

Improving Health-related Quality of Life

For Patients with Painful, Exudating, Chronic Wounds

BY
 Kevin Y. Woo,
 Heather L. Orsted,
 Kristine Gjødsbøl

Chronic wounds result from a disruption of the skin barrier that alters the structural and functional integrity of the integument. Due to underlying wound pathology and co-existing diseases, local wound factors and patient-centred concerns, normal wound healing may be thwarted and not follow an orderly sequential trajectory. The impact of chronic, stalled wounds on any individual is tremendous, compromising quality of life (QoL) due to

myriad interrelated factors, of which pain is consistently described as the most disabling and devastating.^{1,2} As our society continues to age, chronic wounds are becoming more prevalent and complex, demanding an organized and systemic approach to wound caring.

What is Wound Pain?

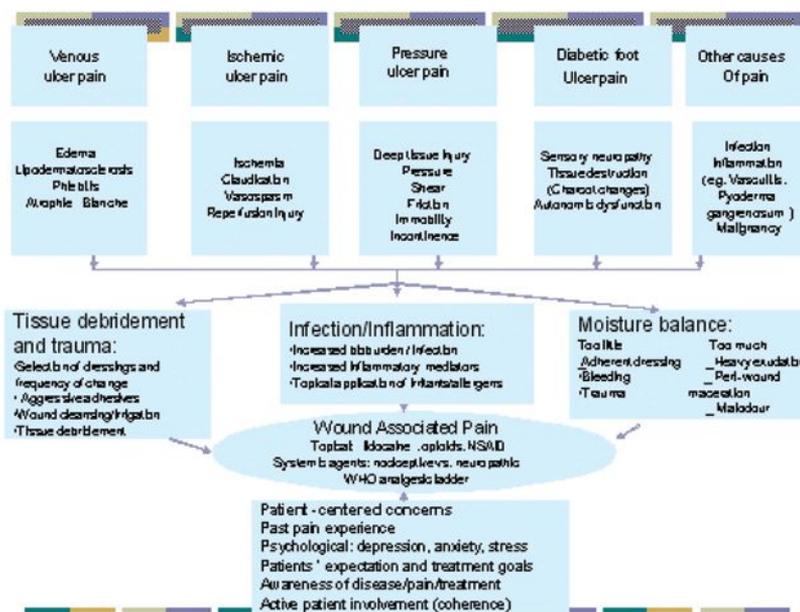
According to a model proposed by Woo et al.,³ the mechanism of wound-related pain is multifaceted.

Kevin Y. Woo, PhD, RN, ACNP, GNC(C), FAPWCA, is a Scientist/Advanced Practice Nurse, Wound Healing Centre, Women's College Hospital, Toronto, Ontario.

Heather L. Orsted, RN, ET, MSc, is a Clinical and Educational Consultant based in Calgary, Alberta.

Kristine Gjødsbøl, PhD, works in Clinical Development for Coloplast A/S, Denmark.

FIGURE 1
The influences on pain by wound type



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Depending on the types of wounds, pain can be influenced by conditions that are intrinsic to the underlying etiologies, as described in Figure 1. In addition, tissue trauma, infection and poor moisture balance (too much or too little) are the local wound-care factors that have been demonstrated to precipitate and exacerbate pain. Consistent with the notion that pain is a subjective and personal experience, patient-centred factors are central to understanding the complexity of pain. These factors may include anxiety, past pain experience, expectations and relationships with caregivers that account for the variable individual responses to a similar noxious stimulation.

The Effect of Pain on Patients

Pain is consistently reported by patients as one of the worst aspects of living with chronic wounds.^{1,2,4,5} As a result of pain, many individuals have to restrict their physical activities, leading to immobility, loss of independence, social isolation, depression and feelings of hopelessness.⁶ For many individuals, the pain is worse at night, disrupting sleep and contributing to fatigue and lack of energy.⁷ In a qualitative study of patients

The patient experience

Patients have described the pain eloquently, as the following quote illustrates: "...the worst thing I have ever gone through in my life, and believe me I have had surgery, multiple surgeries. I've never had nothing hurt like this. Never. It feels like someone is sticking a hot poker in you. They're sticking pins in you the whole time. And it never stops hurting. The damn thing never stops hurting."⁴

The persistent pain experienced by people with chronic wounds can be difficult to imagine. It is frequently described as burning or like having acid thrown onto the skin.⁷ Another patient has described the pain as follows: "One day I was thinking I was going off my head. It was itching and scratching and burning, [I] couldn't concentrate."⁹

with venous leg ulcers, six out of 10 patients reported pain levels as "horrible" or "excruciating."⁸

Assume all chronic wounds are painful.

