

How should we approach pain management in wound care?

As with most issues in wound care, pain can be complicated. Acute pain is considered to be related to a specific tissue injury and resolves in a time frame related to the degree of injury. Chronic pain is less well defined and may be related to tissue damage (nociceptive pain) or nerve damage (neuropathic pain), or combinations of the two. Infection adds another pain dimension, as do wound care interventions. Pain experienced by patients can also be non-wound related (e.g. arthritic pain) but relevant to wound care, particularly in relation to patient positioning for interventions and analgesia. Pain experienced at a dressing change is not, therefore, necessarily confined to the wound itself. In addition to the physical components of pain there are the psychological and emotional factors that can exacerbate pain perception. Different wound aetiologies present different challenges in relation to pain and its consequences. For example there is the absence of pain sensation in diabetic neuropathy and spinal cord compression, which can lead to serious tissue damage, the acute pain experienced by burns patients, and the allodynia experienced by patients with Epidermolysis bullosa for whom a light touch results in severe pain. Palliative wound care presents another set of challenges related to advanced disease and also end of life care. Pain management is evidently an important component of wound care and raises a number of issues in relation to our roles and responsibilities. PG

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I. Is wound pain under-recognised?

AR: According to Briggs and Closs (2003), the prevalence of patients with open leg ulcers receiving treatment from healthcare professionals is in the region of 0.11–0.18%, whereas the prevalence of people with recurrent leg ulceration is 1–2% of the population. They caution that this percentage may be even higher due to patients who self-care. These figures illustrate the potential numbers of patients requiring medical intervention for leg ulceration in the UK. Harding (1998) estimates that patients with chronic wounds may cost healthcare services up to £1bn a year, with venous leg ulceration costs accounting for another £400m annually. These figures illustrate the potential economic impact of chronic wounds.

According to Young (2007) 'all wounds have the potential to cause pain, and the nature of the pain varies with the type of wound. Many factors may exacerbate wound pain, including infection, trauma at dressing changes and poor technique when applying compression therapy'. There are also wide-ranging estimates of the incidence of wound-associated pain, for example, Dallum et al (1995) and Ebbeskog and Emami (1996) report that between 17–65% of patients experience severe or continuous pain associated with leg ulcers. Other researchers have noted the percentage of patients experiencing pain by wound type:

- ▶▶ 83% of patients with arterial ulcers (Lindholm et al, 1999)
- ▶▶ 64% of patients with venous leg ulcers (Hofman et al, 2004)

- ▶▶ 48% to 54% mixed disease (Nemeth et al, 2003)
- ▶▶ 48% of diabetic foot ulcer patients (Ebbeskog and Emami, 1996)
- ▶▶ 59% of pressure ulcer patients (Dallum et al, 1995)
- ▶▶ 38% of patients with fungating wounds (Naylor, 2001).

The above researchers all suggest that wound pain is recognised but conversely poorly managed. This may be explained in part by the complex aetiology surrounding wounds.

DH: In many areas, the answer is sadly 'Yes'. However, recent studies on the impact of wound pain on patients' lives, the publication of books and articles on the subject and study days that focus on wound pain have brought the problem to the forefront, and as a result the situation is improving. Not only are many doctors more aware of the problem and prepared to prescribe opiate analgesia where necessary, but some companies have also taken the initiative to promote and develop dressings that will not cause pain at removal as well as dressings that can deliver analgesia directly to the wound bed. Although in some areas there is a dearth of understanding, nurses and doctors are becoming more aware of the problem and they are adjusting wound management accordingly.

