EARNING THE PATIENT'S TRUST TO FACILITATE HEALING

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WRITTEN WHILE EMPLOYED BY NHS BORDERS, NOW EMPLOYED IN NHS LOTHIAN

Wound history

A 79-year-old widowed female with a previously unremarkable medical history; asthma, essential hypertension and senile macular degeneration sustained a laceration to her right elbow and extensive bruising to the right inner aspect of her leg following a fall, after experiencing a 'dizzy spell'. The District Nursing (DN) team dressed the laceration and assessed the bruising. Whilst the laceration healed, within 4 days there was extensive bruising and two intact blisters on the patient's right leg. At this time the patient suffered a collapse and palpitations. She was admitted to hospital and diagnosed with atrial fibrillation. She was fitted with a pacemaker 8 days later. During an admission period of 18 days she was treated for cellulitis of her right leg. There was no referral to the DN team on discharge, however, after 12 days the patient called the DN team requesting a visit to dress her leg as it was 'leaking'.

Wound assessment

Previous experience of poor care and service from the NHS meant it was vital the patient's trust was rapidly gained. The patient wanted an uncomplicated dressing regime and requested that her leg be dressed only with a surgical pad and a cotton retaining bandage, as she felt unable to tolerate any other type of dressing because of the pain and discomfort.

A thorough assessment of the wound was completed: the patient was found to have a ruptured haematoma, which had become necrosed and sloughy with haemoserous exudate. The wound measured 9cms wide by 8cms long, wound depth could not be determined. The two main considerations in devising a plan of care were that the patient was keen to keep the dressing regime uncomplicated and was against sharp debridement. By addressing these issues we aimed to gain the patient's trust.

Earning the patient's trust

The concept of wound healing and how it could best be achieved was explained to the patient, and a plan of care that was acceptable to the patient was drawn up. The plan of care was as follows:

- Daily visits, initially
- Wound cleansed with either sterile saline or cooled boiled water (patient's request)
- Barrier film to be applied to wound margins and surrounding skin
- 50/50 ointment (50% liquid paraffin and 50% white soft paraffin) to be applied to intact skin
- Flaminal® Hydro to be applied to wound, as instructed by manufacturer
- Foam dressing to cover wound area
- Plain surgical pad to cover foam dressing
- Dressings to be held in place with cotton conforming bandage
- The wound was to be photographed every Monday with the patients consent to be obtained each time
- A wound chart was to be filled in at every visit to provide a detailed record of wound condition and progress.

Wound treatment with Flaminal®

Within 24 hours the patient reported less discomfort and a softening of the necrosis was noted. By day 4, granulation tissue was visible. By day 25 the level of slough in the wound had decreased significantly and Flaminal® Forte replaced Flaminal® Hydro in the dressing regime. Daily visits continued until day 104 and then, with the patient's agreement, the frequency was reduced to alternate days. The wound was noted to have healed on day 115 and, 8 months on, is still healed. At no point during the wound healing process did the wound demonstrate any evidence of an infection.

Day	Pain level 1 = Mild 2 = Moderate 3 = Severe	Wound size (Width x length)	Type of tissue present N= Necrosis S = Slough G= Granulation E = Epithelial	Level of exudate + = Slight ++ = Moderate +++ = Severe
11	1 – 2	9cm x 8cm	S G	++
18	2	9cm x 8cm	S G	++
25*	1	8cm x 7cm	S G E	++
67	1	4cm x 5cm	G E	+
81	0	3cm x 4cm	G E	+
109	0	1.5cm x 2.5cm	G E	Minimal

* Flaminal® Forte replaced Flaminal® Hydro in the dressing regime

Day 11

Day 18

Day 25

Day 67

Day 81

Day 109

Discussion

The DN team was unfamiliar with Flaminal®, a novel alginate antimicrobial dressing with exudate control. However, the team had to devise a plan of care that was acceptable to the patient and to the team. Published data on Flaminal® suggested that it would be highly suitable for the management of this wound[1,2]. Throughout the wound healing process the patient kept her trust in the DN team and continued with the agreed plan of care. What may be considered noteworthy is that during this time there was no evidence of an infection. Flaminal® Hydro and Flaminal® Forte have since been used by the DN team on a range of wounds including pressure sores, leg ulcers and MRSA positive wounds. Faster healing times have been observed when Flaminal® has been used with a foam dressing which has an adhesive border.

Conclusion

This case study showed how a large, traumatic and complex wound healed with a simple, uncomplicated regime (alginate gel dressing and secondary dressing). Daily visits for such a sustained period of time are clearly not recommended in many cases, however, in this case they proved to be highly beneficial for the patient and the team, allowing a strong relationship based on trust and mutual respect to be developed. Flaminal® has been shown to be antimicrobial, simple to use, absorb exudate and be acceptable to the patient by minimising pain.

Reference List

1. De Smet, K, van den Plas, D, Lens, D, and Sollie, P. Pre-clinical Evaluation of a New Antimicrobial Enzyme for the Control of Wound Bioburden. Wounds 21(3), 65-73. 3-3-2009.
2. Vandenbulcke K, Horvat LI, De MM et al. Evaluation of the antibacterial activity and toxicity of 2 new hydrogels: a pilot study. Int J.Low Extrem.Wounds 2006;5:109-14.

