

FLAMINAL® FOR THE TREATMENT OF OBESE PATIENTS WITH INFECTED WOUNDS

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Introduction

Chronic leg ulceration affects up to 1% of the population¹ and has been estimated at costing the NHS between £150-£600 million per year.⁷ Chronic leg ulceration in the obese patient is fast becoming a problem for the NHS as the number of obese patients increases year on year. One in four of all adults in England are now classed as obese², with admissions to hospital in this client group rising from 2,215 in 2005 to 11,173 in 2010.³ Wound healing is often impaired within this group because they tend to suffer from a wide range of co-morbidities and are at an increased risk of developing a wound infection⁴ therefore obese patients can pose a significant challenge when it comes to wound care and product selection. Through a case study format with photographic evidence, the authors will describe the use and results of an antimicrobial product Flaminal® (Flen Pharma) which consists of naturally occurring enzymes and has the advantage of wider use in comparison to some other standard antimicrobials which may have limitations for some patient categories. This communication describes the management of a self-inflicted wound and the use of an antimicrobial enzyme alginate (Flaminal® Forte) to facilitate healing in a methicillin resistant Staphylococcus aureus (MRSA) positive wound without causing discomfort to the patient.

Method

Evaluation of Flaminal® performed was over a period of 6+ months. Photographs were taken at regular intervals with documentation recording the skin status during its use. Product evaluation forms were completed which encompassed ease of application, wear time, patient pain scale and effectiveness.

Patient A

- 56 year old female with chronic lymphedema and leg ulcers.
- Height 5'2, weight 33st, immobile and morbidly obese.

Patient A was admitted on the 10/1/11 with weeping cellulitis. Whilst her legs were being dressed twice daily with gamgee and bandages she was still having to wrap her legs with towels to manage the amount of exudate. She had superficial leg ulcers measuring approximately 40cm x 50cm, which extended the full length of her left lower leg. Pseudomonas and maceration were present and the granulation tissue was discoloured and friable.

A 5mm layer of Flaminal® Forte was applied to her ulcers and covered with Kerramax®. Chest pads were used to cover the entire leg and thigh with surgifix to secure. Dressings were initially reviewed daily but were tailored off as the exudate levels reduced.



Patient A
Admitted
10/1/11

Within 7 days of treatment the granulation tissue became less friable and more healthy in appearance. By day 18 the Pseudomonas and odour had resolved and the wound had reduced in size by nearly 50%. The exudate had subsided sufficiently to allow the dressings to be changed twice a week. The patient was discharged back into the community with the district nurses undertaking the dressings twice weekly.



Patient A
12/1/11



Patient A
17/1/11



Patient A
28/1/11

On follow up appointments the wound had continued to improve and on 7/9/11 final photographs were taken to show that the wound had completely healed.



Patient A
7/9/11

Patient B

• 45 year old female with morbid obesity, lymphedema and hypothyroidism. Patient B was admitted on the 3/3/11 with cellulitis to her right leg. She had been prescribed various antibiotics and for the past five months her leg had been dressed daily with Flamazine, Silvercelb, N-A Ultrab, Velbanda and Crepe. She had maceration to her feet from a sloughy ulcer on her right calf measuring 20cm x 30cm. The silver dressings were stopped due to over use and new research data that indicated Flamazine to be cytotoxic.^{8,9} Flaminal® was applied in a 5mm layer with N-A Ultrab, gauze, padding and surgifix to hold the dressing in place. Swab results from the 3/3/11 confirmed a heavy growth of Pseudomonas and a moderate growth of Staph aureus. On the 11/3/11 there was less slough but more inflammation locally although the exudate levels had reduced along with the green staining to her dressings.



Patient B
day after
admission
4/3/11



Patient B
11/3/11

Patient B's ERCP count was now low and therefore no antibiotics were prescribed. 4 days later the wound had islands of epithelial tissue and the exudate levels had subsided further.



Patient B
15/3/11



Patient B
17/3/11

On follow up only a superficial area remained on the lateral side of her leg which measured approximately 10cm x 2.5cm.



Patient B
7/9/11



Patient B
7/9/11

Continued overleaf...

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Continued...

Patient C

• 79 year old male, height 5' 9, weight 18st, no medical history other than morbid obesity and usually self caring for all ADL. Patient C was admitted on the 30/5/11 with a query obstruction having suffered with vomiting for the past 4 days. On admission tests confirmed that he had severe constipation. He also presented with gamgee dressings from toe to knee on both legs which were so heavily saturated with fluid that the bed linen was also sodden. The dressings were foul smelling and green strained.



