

Pain management in palliative patients with chronic wounds

KEY WORDS

- ▶ Chronic wounds
- ▶ Pain management
- ▶ Palliative

This literature review on how to manage chronic wounds in palliative patients, with a focus on the symptomatic control of pain, aims to provide suitable guidance for nurses in any clinical setting. Each section reviews the literature available and provides recommendations for practice for this specific issue. The main themes that emerge from this review include the use of non-opioid and opioid preparations in pain management and the need to consider pain during dressing changes throughout any intervention.

Chronic wound management has become daily practice within many clinical settings, especially within palliative care. The reasons for this are that the management of tissue viability is a complex process that relies on advanced knowledge and symptom management (Stephen-Haynes, 2008). Theories of palliative wound care are, however, gaining recognition as patients with advanced disease progression are presenting with non-healing chronic, malignant and fungating wounds (Willis and Sutton, 2013).

Pain in particular can be a difficult symptom to manage, and this article aims to define pain in relation to chronic palliative wounds, examine the incidences and rates of chronic pain in this group of patients, and critique the literature for the best management strategies. Within this article, practice experience will also be reviewed.

It must be noted that no specific guidelines are available to nurses that relate to chronic wound management in the palliative care setting. Other than the skin changes at life's end (SCALE) document (Beldon, 2011), which provides evidence calling for regular palliative skin care assessments, there is no formal documentation in place to identify and manage the effects of certain wound-related symptoms.

IDENTIFYING TYPES OF PAIN

The importance of identifying and managing chronic wound pain is crucial for patient-centred care (Brown, 2014). Chronic wound pain is a

background symptom that is present at rest and between wound-related procedures (Woo et al, 2008). While White (2008) claimed that chronic pain can be variable and multicausal in nature, Brown (2014) contended that it is an unpleasant sensation felt as the result of the brain's response to disease or damage to the body, particularly during wound manipulation. This theory is supported by findings that up to 80% of patients experience persistent pain between dressing procedures (Woo et al, 2008). It must be acknowledged, however, that Brown (2014) identified that persistent wound pain is just as devastating as temporary acute pain. This impacts on nursing practice, as thorough assessment and management is necessary to identify the appropriate care management options.

Reddy et al (2003) highlighted that nurses must recognise that chronic wound pain is also felt when the wound is not being manipulated. The type of pain therefore needs to be established to highlight the cause. Pain can be nociceptive or neuropathic in nature, and distinguishing between the two is fundamental for appropriate management (White, 2008). Nociceptive pain is pain caused by direct stimulation of the pain receptors associated with tissue damage (Woo et al, 2008), while neuropathic pain results from disease that causes damage to the peripheral nerves and central nervous system (Acton, 2007).

Chronic wound pain is therefore persistent pain that is either nociceptive or neuropathic in nature, and requires full holistic management in

palliative care to promote comfort and wellbeing (Acton, 2007). It is important to consider pain in palliative care as this has been described as the most distressing symptom (Price, 2005).

PREVALENCE OF CHRONIC PAIN IN PALLIATIVE CARE

From the incidences and rates of chronic pain reported in the literature, it is apparent that chronic wound pain is prevalent among the majority of the palliative population (Alvarez, et al, 2007). Despite patients concerns about chronic wound pain, Woo et al (2008) recognised that it can often be neglected by healthcare professionals. In another paper, Chrisman (2010) acknowledged that this may be the case in nursing due to increased workload and time pressures.

In addition to this, pain reporting is on the increase in palliative patients, and the role of the nurse is crucial in pain management. The results of research carried out by Eager (2005) support this: 210 wound specialist nurses found that pain was reported as being the biggest issue 50% of the time. Gallagher's (2010) large sample size study also identified that pain related to palliative wounds was reported in 30% of nursing consultations, demonstrating that nurses are often the first person patients report pain too.

LASTING PAIN RELIEF

Having reviewed the studies above, it is clear that pain impacts directly on patients' everyday lives and that effective pain relief is needed. It is crucial to consider long-acting relief, as patients' wound pain can worsen over time. Roth et al (2004), whose cross-sectional study focused on mixed chronic wounds in advanced illness, reported that 67% of patients reported severe worsening of pain over a 3-week period. Lasting pain control is therefore needed in the palliative population and nurses should consider this when a patient first presents with a wound or states it is causing pain.

