

The management of a patient with painful pressure necrosis and exposed tendons

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Introduction

Wounds with exposed tendons and bone present a difficult treatment challenge, particularly when, as in the case of the patient in this case study, the wound is also associated with pain. Wound bed pain is a result of the nerve ending exposure and treatment is simple with use of a 'wet' dressing (Flanagan 1997) such as a hydrogel which bathes the nerve endings and can soothe the pain. 'Dry' dressings will create a drawing effect on the wound bed and will potentially increase the pain.

The patient

This study reviews the case of Mr P, an 81 year old man with a large area of necrosis on the back of his right hand due to a failed venflon insertion for antibiotic therapy. He also had a necrotic left heel as a result of pressure damage. Initially, both of these areas were softened with an amorphous hydrogel, and then further debrided with larval therapy. Although initially this was found to be efficient, as the tendon that was now exposed in the right hand became dried, the larvae failed to thrive. Tendon tissue is susceptible to dehydration and during exposure quickly loses its viability which inhibits cell proliferation. These effects are counteracted by keeping the exposed tendon segments moist.

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It is vital that exposed tendons maintain a moist environment to prevent dessication and to allow movement for exercising. The nurse needed to select a dressing that would gently remove the slough without damaging the tendons and surrounding tissue, maintain a moist environment to encourage healing without dessication, and most importantly offer the patient effective pain relief, thus allowing him movement for exercising.

An additional complication was the presence of a necrotic heel as a result of pressure damage. Again, a standard amorphous hydrogel and larvae therapy were the chosen regimen. The hydrogel failed to soften the necrosis, and the larvae suffocated under pressure of the heel.

Management

Reviewing the available wound care products the nurse decided to apply ActiFormCool® sheet hydrogel dressing, a relatively new product which has been shown to have excellent pain relieving properties, whilst still providing the necessary environment for wound healing (Hampton S 2004) (Hofman 2006). The dressing contains approximately 70% water with phenoxyethanol, a known low sensitizing preservative to keep the treatment as simple and bland as possible. The gel is permeable to water vapour, gases and small protein molecules, but impermeable to bacteria. Moisture balance is maintained by the ability of the dressing to provide a moist environment at the surface of the wound without donating fluid back onto the wound bed (Moore K 2005).

Rationale for selection of dressing regime

The aims of treatment (Table 1) were intended to address the above issues.

Table 1. Aims of treatment

To reduce slough and prepare the wound for healing
To reduce pain and maceration
To absorb exudate, but keep tendons moist
To reduce the wound size by providing an optimum wound healing environment
To allow hand flexibility for exercising

Method

ActiFormCool®, a new sheet hydrogel, was selected for pain relief and to maintain moisture balance (Hampton S. 2004). The wounds were assessed for pain, using a Pain VAS and were photographed at every dressing change in order to monitor the healing rates.

Results

The exposed tendon remained clean and the wound healed without problem. ActiFormCool® provided the ideal wound healing environment whilst still providing pain relief that no other dressing was able to deliver

Conclusion

Wound dressings can have a profound effect on the repair process and patient quality of life (Armitage M. 2004). ActiFormCool® has the two attributes that would support a pain free wound environment – it would moisten the nerve endings and would not 'draw' on the wound bed, leading to a potential reduction of pain. The successful cleansing of the wound, effective moisture balance leading to full healing, and the reduction of pain without analgesia and complication enabled the nurses to provide an improved quality of life for this patient.



03/08/2004 - Exposed tendons with sloughy tissue.



18/08/2004 - Clean granulating tissue



18/01/2005 - Almost healed wound



18/01/2005 - Ulcer on heel