

# FLAMINAL® IN THE MANAGEMENT OF A DEHISCED ABDOMINAL WOUND

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## Introduction

This case study describes the management of Mr P a 53-year-old married father of 2 children who underwent a liver transplant and DBD (donation after brain death) graft for liver failure of unknown cause. Mr P's clips were removed 10 days post operatively, and 5 days after that his abdominal wound partially dehisced exposing the deep tension sutures. Surgical wound dehiscence (SWD) is defined as the pulling apart of the margins of a closed wound following a surgical procedure.<sup>1</sup>

Mr P was self-employed managing his own local shop and was anxious to return to work as soon as possible. Mr P had Type 1 Diabetes and was immunosuppressed therefore at risk of delayed healing and complications.

## Method

Mr P's abdominal wound dehisced 5 days following removal of his clips resulting in a large sloughy, malodorous and heavily exuding wound measuring 12cm x 7cm with a depth of 2.5cm (fig.1). The aims of treatment were to autolytically debride the sloughy tissue and manage the exudate whilst protecting the surrounding skin from excoriation. On discharge home Topical Negative Pressure (TNP) was recommended by the Tissue Viability Nurse which was changed daily due to pooling of exudate under the primary dressing as a result of Mr P switching the machine off at night. For a period of 4 weeks Flaminal® Forte was applied under the TNP dressing to deslough and manage the exudate with Mr P's dressing being changed three times a week for the first 2 weeks reducing to twice weekly (fig.2). When the TNP was discontinued, the treatment plan was revised to twice weekly dressing change with Flaminal® Forte and an adhesive foam for a further 5 weeks until the wound was clear of slough and granulation tissue evident (fig.3).

## Results

There was a reduction in dressing changes once Flaminal® Forte was initiated into the treatment regimen and a decrease in the number of call outs for the District Nursing service. The introduction of Flaminal® Forte controlled the exudate and reduced the wound bioburden thus eliminating malodour and minimising the risk to the peri-wound skin. Once the exudate was controlled Mr P's quality of life improved and he was able to return to work thus reducing his anxiety levels. Mr P's wound progressed to healing after a total of three months without the necessity for antibiotics (fig.4).



Figure 1



Figure 2



Figure 3



Figure 4

## Discussion

SWD contributes to increased morbidity and mortality rates with concomitant increase in costs due to prolonged hospitalisation, plus community nursing time together with the cost of consumables.<sup>2</sup> The frequency of wound dehiscence following laparotomy is cited to be in the range of 0.6%-6%, with a slightly higher proportion of male patients.<sup>3</sup> SWD impairs wound healing as well as impacting on the quality of life and wellbeing of the patient<sup>4</sup> as these wounds can take weeks or months to heal.<sup>5</sup>

Debridement, control of exudate and prevention of infection were important considerations when devising any treatment plan for Mr P. As Mr P was already immuno-compromised and diabetic it was imperative that the area was free from infection as this would have compromised him further. Flaminal® Forte (Flen Health), is an Enzyme Alginogel which combines the benefits of a hydrogel and alginate with an antibacterial enzyme system. Flaminal® comprises hydrated alginate polymers in a polyethylene-glycol (PEG) matrix embedded with the enzymes glucose oxidase and lactoperoxidase to control bioburden.<sup>6</sup> Flaminal® has the capability to absorb excess exudate while remaining in a gelled state, promote debridement and control bioburden.

## Conclusion

Exudate control, autolytic debridement of slough and reduction in bioburden of the wound were facilitated by Flaminal® in the management of Mr P's large abdominal wound. Flaminal® was a product that could be utilised throughout the healing trajectory and a useful adjunct to TNP enabling the TNP therapy to be continued, resulting in a good outcome for the patient with a concomitant reduction in the number of visits by the District Nurses.

### References

1. Mosby (2013) Mosby's medical Dictionary, 9th Edition. Mosby, St Louis Elsevier
2. Sandy-Hodgetts K, Carville K, Leslie GD (2015) Determining risk factors for surgical wound dehiscence: a literature review. International Wound Journal 12 (3): 265-275
3. Aksamija G, Mulabdic A, Rasic A, Aksamija L (2016) Evaluation of risk factors for surgical wound dehiscence in adults after laparotomy. Med Arch 70 (5): 369-372
4. Correa NFM, de Brito MJA, de Carvalho MM et al (2016) Impact of surgical wound dehiscence on health-related quality of life and mental health. JWC 25 (10): 561-570
5. Sandy-Hodgetts, K Ousey, K Howse E (2017) Ten top tips: management of surgical wound dehiscence Wounds International 8 (1):11-14
6. White R (2006) Flaminal: a novel approach to wound bioburden control. Wounds UK 2 (3): 64-9