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MANAGEMENT OF A WOUND RESULTING FROM NECROTISING FASCIITIS

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Introduction

Necrotizing fasciitis is a rare, life-threatening bacterial soft tissue infection. It is characterized by rapidly spreading inflammation and necrosis of the skin, subcutaneous fat, and fascia. Many different types of bacteria can cause necrotizing fasciitis, for example Group A streptococcus, Vibrio vulnificus, Clostridium perfringens and Bacteroides fragilis. Flaminal® is an alginate gel that contains an antimicrobial enzyme system designed to promote rapid healing whilst offering protection from microbial colonisation[1]. It is available in two formulations; Flaminal® Forte, with a high alginate content is designed for medium to heavily exuding wounds and Flaminal® Hydro, contains less alginate and is designed for more lightly exuding wounds.

Case study

A male 59 year old patient who had suffered from type 1 diabetes since childhood developed necrotizing fasciitis to the perineum.The patient was originally admitted, via casualty, to the ITC unit Queen Elizabeth Hospital, Gateshead, where he remained for 48 hours. During this time the wound was debrided in theatre and a tissue biopsy confirmed necrotizing fasciitis. The patient was then referred to the Department of Plastic Surgery, Royal Victoria Hospital, Newcastle upon Tyne. The patient was unable to be transferred to the RVI Hospital, therefore, the clinical nurse specialist (CNS) attended the Queen Elizabeth Hospital to perform a full assessment of the wound and provide advice on wound management. The wound was sloughy, malodorous with large amounts of exudate (Figures 13). The wound extended from the buttock through to the perineum and this presented a challenge in terms of managing the wound. Topical negative pressure (TNP) could not be applied for several reasons: the wound still needed de-sloughing; nursing staff were not competent in managing VAC therapy; the location of the wound would prevent the seal being maintained. Mesitran honey was available on the hospital wound formulary and this was, therefore, used initially to debride the slough. At the following review (48 hours) Flaminal® was provided by the plastic outreach service. Flaminal® was chosen for ease of dressing change, patient comfort, exudate absorption and for antimicrobial protection. The patient was also prescribed IV antibiotics for 5 days.

Figure 1.

Figure 2.

Figure 3.

The patient was transferred to the RVI Plastic Surgery Ward one week after commencing Flaminal® Forte. The wound still required surgical debridement and a skin graft was applied to the debrided area. The graft was only partially successful, with just a 10% take initially then total loss of graft by second dressing check. The decision was then made to treat the wound conservatively and wound management continued with Flaminal®, changing from Flaminal® Forte to Flaminal® Hydro as the wound progressed and exudate levels decreased (Figure 4). Mepilex was initially used as the secondary dressing, as the wound improved a mesorb pad was used. The patient was discharged into the community and care was shared with the District Nursing service and plastic surgery outreach nurse. The patient was encouraged to follow a high protein diet and maintain good control of blood sugars. In addition, he was encouraged to mobilise within his own limitations.

Figure 4.

After 4 weeks treatment with Flaminal® the wound was showing signs of healing (Figure 5). The wound healed completely after 3 months. For the heavily exuding wound two tubes of Flaminal® Forte were applied, however as exudate levels decreased and the wound healing was initiated Flaminal® Hydro was used in place of Flaminal® Forte and only half a tube was applied at each dressing change. The patient found dressing changes easy and not too painful, with the Flaminal® dressing being removed in the shower prior to dressing change. The District Nurses were new to Flaminal® and found application relatively easy, that the dressing stayed in contact with the wound and exudate levels were managed well. Of note, only one course of oral antibiotics was required when the patient was being treated in the community over a 3 month period

Figure 5.

Challenges in wound management

- Location of the wound
- Allow mobilisation
- Manage exudate
- Patient comfort

Discussion

Necrotizing fasciitis has a relatively high mortality rate, estimated to be between 20 and 70%. Certain conditions, such as diabetes which weakens the immune system, can predispose patients to necrotizing fasciitis.

Due to the location of the wound TNP could not be applied and so an alternative option for wound management had to be chosen. Previous experience with Flaminal® by the CNS had shown the dressing to be easy to apply, well tolerated by patients and to demonstrate antimicrobial properties. Early success with Flaminal® meant that following partial failure of the skin graft it was a good choice for continuing wound management in this patient.

Benefits experienced with Flaminal®

- Patient:
  - dressing changes easy
  - dressing changes relatively pain-free
- District Nurses, new to Flaminal®:
  - found application relatively easy
  - the dressing stayed in contact with the wound
  - exudate levels were managed well

Conclusion

Flaminal® Forte is suitable for heavily exuding wounds and Flaminal® Hydro is suitable for more lightly exuding wounds. Together they offer a total wound care solution suitable from initial wound management until complete healing.

Reference List

1. White R. Flaminal®: a novel approach to wound bioburden control. Wounds UK 2006;2(3):64-9.

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