JM: While pain is hopefully near the forefront of nurses' minds as a possible symptom when caring for any patient, a lack of understanding on why wounds might be painful, what aspects of the wound are commonly associated with pain, and the reasons

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for this pain can lead to wound pain being under-recognised. A wound that is painful may hurt for various reasons, and nurses need to work with the patient to make a thorough assessment of the wound itself, and the pain or discomfort that may be associated with it or the dressing regimen in place, to then be able to manage the pain successfully. Treating pain is like finding your way through a maze with several entrances and exits — by finding the correct entrance and tracing a route slowly and methodically, turning back when a dead end is reached, the exit will eventually be found. Often it is the patient who reports pain before being asked, but a patient who is unable or unwilling to do so, may be perceived to have no pain, especially if the nurse is lacking in confidence, knowledge or willingness to spend time making a thorough assessment.

2. How do we assess the different causes of pain and distinguish between them?

AR: The importance of assessment is highlighted by a World Union of Wound Healing Societies principles of best practice statement, which stresses that healthcare professionals should 'identify and treat the cause of the chronic wound and address concerns expressed by the patient, including a pain assessment at each visit' (Woo et al, 2008). Reddy et al (2003) also note that one of the failures of modern medicine is the inadequate assessment and treatment of pain.

The site, nature and degree of pain can be recorded in many ways, from a simplistic visual analogue scale

(VAS), to the more complex McGill Pain Questionnaire, where pain descriptors and a body chart can aid pain mapping. Where patients have a problem with communicating their pain, e.g. in those with dementia, tools such as the Doloplus behavioural pain assessment tool can be used as it uses observational assessment (Pautex et al, 2007).

Pain descriptors can give the healthcare professional a valuable insight into the nature of patients' pain and also the effect it may be having on their quality of life, for example, patients may describe their pain as 'cruel' or 'punishing'. Charles (1997) and Closs (2008) found that some characteristics of pain appeared to be associated with leg ulcers, e.g. venous leg ulcers were frequently described as 'throbbing', 'burning' and 'itchy', while arterial ulcer pain tended to be described as 'sharp' and 'hurting'.

From the healthcare professional's perspective, patient reporting and non-verbal cues may also help to develop a picture of the type and nature of the pain the patient is suffering. Pain of nociceptive origin is usually described using words such as 'dull', 'aching' or 'tender', while neuropathic pain may be described as 'shooting', 'burning' or 'stabbing'. It should also be noted that both types of pain may co-exist and will need to be treated accordingly.

From the patient's perspective, a thorough explanation needs to be provided if analgesic medication is to be used. This should include the possible need for different types

of analgesia (to work on different types of pain), and the likelihood of unpleasant side-effects and how to deal with them.

DH: Wound pain assessment is a complex process, especially in the case of leg ulcer pain and it is important to identify the cause and location of the pain — for example, the predominant pain may be in the surrounding skin due to maceration or eczema; in the vascular system due to phlebitis, ischaemia, aching veins or deep vein thrombosis; in the bones due to arthritis; or in the wound bed.

Prolonged wound pain frequently results in neuropathic pain, where the patient's pain perception becomes distorted. Patients suffering neuropathic pain may complain of levels of pain which seem abnormally high (hyperalgesia), or high levels of pain when an area distant from the wound is lightly touched (allodynia). In addition, patients with neuropathic pain may experience sudden shooting pains, sometimes originating in the wound. It is important to exclude infection, ischaemia, tight bandages and dressings as causes of pain and treat them accordingly before prescribing analgesia. The distinction between nociceptive pain and neuropathic pain is important as the different types of pain respond to different types of analgesia. Procedural pain (dressing changes/debridement) should be identified by questioning patients and observing their facial expressions and movements.

JM: Purposeful questioning of the patient is fundamental in establishing

a comprehensive pain history, but an underlying knowledge of anatomy, physiology, wound aetiologies and symptoms will help the nurse to set the patient's history into context. A deep wound may be painful as underlying tissues are exposed and may dry out, which is unnatural for the body. A wound that is colonised or infected with micro-organisms can be painful in itself, and the exudate that these micro-organisms produce can damage healthy wound tissue and the surrounding skin, causing a chemical burn which can also hurt. Superficial nerve endings in the skin are often sheared or irritated by shallow wounds, macerated skin or stripped skin where an adhesive dressing product has removed the top layer of skin, exposing these nerve endings. The stinging and burning from very superficial damage is often much worse for patients than pain deeper in a wound cavity, where these nerve endings are not commonly present.

