incidence, economics and risk assessment. *Care Science and Practice* 1989 7(4): 96-99.
- 4 European Pressure Ulcer Advisory Panel. Guidelines on Treatment of Pressure Ulcers. *EPUAP Review* 1999 1(2): 31-33.
- 5 Clark M, Bours G, Defloor T. The prevalence of pressure ulcers in Europe. In: Clark M. (Ed). *Advances in Tissue Viability*. 2004 Salisbury: Quay Books.
- 6 Arao H, Obata M, Shimada T, Hagiwara S. Morphological characteristics of the dermal papillae in the development of pressure sores. *Journal of Tissue Viability* 1998 8(3): 17-23.