Pain · Anxiety · Inflammation · Non-healing

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Introduction

Pain caused by chronic wounds is distressing for the patient and may contribute to non-healing due to physiological changes. The inflammatory mediators interact with nerve cell nociceptors and can also act as pain stimulators[1]. Apart from aetiology related pain, other types are anticipatory, procedural and post procedural. Challenges with management may be associated with lack of this knowledge.

Pre-procedural

Anxiety or anticipatory pain may be triggered by memories of past treatments e.g. dressing changes, compression, perceptions of treatments offered e.g. debridement (Fig 1). Additional stressors may be having no control to change or adapt treatment that may become painful or uncomfortable e.g. compression bandages/hosiery.

Procedural

Disturbance of sensory nerve endings in the skin may be caused by touching the wound or pressure exerted on the wound/skin during debridement to remove debris[2] (Fig 2). Maintaining moisture balance by absorption or donation of fluid may cause a drawing sensation or cause the wound to become too dry. Compression therapy may be uncomfortable if used inappropriately.

Post procedural

Temporary pain immediately post procedure is not usually a problem for the patient. However lasting iatrogenic pain from treatments e.g. sensitivities or failure to address symptoms may cause further pain and non-concordance (Fig 3).

Solving the problem

The author reviewed the literature to gain information on studies that have been conducted and the science that underpins pain theory pathways. The simple pain cycle diagram that was developed set out the link between pain, inflammation and wound healing, identifying wound complication and psychological elements as contributory factors[3] (Fig 4). Anxiety and stress may be manifested as anticipatory pain that may delay healing by lowering levels of cytokines[4] Cortisol disrupts sleep patterns that further delay healing.

Simple measures to relieve anxiety and pain

- Distraction techniques
- Involving the patient and family by education and offering choices

Fig 1 Perceptions of treatments offered

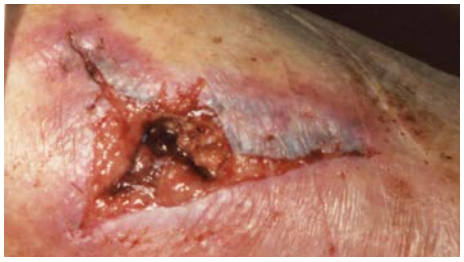

Fig 2 Some wounds may be painful to touch

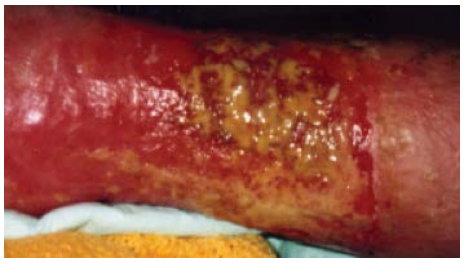

Fig 3 Sensitivity from an inappropriate dressing

Fig 4 Pain, Inflammation, non-healing cycle

Fig 5 Self-application of ReadyWrap™ Velcro® compression Wrap

- Self-care to transfer control e.g. the ability to loosen compression wraps at night (Fig 5).
- Gentle yet thorough debridement that could be done by the patient.
- Dressings that help to relieve pain and control symptoms.

Case study evidence for relieving anxiety

"You wouldn't have got near me with a scrubbing brush"

"it (Monofilament pad*) soothes the site of the wound whilst cleaning"

"one patient was a six year old boy and the grit was removed with very little trauma or emotional upset"[5]

"In every case the monofilament pad* did not result in trauma to the healthy adjacent tissue. Objective measurements of irritability resolved within two minutes following completion of the procedure. Non vitalized tissue was effectively debrided from the wound beds with minimal pressure or force"[6]

"The dressing** was found to be helpful in controlling pain in 8/10 of patients in this evaluation suffering high levels of ulcer pain"[7]

"A 78 yr old lady who had refused compression due to 'unbearable' pain was taught how to apply the Velcro® Wrap"***

"By involving the patient in her care concordance was achieved"

"Results showed improvements in swelling & healing within 2 weeks"[8]

Conclusion

Gaining the patient's confidence and choosing appropriate treatments including self-care options aid concordance and help to relieve pain and anxiety. This could have a beneficial effect on wound healing. ■

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* Debrisoft® Monofilament Debridement Pad (L&R USA), ** Suprasorb® G Sheet Hydrogel Dressing (L&R USA) (ActiFormCool® in the UK), *** ReadyWrap™ Velcro® Adjustable Compression Wrap (L&R USA)

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