Dressing changes

This concept of pain relief also applies to dressing changes, where the majority of increased pain is reported. Szor and Bourguignon (1999) found that 87.5% of patients (28/32) in a qualitative study reported pain at dressing change. Of the 28 reporting pain, 21 rated their pain as mild, discomforting, or distressing, and five as horrible or excruciating. Sibbald et al (2006), in their review

of literature published between 2000 and 2006, stated that pain was often at its worst during dressing removal. This again points to the nurse's role in providing lasting pain control, especially in palliative patients whose underlying pathology may exacerbate pain further (Alvarez et al, 2007).

These incidences and rates demonstrate how palliative patients can experience chronic wound pain on a daily basis, no matter what their underlying pathology.

Managing symptoms

It is crucial to consider pain management in the palliative patient because, as White (2008) pointed out, patients may already be experiencing other symptoms related to their illness. My own practice experience compliments this, as many palliative patients do not want to suffer further symptoms. Nurses must provide suitable management strategies combined with excellent communication and observation skills to manage patients' symptoms (Reddy et al, 2003). Pain assessment should be undertaken daily within practice due to the increased symptom control needed for this patient group (Woo et al, 2008). *Figure 1* should assist in the identification of the most appropriate management option for a patient.

Within the literature, there are many management options proposed for the control of chronic wound pain in palliative patients. Most of the material relates to nurse administration of topical and systemic opioids and anaesthetics, however, which relies on their appropriate prescription by doctors (Chrisman, 2010). Available medications include NSAIDs, morphine, diamorphine, and lidocaine. Brown (2014) recognised that the appropriate use of opioids is key to minimising pain, and that used in combination with other strategies (i.e. anaesthetics) will enhance pain relief further.

TREATMENT OPTIONS

Topical opioids

Topical opioids work on the peripheral nerves to relieve localised chronic wound pain (White, 2008). In a review of 19 studies (including six randomised controlled trials, six case series and seven case reports), 18 studies found that the use of topical opioids reduced post-treatment pain scores in palliative care patients. The evidence, however, did not clearly indicate the ideal opioid or when it should be administered (LeBon et al, 2009). Despite the results of these studies, the use of topical opioids

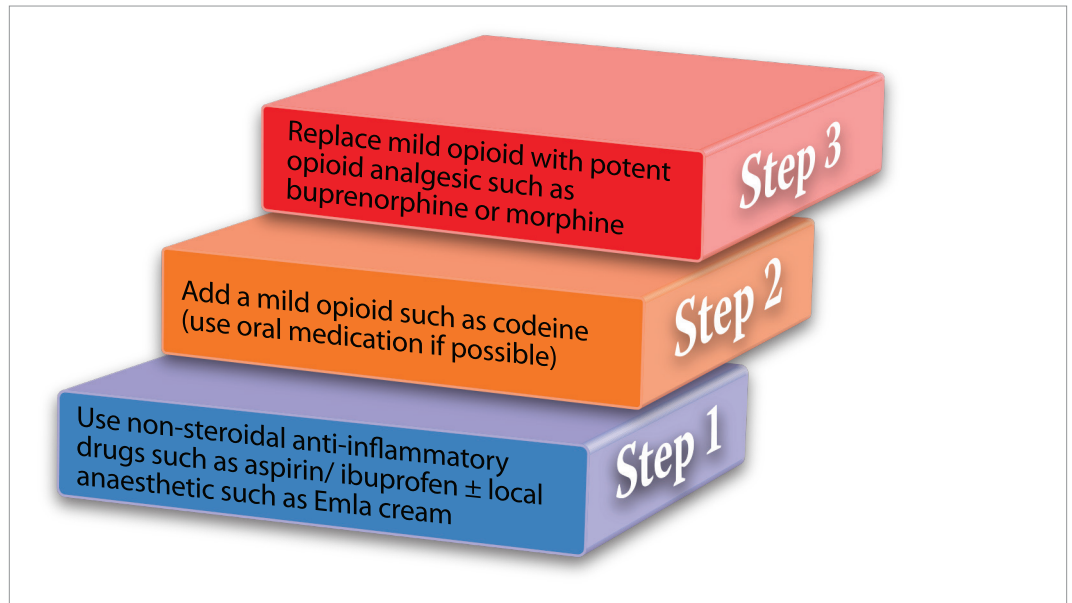


Figure 1. Pain relieve ladder for wound management in palliative patients (Brown [2014] adapted from WHO [2006])

has been contested due to poor evidence of cost-effectiveness and potency (Acton, 2007).

