A reflection on the successful outcome of effective analgesia in a patient with a venous leg ulcer

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Across cultures and across time one of the most basic human experiences is pain, which may be acute or chronic (Madjar & Walton, 1999). Addressing the control of pain, which is often the main concern in patients with leg ulcers (Morrison et al, 1999) may lead to improvement in quality of life.

Pain in Venous Ulcers

There are two types of pain associated with venous leg ulcers, neuropathic and nociceptive. Neuropathic pain arises from damaged nerve tissues (Mangwendeza, 2000). Nociceptive pain, which is associated with trauma or injury (Hall, 2003) results from actual or potential tissue damage. Pain receptors may be excited by mechanical, thermal or chemical stimuli and they are especially common in the superficial portions of the skin. Pricking or fast pain can be elicited by all three stimuli. Chemical substances such as histamine, serotonin, prostaglandins and cytokines are especially important in stimulating the slow suffering type of pain that occurs from epithelial and connective tissue injury (Martini & Bartholomew, 2000).

Tissue ischaemia is thought to cause pain because of accumulation of large amounts of lactic acid in the tissues. However, formation of bradykinin or proteolytic enzymes from damaged cells may also stimulate nerve endings (Guyton, 1991).

Issues Related to Holistic Nursing Care

Provision of nursing care of patients with wounds must begin with a comprehensive understanding of the concept of pain. As well as physical pain, those with chronic wounds also suffer psychological, social and spiritual pain, and their care must encompass all three dimensions (Greenstreet, 2001). If true holistic care is to be given physical aspects of pain cannot be treated separately. However, observation and measurement of physical pain are important (Hawthorn and Redmond, 1998). Indeed Moffatt(1999) identifies pain in chronic wounds as a major issue in quality of life assessment.

Quality of Life Issues

In this article I will focus on a patient in my care and through reflection suggest that perhaps there has not been enough consideration of pain assessment and its documentation, with an associated lack of evaluation of how effective prescribed analgesia actually is. Research by Charles (1995) identified pain as the worst aspect of leg ulceration, a chronic condition which can have a significant impact on the patients quality of life (Cave, 1999).

Prevalence and Aetiology

A prevalence survey (O’Brien and Burke, 2002) in the Mid-Western Health Board region of Ireland revealed a prevalence rate for leg ulceration of 12/10,000. The prevalence increases eightfold in the population over 70 years. The average age of patients was found to be 72 years and women were twice as likely to be affected as men(O’Brien & Burke, 2002)

A recent study by Douglas (2001) has shown that 55% of patients with leg ulceration in the United Kingdom are over 85 years of age. It is also estimated that in the next two decades the number of people aged over ninety is set to double. This client group are often isolated due to other medical conditions. Research into quality of life in leg ulcer patients has found high levels of social isolation, depression, anxiety (Keeling et al, 1996) and pain frequently compounds this problem. Indeed a study by Moffatt (2001,a) associated factors such as pain and depression with delayed healing of leg ulcers. Low healing rates together with high recurrence rates cause untold suffering to the patient (Diamond, 1999). Recurrence following healing is less common in patients who comply with treatment programmes (Tonge, 1995).
Reviewing the literature (Loveman & Gale, 2000; Greenstreet, 2001; Hawkins, 2001; Hollinworth, 2001) there were suggestions that wound pain generally is poorly managed, indeed in leg ulcers it may often be ignored (Mangwenweza, 2000).

Case Study

Ineffective pain management was reflected in practice with Mary, a seventy-two year old married lady who presented to the hospital leg ulcer clinic for assessment. She had been treated for the previous six months with four-layer compression bandaging. The ulcer was on the gaiter area of her left leg. A hydrogel to enable autolytic debridement (Hollinworth, 2001) of the wound bed was being used, together with a secondary adhesive foam dressing. Granulation tissue was beginning to fill the wound bed and small islets of epithelium were visible. However there were signs of tissue trauma around the edge of the ulcer, which measured 3cms x 4.5cms. Mary said she now dreaded the weekly dressing changes as pain caused by removal of the adhesive foam was unbearable. Modern dressing products such as adhesive foams, hydrocolloids and films often cause pain and tissue trauma at dressing changes due to their adhesive properties (lones and Milton, 2000 a; Hollinworth, 2000).

Alginates may adhere to the wound when the level of exudate decreases (Jones and Milton, 2000b) causing further suffering and trauma. Mofatt (2001b) found that ritualistic procedures involving dressing techniques often isolates the wound from the patient. She found that among nurses the evidence based care agenda supporting wound care was still dominated by the biomedical model. Also professionals felt ill-equipped to face emotional and psychosocial issues raised by patients. Mary had been prescribed paracetamol 1 gramme four times daily, for the ulcer pain which she described as a constant gnawing. She reasoned that daily dressing changes without four layer bandaging would help, she felt there would be less adherence of the foam after 24 hours. She also complained that she found the four layer bandages hot, malodorous and bulky, she was unwilling to tolerate them any longer. Hayward (2002) found that there are many reasons for non-compliance with compression bandaging such as pain, discomfort, immobility, social isolation due to malodour or simply because the patient wants to shower every day. Mary felt socially isolated due to the malodour from the bandages, which was evident on the second day following dressing changes. Due to the bulk of the bandages she could not wear her normal shoes, instead she had to resort to slippers, which were also moist and malodorous due to excessive exudate.