To address the primacy of pain as part of chronic wound management, a new international consensus document on the assessment and management of chronic wound pain has been published.³ The key message from this document is to "assume all chronic wounds are painful unless the patient indicates otherwise." While pain is often experienced during dressing-related procedures (e.g., wound cleansing, dressing changes), chronic, persistent pain is equally distressing between treatments—even at rest. Assessment and treatment should no longer simply concentrate on the pain during dressing changes alone.³

Assessing for Chronic Wound Pain

Potential causative factors should be identified as wound-related pain may be associated with nerve damage, trauma or infection. Dressing removal is painful when dressings adhere to the wound bed because of dried-out materials, aggressive adhesives, abnormal granulation tissue and capillary loops growing into the product matrix and the glue-like nature of dehydrated or crusted exudate.^{10,11} Several authors have validated that the presence of unexpected pain or tenderness, along with other criteria, is indicative of wound infection.^{12,13}

A thorough pain assessment should include the following components:

- A detailed pain history: past experience, meaning, cultural norm
- Description of pain: intensity (0–10), quality (e.g., burning, heavy, aching)
- Pain pattern: precipitating factors (e.g., anxiety before dressing change), alleviating factors (e.g., music with dressing change), temporal variations (e.g., night pain)
- Impact of pain: mood, social, spiritual, activities of daily living

By exploring the meaning of pain from patients' perspectives, we can identify values, preferences and barriers that may influence the choice of treatment

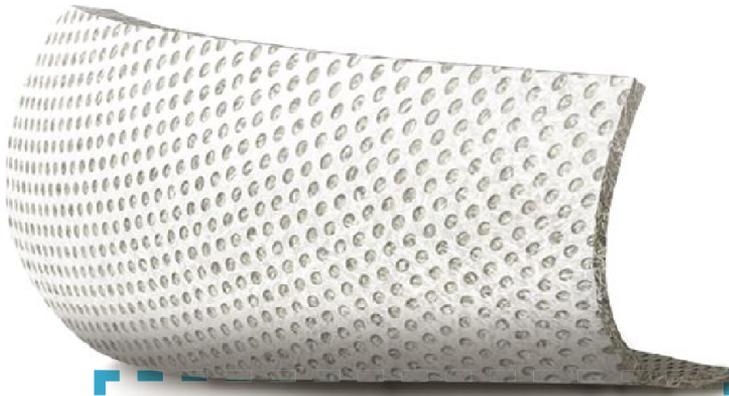
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Did you know...

Wound-related pain can be temporary (acute) or persistent (chronic). *Acute* wound pain can be aggravated whenever the wound is being handled or manipulated, such as during dressing removal, wound cleansing or debridement. *Persistent* wound pain is the background symptom that exists at rest and between wound-related procedures. Evidence indicates that up to 80 per cent of patients with chronic wounds experience persistent pain between dressing changes.³

strategies for pain and treatment adherence. When talking to a patient, remember that you only get the answers to the questions you ask.

Elderly people do not always express their concerns relating to pain because they believe wound pain to be both unavoidable and untreatable.¹⁴ Certain cultural considerations may create additional barriers for patients regarding the verbalization of their pain status. To empower patients to be active participants in their own care, the National Patient Safety Foundation suggests three questions that patients should ask at their visits with health-care providers.¹⁵ The questions that constitute the "Ask Me 3" model (www.AskMe3.org) are:

- What is my main problem?
- What do I need to do?
- Why is it important for me to do this?

Studies have demonstrated that by implementing the "Ask Me 3" model, patients express better communication with their providers and are more satisfied with their care. Subsequently, the number of missed visits and call-backs (patient calls for clarification or more information) is reduced. Despite the concerns of many health-care providers, this interaction does not add significant time to the length of patient visits.¹⁶

Management of Wound Pain

Wound-related pain is often underestimated and under-treated. However, multiple non-pharmacological strategies and pharmacological agents are available to control wound-related pain. The selection of an appropriate agent should take into account the type and severity of the pain. For optimal pain management,

consider the use of non-pharmacological approaches combined with pain medication.

Non-pharmacological treatments

Common non-pharmacological pain management strategies are aimed at reducing the potential effect of psychological factors (e.g., anxiety, stress) that may aggravate the pain experience. Relaxation techniques, music therapy, touch therapy, visual stimulation, hypnosis, stress-reducing strategies, guided imagery, behavioural and cognitive therapy and distraction have all been suggested as options for managing wound pain. Other modalities that may be complementary therapies for pain control include transcutaneous electrical nerve stimulation, acupuncture, massage, laser therapy and thermal therapy. The everyday clinical utility of these techniques in the management of wound-related pain is unknown due to the paucity of wound-pain-related research concerning these adjunctive therapies. Non-pharmacological modalities alone may not be sufficient to provide adequate pain control, and they are often used in conjunction with other systemic and topical agents. Patient preference must be sought and incorporated in the plan of pain management.