Adapting the pain ladder

Brown (2014) asserted that application of the World Health Organization's (WHO, 2006) analgesic ladder should be adapted to palliative pain management to allow the safe use of topical opioids (Figure 1). This ladder recommends the use of an NSAID (ibuprofen) plus an anaesthetic cream (lidocaine) as the first measure, with the addition of a mild topical opioid for increasing pain. Finally, should the pain worsen, the use of a potent topical opioid (morphine) should be implemented.

Research supports this adaptation, as a meta-analysis of topical opioids for non-cancer pain found that they were most effective in managing pain in chronic wounds (Furlan et al, 2006). This meta-analysis included 41 randomised trials involving 6,019 patients, of which 80% had nociceptive pain and 12% had neuropathic pain. This study suggests that all types of pain can be managed by topical opioids.

Ashfield (2005) maintained that morphine and diamorphine gels in particular are beneficial for chronic wound pain relief, as the case-controlled study performed found that these gels provided effective relief for up to 24 hours, and significantly improved patients' comfort between dressing changes.

Zeppetella's (2003) study on the use of 10mg topical morphine also found a reduction in pain

intensity scores. These scores were compared twice daily and a significant reduction in pain was found ($p < 0.01$) with no adverse effects.

Caution and a stepped approach are needed

These studies demonstrate the clinical benefit of applying topical opioids to the wounds of palliative patients to manage chronic pain. By following Brown's (2014) adaptation of the analgesic ladder to palliative wounds, a stepped approach can be followed by nurses to promote adequate pain management. However, it must be acknowledged that combination drugs such as paracetamol and acetylsalicylic acid (aspirin) preparations should not be added to opioids, as this can lead to hepatic and renal insufficiency that can be detrimental to the palliative patient (Reddy et al, 2003). A clear titration starting from a low dose is recommended to prevent adverse effects (White, 2008).

Systemic opioids

Systemic opioids can be considered, as many palliative patients have multiple sources of pain that can be managed through their administration. Systemic opioids do have side-effects, however, that can limit their tolerability and this should be considered if the wound is the only source of pain (Gallagher, 2010).

Topical anaesthetics

Having discussed topical and systemic opioids, the use of topical anaesthetics must be acknowledged.

Woo et al (2008) recommended the use of lidocaine, tetracaine (amethocaine) 4% and prilocaine prior to procedures or wound manipulation. Sibbald et al (2006) supported this, as their research found these topical anaesthetics reduced pain during wound manipulation. In addition to this, anxiety was reduced as patients felt 'eased' at knowing an anaesthetic was being applied.

There is debate about which concentrations of anaesthetic are most effective. Alvarez et al (2007) investigated whether different concentrations had an impact on chronic wound pain, and from their case-controlled study found that 2.75% lidocaine cream containing zinc oxide provided fast-acting and effective pain relief lasting up to 4 hours. As this research was conducted in a palliative outpatient wound clinic, its application to practice can be recommended.

A systematic review by Evans and Gray (2005) found that 4% lidocaine patches worn for a maximum of 12 hours daily controlled pain. Again, this suggests that lidocaine has promise in controlling chronic wound pain over a certain period depending on the concentration.

Acton (2007) proposed that a topical mixture of lidocaine and prilocaine was potent for painful intermittent procedures. The author does acknowledge, however, that there are limited studies on its uses for persistent pain during dressing changes.

Conclusion

By analysing the literature on topical opioids and anaesthetics, it could be argued that their use in practice is beneficial. The studies appraised recognised the strengths of providing fast, effective relief over a prolonged period. However, careful titration and monitoring will be needed to assess for potential side effects.

WOUND CLEANSING AND DRESSING SELECTION

Another theme from the literature is how wound cleansing and dressing selection impact on pain. Extensive research shows how wound cleansing in particular is a source of pain in chronic wounds (White, 2008). The literature does, however, provide guidance on how to clean wounds while minimising the risk of causing pain. Fleck (2007) promoted the use of a four-pronged approach of cleaning, moisturising, protecting and nourishing the skin, while Chrisman (2010) stated that hot water and excessively cold fluids should be avoided, no excess

rubbing should take place, and that wiping across the wound between dressing changes is painful. These concepts highlight how a degree of care and the selection of appropriate cleansing methods are needed by the nurse to manage pain during the wound cleansing procedure.

