

Managing the Challenge of Wound Exudate.

Kathleen Leak, Wound Care Sister, Susan Johnson, Clinical Nurse Specialist Wound Care, Doncaster and Bassetlaw NHS Foundation Trust, Doncaster, UK; Pam Spruce Clinical Director, TVRE Consulting, UK



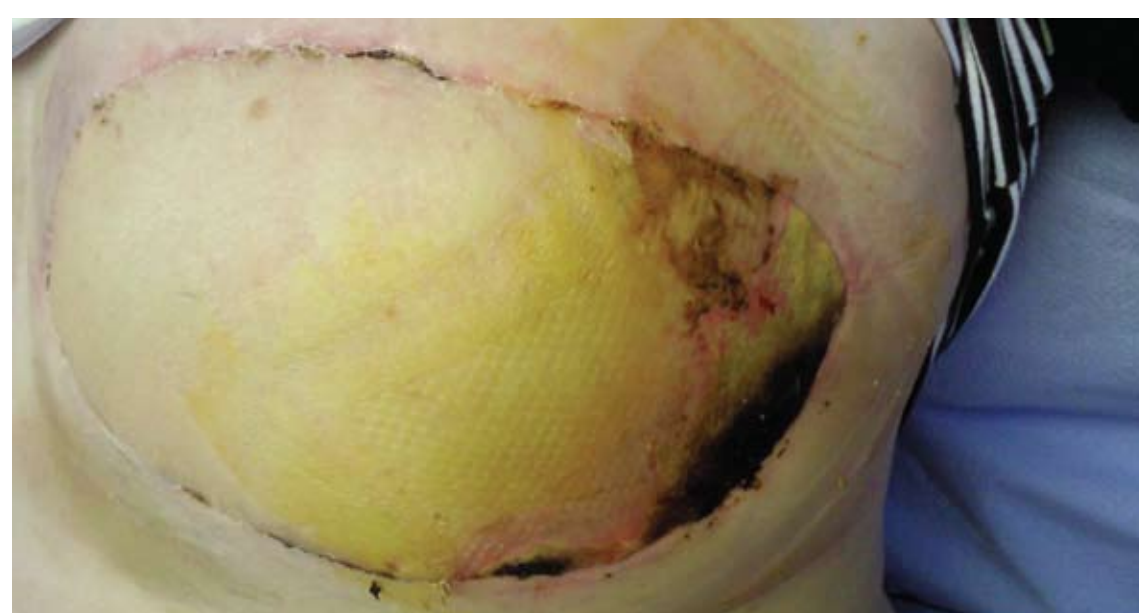
Patient 1: Wound prior to application of new antimicrobial foam dressing impregnated with 0.5% Polyhexamethylene biguanide (PHMB)*



Patient 1: 3 days later



Patient 2:



Patient 2:



Patient 3: First picture



Patient 3: 3 days later already showing signs of improvement



Patient 4:



Patient 4: Two weeks later



Patient 5: Initial image; no further images as patient went on holiday due to improvement of wound

AIM

Since the concept of wound bed preparation was described in 2000¹, clinicians have focused on the importance of maintaining an optimum moisture balance at the wound bed. It is recognized that not only the amount of exudate, but also the contents of exudate can influence the potential of the wound to progress to healing².

Wound exudate may be beneficial to wound healing, but has also been described as a "corrosive biological fluid"² which can inhibit the healing process. In addition, the exudate of infected wounds contains bacterial toxins which can also indirectly delay wound progression³.

It is recognised that the application of an appropriate dressing may be beneficial to facilitate wound healing, by removing excess exudate and its harmful components^{4,5}, such as bacteria. It is also observed that there is often difficulty in finding the right dressing to meet the patients' clinical needs⁵

It is the role of the Wound Care Service to establish through evaluation, which products are effective and should be included in the Wound Care Formulary. One such evaluation was undertaken on a new antimicrobial foam dressing that contains 0.5% Polyhexamethylene biguanide (PHMB)*. A number of patients were identified who had been fully holistically assessed. It was considered that exudate management and potentially bacterial burden was a problem, and subsequently they were considered suitable for the evaluation.

Results

The results of the evaluation were positive, with the outcome of 5 patients identified in the poster through a descriptive case series approach.

All of the patients experienced problems with exudate levels which may have led to excess bacterial burden and were difficult to manage and therefore had a negative impact on their quality of life.

Patient 1.

A 47 year old male was involved in a road traffic accident. As a result he suffered an injury to the ankle, which then went on to develop osteomyelitis and abscess formation. Surgery was undertaken to correct and drain the abscess, following which the wound was treated with Negative Pressure Wound Therapy (NPWT).

Once this therapy was discontinued, high levels of wound exudate continued to be a problem using conventional wound care products. Ultra-soft antimicrobial foam dressings impregnated with 0.5% PHMB* were applied and the dressings changed twice weekly. The wound progressed to healing.

Patient 2.

A 47 year old female had a trans-flap reconstruction of the breast, following a mastectomy for carcinoma. NPWT was applied to facilitate exudate management and to try maintain the existing scarline. The peri-wound tissue was very macerated. An ultra-soft antimicrobial foam dressing impregnated with 0.5% PHMB* was applied, which facilitated exudate management effectively, appeared to manage bacteria and contributed to improving the condition of the peri-wound tissue.

Patient 3.

A male vascular patient with arterial insufficiency, amputation of great toe, right foot. NPWT achieved full granulation, epithelial margins were static, so an ultra-soft antimicrobial foam dressing impregnated with 0.5% PHMB* was applied. Improvement was seen within three days.

Patient 4

A 55 year old female had a complete mastectomy for carcinoma. The wound dehiscd following surgery and NPWT was applied. After 1 week the patient was assessed as suitable for discharge home, although there was no facility to carry on this treatment. An ultra-soft antimicrobial foam dressing impregnated with 0.5% PHMB* was selected because of its ease of use and potential to control the bacterial environment. The wound continued to improve.

Patient 5

A 70 year old female was treated for a longstanding, arterial leg ulcer. She also has other co-morbidities including chronic obstructive airways disease. Previous topical applications were unsuccessful, however an ultra-soft antimicrobial foam dressing impregnated with 0.5% PHMB* was effective, as it appeared to control moisture and bacteria it is believed to have contributed to wound healing. (There is no follow up photograph as the patient went on holiday to Spain!)

Conclusion

Clinicians are often faced with the difficult decision of which dressing to select when treating complex wounds. A number of factors influence this decision, and managing exudate and the wound bioburden need to be considered.

This can be challenging, but the combination of holistic patient care and an effective wound care product which is acceptable to the patient, can have a positive influence on wound healing.

REFERENCES

1. Falanga V., Classifications for wound bed preparation and stimulation of chronic wounds. *Wound Repair Regeneration* 2000;8:347-52
2. Bishop S.M et al., Importance of moisture balance at the wound-dressing interface. *Journal of Wound Care*. Vol 12; No 4: April 2003: 125-128
3. Russell L., Understanding physiology of wound healing and how dressings help. In *Trends in Wound Care*. B/JN Monograph: Mark Allen Publishing. 7-8.
4. Wound exudate and the role of dressings. A consensus document. World Union of Wound Healing Societies. W:2006;1-10
5. Okan D et al., The role of moisture balance. *Advances in Skin and Wound Care*: January 2007:39-53



Presented at EWMA 2009.

This work has been made possible by an unrestricted educational/research grant from Covidien.

*Kendall™ AMD ultra-soft antimicrobial foam dressing impregnated with 0.5% PHMB, by Covidien.

™Trademark of Covidien AG or an affiliate.