A wound is unlikely to be painful without variation or fluctuation in severity at varying times in the day. Sometimes analgesics will improve the patient's pain, although not all wound pain responds to systemic analgesics. Sometimes the dressing change procedure itself is painful, or wound pain can be exacerbated by movement of the body, or it can be spontaneous. The nature of the pain, its causes, when it occurs, how long it lasts, and what makes it better or worse all need to be assessed to then identify the most appropriate treatment both pharmacological and non-pharmacological.

3. Who is responsible for wound pain management?

AR: The best answer is that this should be a partnership between different members of the multidisciplinary team, with the patient taking the lead. As Ashburn and Staats (1999) noted of patients with chronic pain, they frequently require an interdisciplinary model of care that allows healthcare professionals to address the multiple components of the pain experience. It should be possible to have GPs, hospital consultants, district nurses, specialist nurses (such as vascular/diabetes), physiotherapists, practice nurses as well as the tissue viability team all involved in a patient's pain management. Communication between these teams is vital to ensure continuity of service — otherwise problems can develop and a disjointed provision of pain management could result.

Nurse-led pain teams are an under-used resource and can coordinate all medication-based treatments as well as advising on and adjusting dosages at scheduled pain clinic appointments. These teams can offer the latest evidence-based pain management advice and, working closely with pharmacists, can often propose novel approaches to pain management.

DH: All healthcare practitioners are responsible for pain management, however, this is especially true of nurses as they have the opportunity to observe the patient closely at dressing changes as well as at other times and are able to assess all aspects of

wound pain, decide pain management strategies and refer patients for appropriate analgesia. Patients must also be encouraged to take responsibility for managing their pain by taking analgesia at regular intervals before the pain levels have a chance to build up.

JM: While it is usually nurses who take the professional lead in wound management, it may be that a more thorough symptom assessment by medical or other colleagues identifies pain as a symptom. However, it is important that the assessment of the pain is comprehensive to enable appropriate strategies to be implemented. Sometimes the cause of the pain can be tackled, such as by treating an infection and leaving the wound bed exposed to the air for as short a time as possible during dressing changes. Administering a dose of analgesia before dressing changes, giving enough time for it to take effect before starting the procedure, and the use of topical and systemic analgesia agents regularly, can all help in reducing wound pain. The effectiveness of pain management rests on good assessment, an appropriate choice of medication, appropriate administration, and regular review and reassessment with the patient at the centre.

4. How do we monitor the patient outcomes of pain management strategies?

AR: Pain is an individualised experience and it is vital to set achievable, realistic goals on a patient-to-patient basis, for example, using the Heal not Hurt programme

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DH: *'Healthcare professionals should ensure that dressing changes are as pain and stress-free as possible. Distraction techniques may be helpful and analgesia should be provided where necessary before dressing changes.'*

(Young 2007). As Persoon et al (2004) noted, patients with chronic wounds not only suffer pain but also immobility, sleep disturbance, lack of energy, limitations in work and leisure activities and a lack of self-esteem — in short, their overall quality of life is affected.

The use of pain diaries can help develop an insight into how pain is affecting the patient. These involve recording, for one week, the level of pain at regular times throughout the day, allowing the patient to monitor the impact of pain on their daily activities. Any medication taken is also recorded, allowing the healthcare professional to gauge its effect and side-effects. Pain diaries can demonstrate patterns, such as cyclical pain associated with iatrogenic causes or inadequate medication regimens, which may not be offering 24-hour pain relief.

However, it may be that the very complexity of the patient's wound means that pain management is not always the priority, which further emphasises the need for a thorough initial assessment and ongoing assessment.

DH: There are various tools available for recording levels of pain, depending on the cognitive abilities of the patient. Twenty-four-hour pain charts are especially useful when trying to assess the effectiveness of interventions.