The majority of the research indicates that 0.9% saline solution should be promoted as the generalised cleansing agent (White, 2008), as it cleans wounds gently while slowing the conduction of pain fibres. This helps to reduce inflammation (Fleck, 2007).

Keeping dressing changes to a minimum will promote comfort and wellbeing in the palliative patient. Acton (2007) recognised that a desire to see wound progression may be evident, but this must be balanced against the damage caused to the wound and surrounding skin during dressing change.

Analysis of the literature surrounding wound cleansing suggests that dressing selection is also crucial to minimising pain. There is profound agreement that the moist wound healing theory should be considered in palliative patients (McManus, 2007). This is because exposed nerve endings are bathed in fluid, preventing dehydration of the nerve receptors and thus minimising pain (White, 2008). This must be the first consideration for nurses when selecting dressings for painful wounds.

Another important factor is the need for pain-free dressing removal in combination with a moist environment. Gallagher's (2010) study found that fibrous products (i.e. alginates) transform into gels on contact with wound fluid, forming a moist environment where non-traumatic removal is facilitated and generally provides pain relief. Fletcher (2005) asserted that hydrocolloids have a similar function, as they disperse in the exudate, and form a soft conforming gel that produces a moist environment, preventing painful removal and bathing nerve endings.

Hollinworth (2006) disagreed entirely with Gallagher and Fletcher, and promoted the use of soft silicone dressings. This is because the polyamide net-coated soft silicone provides atraumatic removal and manages moisture balance appropriately. Soft silicone dressings are frequently used due to their cost-effectiveness and efficiency (Acton, 2007). White's (2005) review indicated that silicon dressings are preferred in palliative care. This review, even though it is 10 years old, coincides with my own practice experience.

The literature also proposes the use of ibuprofen-releasing foam dressings to manage chronically inflamed wounds in palliative care. The effectiveness of these dressings, however, remains questionable. One prospective case study looking at 10 patients with painful chronic venous leg ulcers treated with ibuprofen foam dressing for 6 months found a slight reduction in pain intensity scores, but these scores increased 1 week after discontinuing the treatment (Flanagan et al, 2006). Another small single-blinded study found that a dressing containing ibuprofen (Biatain-Ibu Non-adhesive) reduced numeric box scale pain scores from 7 to 2.5 in 12 patients compared to the same dressing without ibuprofen (Biatain Non-adhesive) (Jørgensen et al, 2006). The use of additional NSAIDs and other pain-relieving medications are restricted when an ibuprofen-releasing foam is used, therefore it may not be suitable for palliative patients as comfort and wellbeing may not be maximised.

Conclusion

By analysing the research it is clear that suitable techniques for wound cleansing and dressing selection are needed. The cleansing of wounds with 0.9% saline and the use of a soft-silicone dressing will help nurses provide pain relief for their patients.

DISCUSSION

This review revealed some contrasting opinions and results relating to pain management in palliative care patients, but there is some consensus that nurses can use. It is acknowledged that pain management is crucial to the overall care of patients with advanced illness. Nurses need to consider all available options, taking into account the level of pain, the underlying pathology and the medications' safety.

Pain during cleansing can be reduced with the use of 0.9% saline and nurses should avoid rubbing or wiping the wound area where possible. Dressing removal can cause pain, so nurses should consider using products that form a gel, creating a moist environment that facilitates non-traumatic dressing removal. Nurses can also minimise trauma to the wound bed by avoiding unnecessary dressing changes.

From the analysis, recommendation could be made to use either lidocaine gel covered with a soft-silicone dressing to provide a moist environment to prevent traumatic removal. Should the pain worsen, then a topical opioid (morphine) could be considered in line with Brown's adaptation of the WHO pain ladder. Nurses should liaise with the pharmacy and medical teams throughout this process to ensure adequate titrations of pain-relieving medications are given and at the correct intervals.