Appropriate dressing materials

The repeated application and removal of adhesive tapes and dressings can mechanically strip the stratum corneum on the skin surface from the epithelial cells. This can precipitate pain and skin damage.¹⁷ In severe cases, erythema, edema and blistering have been observed.¹⁸ By limiting skin damage with dressing removal, it is possible to minimize pain at dressing changes. Considering pain as an outcome indicator, Dykes and Heggie¹⁹ concluded that removal of a silicone dressing was less painful ($n=24$, $p<0.01$) than removal of dressings that required a higher peel force. However, this study was conducted with healthy volunteers, and results from intact skin may not be applicable to patients with wounds and fragile peri-wound skin.

Topical agents

Topical agents or dressings play a critical role in alleviating wound-related pain.³ Briggs and Nelson have reviewed the literature pertaining to topical interven-

tions for pain in patients with venous leg ulcers.²⁰ They found strong evidence to support the use of an anaesthetic cream containing lidocaine/prilocaine prior to the debridement of venous leg ulcers.

Advanced wound dressings containing ibuprofen may be suitable for reducing persistent and acute wound pain.^{21–24} There are many advantages to using local rather than systemic treatment. Any active agent is delivered directly to the affected area, bypassing the systemic circulation, and the dose needed for pain reduction is low, with minimal risk of side effects.

The use of topical morphine offers an alternative pain management strategy. Although pain improvement was indicated in several studies of patients with chronic wounds, this formulation is not commercially available, and the lack of pharmacokinetic data precludes the routine clinical use of these compounds use at this time.^{25–28}

Systemic treatments

Pain is in general categorized as nociceptive, neuropathic or a combination of both. Nociceptive pain, caused by tissue damage, is often described as gnawing, aching, tender and throbbing. According to the recommendations of the World Health Organization (Table 1),³ most patients with mild to moderate pain respond favourably to oral non-steroidal anti-inflammatory drugs or acetaminophen. For severe pain, opioid analgesics

(weaker and then stronger) should be utilized. To minimize adverse side effects of opioid (such as confusion, constipation, drowsiness), it is prudent to start at a low dose and titrate slowly to the desired therapeutic dose (start low, go slow). Neuropathic pain, which is due to nerve injury, is typically experienced as burning, stinging, stabbing or shooting sensations. Patients experiencing neuropathic pain may benefit from adjuvant therapies such as tricyclic anti-depressants and anticonvulsants. Antidepressants and anticonvulsants exert a different mechanism to block pain transmission, and their use does not imply pain is related to psychiatric or seizure disorders. The dosing of these medications for pain management is much lower than that for the treatment of depression and convulsion.

The Effect of Pain on Other QoL Considerations

The patient's QoL might influence the healing of the wounds and their desire to comply with the necessary treatment. More importantly, it has a huge impact on patients' lives and their acceptance of the condition of wounds and treatment. Being able to live as normal a life as possible is often the most important treatment priority for wound patients, and health-care professionals can play a significant role in supporting a patient's QoL.

Patients with chronic wounds often report pain to be the most dominant factor of having a wound, and the

TABLE 1

Pain treatment recommendations according to the World Health Organization³

Start treatments at a low dose and increase slowly.

	Neuropathic pain	Nociceptive pain
First line	Tricyclic antidepressant: amitriptyline, nortriptyline, desipramine	Non-steroidal anti-inflammatory drug (NSAID) or acetaminophen
Second line	Anticonvulsant: gabapentin/pregabalin	Weak opioid (e.g., codeine)
Third line	Serotonin-norepinephrine reuptake inhibitor (SNRIs) antidepressant: duloxetine, venlafaxine Anticonvulsant: carbamazepine, sodium valproate	Strong opioid (e.g., morphine)

factor that most compromises QoL because of the affect of pain on daily activities. For example, painful leg ulcers often limit the mobility of the patient, and simple activities such as climbing the stairs or stepping onto a bus become very difficult. The pain can also lead to a decrease in activities of daily living such as housework, meal preparation and bathing. Uncomfortable dressings can lead to altered clothing and/or shoe options, which can contribute to social isolation and a feeling of being housebound.

It is important for the health-care professional to identify and address problems that affect a person's QoL, not only in the case of wound pain but also with regard to potential issues such as exudate leakage or odour.^{23,29}

This can be done by:

- Asking questions related to health-related QoL
- Identifying important influencing factors (e.g., wound pain)
- Addressing those influencing factors (e.g., treat pain, support faster wound healing, manage exudate) by using the best possible treatments available

It is not only possible to improve a patient's QoL—it is also the *responsibility* of all health-care professionals to do everything they can to support a holistic approach to care. ☺

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