Effects of pain on mobility, sleep and infection

Walshe (1995) found that pain limits mobility and interrupts sleep. Due to constant pain, Mary was too debilitated and tired to mobilise. Also the constant ache in her leg prevented her from having a good nights sleep. Poor management of wound pain often leads to increased frequency of infection, delayed healing and suppressed inflammatory response (Flanagan, 1997) issues which all complicate leg ulcer management. Infection had been excluded in Mary’s case as a swab had been taken the previous week. Mary felt that her district nurse, who was constantly rushing due to her excessive caseload, had underestimated the significance of her pain. Hollinworth (1999) found that those inflicting wound pain often dismiss its significance.

Perhaps there has not been enough consideration given to pain assessment and its documentation, with an associated lack of evaluation of how effective prescribed analgesia actually is. Clearly more communication with the patient when planning treatment is necessary, a finding supported by Scherwitz et al (1997) who found that more than anything the patient wants to be acknowledged, seen and heard. Due to staff shortages in the workplace nurses may not have time to sit and talk to the patients or ask them how they feel about their ulcer. Often talking to the patients and comforting them contributes to pain relief (Pediani, 1998). Bernason et al (1998) concluded that although pain control was a priority in nursing care, pain management was ineffective and inconsistent. Often the nurses perception of how much pain the patient is experiencing differs greatly from what the patients are actually suffering (Carr, 1997). Language and ethnic differences can impede effective communication; however, nurses are becoming increasingly aware of these differences (O’Keefe, 2001). It was explained to Mary that compression of the oedematous leg, plus elevation to aid venous return and reduce swelling (Moffatt & Harper, 1997) would in turn reduce pain. The explanations were made using diagrams showing lymphatic drainage plus venous return to the
heart. Use of the diagram aided her understanding of the importance of leg elevation. Bradley (2001) acknowledges that sharing knowledge at the patient's level of understanding may help them to grasp the importance of interventions such as compression bandaging.

The vascular consultant prescribed Co-proxamol, two tablets, three times daily plus Zimovane 7.5mg nocte to induce sleep, as inappropriately managed pain is often associated with sleep disturbance (Hofman, 1997). A home help was arranged to help with the housework and cooking so that Mary could rest and relax more with her legs elevated. The occupational therapist was asked to assess her home for grant aid for the addition of a shower and toilet on the ground floor of the house, a traditional two-storey. The leg ulcer nurse specialist, in consultation with the vascular surgeon suggested the use of short stretch cohesive bandages, the weave of these bandages allowing for minimal stretch and recoil, resulting in a low resting pressure (Hayward, 2002). Mary agreed to try them for four weeks. Instead of the adhesive foam a soft silicone dressing (Mepitel) was applied over the ulcer, a dressing which has been shown to reduce wound pain in children with partial-thickness scalds (Gotschall, 1998). When Mary returned to the clinic four weeks later she felt that her quality of life had improved. Her physical pain had decreased as well as the size of the ulcer, and the swelling in her leg had also reduced. She was happy to be able to wear her normal shoes.

Pain Assessment Tools
A phenomenological study by Thomas (2000) on the lives of individuals suffering non malignant chronic pain found that most participants described the pain as unremitting torment, which affected the way they viewed their bodies. Participants did not perceive nurses as supportive of their pain experience even though they were actively involved and ethically bound to deliver quality care. Pain in venous ulcers may be excruciating (Hollinworth, 2001) or ‘bursting’, ‘heavy’ or ‘dull’ (Moffatt, 1998). Many patients may experience nocturnal pain which affects their sleep (Liew et al., 2000). Pain management is an important aspect of leg ulcer care (Mangwendeza, 2000). However physical pain is subjective in nature, therefore difficult to measure. Pain assessment tools can provide a quantitative assessment of the degree of the patients suffering (Harlos and Dudgeon, 1998). The Chronic Limb Venous Insufficiency Questionnaire (CLVIQ) (Franks and Moffatt, 1998) may be used as a means of addressing and evaluating pain management. However the McGill Pain Questionnaire (MPQ) is the one favoured in my workplace as it is thought to be more useful than the CLVIQ for assessing pain in wounds generally (Gaglione and Melzack, 1997). Incorporation of a valid pain assessment tool into wound care plans has been suggested to the wound care committee.

Wound pain is distressing and debilitating but it can be minimised by appropriate assessment and management techniques

Conclusion
The wide-ranging consequences of pain in wounds, a complex phenomenon, is perhaps often ignored by caregivers (Flurrie, 2001). Wound pain is distressing and debilitating but it can be minimised by appropriate assessment and management techniques (Hollinworth, 2001). Management of pain in leg ulcers by nurses is often inadequate and research has shown that continuing education raises awareness and enhances standards (Mangwendeza, 2000). Flurrie (2001) suggests that quality of life measurement tools are vital. Franks and Moffatt (1999) suggest that these studies should illustrate a holistic view of the patient rather than focussing on the wound alone. There is a need to channel resources into the set-up of dedicated pain clinics for leg
ulcer patients, where health education aimed at primary prevention (Ewles and Simnett, 1999) and promoting healthier lifestyle choices would make better use of scarce resources. Briggs and Torra i Bou (1999) suggest that adequate analgesia may benefit wound healing rates. Early audits in the North Western Health Board area show high healing rates, with cost effective evidence based care and a reduction in recurrence rates for patients who have access to established leg ulcer clinics (Diamond, 1999). This case study has implications for future wound care planning in the authors workplace so that nurses can continue to promote clinically effective outcomes, utilising evidence based, cost effective, true holistic care.

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