Patient C
Admitted
30/5/11



He had a large ulcer to his left leg measuring 22cm in length and was almost circumferential. There was erythema and maceration to the peri-wound area and the ulcer was painful to touch (ranked as level 7 using a Likert scale for pain).

His right leg although ulcerated was less severe and while similarly treated has not been included in this case study. The district nurses had been visiting him daily for the past 2 years to redress his legs. They had used a multitude of products with the most recent being Sudocrem to the peri-wound area and absorbent alginate dressings to the ulcer. His legs were dressed with Flaminal® Forte applied in a 5mm layer with a hydrofibre dressing to cover. Pulses were checked, as pain prevented Doppler investigation and Velbanda and crepe bandaging was applied.

He was advised to elevate the limb when sitting and the bed was tilted to 60°. The dressing changes were initially every 2 days for a 2 week period (13/6/11) until his pain was under control and Doppler evaluation highlighted his suitability for compression therapy. Flaminal® Forte and hydrofibre dressings were maintained and 4 layer Charing Cross bandaging was applied. Following application of the

bandaging his legs were more comfortable and his pain levels continued to subside. Exudate levels were under control and therefore as his main admission problem had now been resolved he was discharged home with follow up appointments to the tissue viability department. Further photographs were taken on a weekly basis and within 2 weeks (27/6/11) Flaminal® Forte was no longer required. Foam dressings were used in place of Flaminal® Forte and hydrofibre dressings and 1 week later, on the 4/7/11 the photographs showed that Patient C's ulcers had reduced by over 70%.



Patient C
4/7/11



Compression therapy was maintained weekly by his community team with review by the tissue viability team on a monthly basis. His follow up appointment on the 6/9/11 revealed the ulcers were almost healed. His life has been transformed, he is more independent, doing his own shopping and seeing his family regularly.

Final photographs were taken and he was discharged into community care.



Patient C
Ulcer
nearly
healed
6/9/11



Patient B
day after
admission
4/3/11

Results

These case study findings highlight that Flaminal® Forte was able to manage exudate levels without causing further maceration. It controlled Pseudomonas and managed the patients' pain related to dressing change as none of the patients within the study experienced any stinging or drawing sensation which is frequently associated with some other antimicrobials. This product is easy to apply and can be used in a variety of wound types.

Discussion

Flaminal® comes in a tube and is obtainable in the UK in two sizes, 15g and 50g.

It is available in two formulations, Flaminal® Hydro which is suitable for low to moderate exuding wounds or Flaminal® Forte which is indicated for moderate to heavily exuding wounds. Unlike some other antimicrobials, Flaminal® has no reported evidence of cytotoxicity which offers an extended time frame of use and no limitations with the amount of product that can be used. The patients on which Flaminal® was evaluated all posed a significant challenge for successful wound management.

Conclusion

The authors conclude that Flaminal® is an effective alternative antimicrobial treatment to some traditional products whilst also being cost effective in comparison to other antimicrobial products. Flaminal® gave rapid results in all the study subjects which enabled early discharge. Early discharge is important as the longer obese patients are hospitalised, the risk of them becoming immobile and having further skin breakdown is increased. 5,6

Reference List

1. Graham.I.D. Harrison.M.B. Nelson.E.A, Lorimer.K & Fisher.A. 2003 The Prevalence of lower limb ulceration: A systematic review of prevalence studies. *Advances in Skin & Wound Care* 16(6), 305-316.
2. NHS Information Centre: Statistics on obesity, physical activity and diet: England 2011.
3. Martin.D 2010 Mail online.
4. Baugh.N. Zuelzer.H Meador.J & Blankeship.J. 2007 Wise Wounds: Wounds in surgical patients who are obese. *American Journal of Nursing* 107(6), 40-50.
5. Corbyn.C & Rush.A. 2010 Challenges of wound management in bariatric patients. *Wounds UK* 6(4), 62-71.
6. Mathison.C.J 2003 Skin & wound care challenges in the hospitalised morbidly obese patient. *Journal of Wound, Ostomy & Continence Nursing* 30(2), 78-83.
7. Healthcare Commission. National audit of the management of venous leg ulcers. 2008 www.healthcarecommission.org.uk
8. De Smet K. et al. Pre-clinical evaluation of a new antimicrobial enzyme for the control of wound bioburden. *Wounds* 2009, 21(3):65-73.
9. Atiyeh B S, et al. Effect of silver on burn wound infection control and healing: review of the literature. *Burns* 2007; 33(2): 139-48.

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