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REFERENCES

- Acton C (2007) The holistic management of chronic wound pain. *Wounds UK* 3(1):61–9
- Alvarez O, Kalinski C, Nusbaum J et al (2007) Incorporating wound healing strategies to improve palliation (symptom management) in patients with chronic wounds. *J Palliat Med* 10(5): 1161–89
- Ashfield T (2005) The use of topical opioids to relieve pressure ulcer pain. *Nursing Standard* 19(45): 90–2.
- Beldon P (2011) Skin changes at life's end: SCALE ulcer or pressure ulcer? *Br J Community Nurs* 16(10):491–4
- Brown A (2014) Strategies to reduce or eliminate wound pain. *Nurs Times* 110(15): 12–5
- Chrisman CA (2010) Care of chronic wounds in palliative care and end of life patients. *Int Wound J* 7(4):214–35
- Eager C (2005) Dressings and clinician support in relieving pain and promoting healing. *Ostomy Wound Manage* 51(8): 12–4
- Evans E, Gray M (2005) Do topical analgesics reduce pain associated with wound dressing changes or debridement of chronic wounds? *J Wound Ostomy Continence Nurs* 32(5): 287–90
- Flanagan M, Vogensen H, Haase L (2006) *Case series investigating the experience of pain in patients with chronic venous leg ulcers treated with foam dressing releasing ibuprofen.* <http://www.worldwidewounds.com/2006/april/Flanagan/Ibuprofen-Foam-Dressing.html> (accessed 11.08.2015)
- Fleck CA (2007) Wound pain: assessment and management. *Wound Care Canada* 5(1): 10–7
- Fletcher J (2005) Understanding wound dressings: hydrocolloids. *Nursing Times* 101(46):51–3
- Furlan AD, Sandoval JA, Mailis-Gagnon A, Tunks E (2006) Opioids for chronic noncancer pain: a meta-analysis of effectiveness and side effects. *CMAJ* 174(11): 189–94
- Gallagher R (2010) Management of painful wounds in advanced disease. *Canadian Family Physician* 56(9): 883–5
- Hollinworth H (2004) Sharing the burden: the complex practice of wound care in the community. *Br J Community Nurs* 9(1): 5–10
- Hollinworth H (2006) Addressing pain and tissue trauma during wound care. *Nursing Resident Care* 8:259–64
- Jørgensen B, Friis G, Gottrup F (2006) Pain and quality of life for patients with venous ulcers: proof of concept of the efficacy of Biatain-Ibu, a new pain reducing wound dressing. *Wound Repair Regen* 14(3): 233–9
- LeBon B, Zeppetella G, Higginson I (2009) Effectiveness of topical administration of opioids in palliative care: a systemic review. *J Pain Symptom Manage* 37(5): 913–7
- Price P (2005) An holistic approach to wound pain in patients with chronic wounds. *Wounds* 17(3):55–7
- Price P, Fagervik-Morton H, Mudge E et al (2008) Dressing related pain in patients with chronic wounds: an international wound perspective. *Int Wound J* 5(2): 159–71.
- Reddy M, Kohr R, Queen D, Keast D, Sibbald RG (2003) Practical treatment of wound pain and trauma: a patient-centred approach an overview. *Ostomy Wound Manage* 49(4 Suppl): 2–15
- Roth R, Lowery C, Hamil J (2004) Assessing persistent pain and its relation to affective distress, depressive symptoms, and pain catastrophizing in patients with chronic wounds. *Am J Physical Med Rehabil* 83(11):827–34
- Sibbald R, Katchky A, Queen D (2006) Medical management of chronic wound pain. *Wounds UK* 2(4): 74–89
- Stephen-Haynes J (2008) An overview of caring for those with palliative wounds. *Br J Community Nurs* 13(12):24–30
- Szor JK, Bourguignon C (1999) Description of pressure ulcer pain at rest and at dressing change. *J Wound Ostomy Continence Nurs* 26(3): 115–20
- White R (2005) Evidence for atraumatic soft silicone wound dressing use. *Wounds UK* 1: 104–9
- White R (2008) Pain assessment and management in patients with chronic wounds. *Nursing Standard* 22(32):62–8
- Willis S, Sutton J (2013) Managing complex palliative wounds: an interactive educational approach for district nurses. *Int J Palliative Nurs* 19(9):457–62
- Woo K, Sibbald R, Glynn C et al (2008) Assessment and management of persistent (chronic) and total wound pain. *Int Wound J* 5(2):205–15
- World Health Organization (2006) *Cancer Control: Knowledge into action. WHO guide for effective programmes.* <http://bit.ly/1hVyyRb> (accessed 11.08.2015)
- Zeppetella G (2003) Analgesic efficacy of morphine applied topically to painful ulcers. *J Pain Symptom Manage* 25(6):555–8