JM: There are several pain assessment tools available which have a wide-ranging validity. Some

patients may prefer to keep a written diary-style record of their pain, and some may prefer to have a simple conversation with their care provider to monitor and reassess the wound and its pain. As many chronic wounds change in nature over time, it is important that nurses are mindful that pain may change too — due to the wound as well as management strategies. Whichever methods of assessing a particular patient's pain are used, these methods should be used to reassess the pain over time, so that the information gained is consistent and can build up a record, unique to that patient, of their clinical situation. This is helpful for the nursing and wider professional team too, as by carefully monitoring the effects of management strategies related to the wound and the pain, professionals can learn from individual patient cases, and apply this learning to future patients in similar circumstances. So when the availability of good quality research evidence is lacking, an individual practitioner and a wider team, can learn from individual patient cases, to improve care for future patients.

5. In palliative care, how should we approach dressing changes for patients with extensive, long-standing, non-healing and painful wounds?

AR: Pain in wounds experienced by palliative patients may be due to inflammation, infection, exposure of nerve endings, maceration and excoriation. In addition, Kammerlander and Eberlein (2002)

cite dressing removal (51%) and wound cleansing (41%) as painful episodes as well as dressings that adhere to the wound area (35%) and dried-out dressings (28%). Puntillo et al (2002) examined patients (n=5,957) undergoing procedures such as changing dressings on non-burn wounds and observed that:

- ▶▶ Pain intensity increased at the time of procedure for all procedures studied
- ▶▶ 63% of patients received no analgesia
- ▶▶ Less than 20% of patients received opiates
- ▶▶ The mean dose of opiate used was 6.44mg morphine equivalent
- ▶▶ 10% of patients had a combination of drugs as therapy.

These figures suggest an uncoordinated approach in relation to incident pain and the under-use of balanced analgesia techniques. Balanced analgesia involves the administration of pain-killing drugs that work on differing pain pathways to give maximum effect, while minimising side-effects.

Consideration should be given to fast-acting analgesia for dressing changes in combination with oral medications such as paracetamol and ibuprofen administered at least one hour before a dressing change or debridement, for example. Dressings impregnated with non-steroidal anti-inflammatory drugs (NSAIDs) appear to have some merit, as do peripherally administered opioids in the form of a gel, although evidence for their use is mostly gleaned from case studies at present. These

strategies may be of some use in incident pain management, however, the importance of altered body image and the psychological care of the patient must also be carefully considered.

DH: Healthcare professionals should ensure that dressing changes are as pain and stress-free as possible. Distraction techniques may be helpful and analgesia should be provided where necessary before dressing changes. When pain is severe, nitrous oxide or fentanyl lozenges can be helpful. Dressings that are genuinely non-adherent and adequately cope with exudate levels should be selected, however, there is still work to be done in persuading companies to develop dressings large and conformable enough for these complex and extensive wounds. Any ongoing wound pain should be managed with adequate levels of systemic or topical analgesia.

JM: In all care settings, the dressing change needs to be planned to minimise any distress or discomfort to the patient. Having appropriate wound care products available is important, but with chronic, extensive wounds this may be difficult as the large size dressings that are often required may not be available or may be expensive. The use of analgesia is vital, if a wound is assessed as painful, or indeed if the position the patient needs to adopt during the dressing change is painful. Often managing symptoms such as excessive exudate in extensive fungating tumour wounds for example, require the use of

incontinence products not designed for wound care, but designed for managing large volumes of body fluids. Patients can be surprisingly willing to try the unconventional, especially in situations where the management of a wound has been challenging and unsuccessful. At the end of life, comfort and symptom management often become priorities over the underlying wound and the causes of symptoms, so management strategies may need to change to accommodate this. Again, assessment and regular reassessment, with a strong patient focus are the key components of managing wounds and dressing changes in palliative care. **WUK**

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