

Different Challenges – One Solution

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Introduction

There are many factors which can prolong healing in complex and challenging wounds. Clinicians need to be competent and skilled in undertaking a complete holistic assessment to determine the underlying pathology and identify patient and wound-related factors, before selecting a wound care product.

There is no one product which can be used from “wounding to healing”. Treatment plans have to be evaluated and modified as the wound progresses or deteriorates, and the application of a wound care dressing changed accordingly. Changing wound products can be costly within the community as unused dressings have to be discarded, and there is the risk of the newer product being unsuitable to the patient or the wound. Therefore, wound care products which have the capacity to manage different wound factors are important within clinical practice.

The aim of the evaluation of Kendall™ AMD antimicrobial foam dressing (Tyco Healthcare Group LP d/b/a Covidien, Mansfield, MA, 02048, USA) was to observe its mode of action on 6 complex wounds and to observe the outcome on wound progression, exudates management, prevention of infection and patient comfort.

Method

Six patients who were referred to the Tissue Viability Service were asked to consent to participate in an evaluation of Kendall AMD antimicrobial foam dressing. This was used according to the local guidelines for the use of antimicrobial dressings and within the Manufacturer’s instructions for use. The patients were monitored closely by both the Specialist and General Nurses, and the wound progress was documented and photographed.

Each patient within the evaluation had complex factors which contributed to wound healing.

Case 1.

10 year old boy who required assessment
Ten year old boy who required assessment and treatment of a surgical wound following appendicectomy and partial right hemicolectomy. The wound contained hypergranulation tissue, which was being treated with silver nitrate twice weekly (Figure 1). This caused the patient so much pain and discomfort during the procedure that he required Entonox® (BOC Healthcare, Worsley, Manchester, M28 2UT, United Kingdom).

The wound was dressed twice weekly by the patient’s mother with Kendall AMD antimicrobial foam dressing. After 4 weeks, the wound had progressed to almost full epithelialisation (Figure 2). The dressing was comfortable for the child, and he was able to undergo dressing changes without analgesia



Figure 1



Figure 2

Case 2

Fifty-six year old lady with a trauma wound which presented to the District Nursing Team as a haematoma. The wound had originally been sloughy but this had been autolytically debrided with a sheet hydrogel dressing. Figure 3 shows the wound prior to the use of Kendall AMD antimicrobial foam dressing.

After 3 weeks of treatment where the patient self-managed the wound by changing the dressing on alternate days, she was re-assessed by the Tissue Viability Nurse where a great improvement was observed (Figure 4). The peri-wound skin however was very dry, but this was considered to have occurred as a result of the adhesive fabric tape which was used to retain the dressing in place. This was replaced with an elastic stockinette, and emollient was applied to the peri-wound skin with good result.



Figure 3



Figure 4

Case 3

Thirty-six year old gentleman who had a long history of chronic bilateral venous leg ulceration. He was historically non concordant with therapy due to alcohol and drug dependence and tended to miss his clinic appointments. He presented in the Accident and Emergency Department of his local General Hospital with sepsis secondary to leg ulcers, and wounds to the dorsal areas of 1st and 2nd toes bilaterally. On this occasion he appeared to be very motivated to overcome his problems, seeking help and advice regarding his drug and alcohol dependency. He was also tolerating 4 layer compression bandaging to his leg ulcers which were improving. However, the wounds to his toes were more challenging (Figures 5 and 6). They caused him a great deal of pain and he was unable to tolerate any topical treatment other than simple low adherent dressings. The toes frequently looked erythematous and inflamed, and the wound bed appeared desiccated. The clinicians assessing the patient considered that a topical antimicrobial may benefit the wounds and Kendall AMD antimicrobial foam dressing was applied.

Kendall AMD antimicrobial foam dressing was well tolerated by the patient; he did not report significant levels of pain, which was an improvement on previous therapies. The dressing was changed twice weekly when the



Figure 5: Left foot



Figure 6: Right foot



Figure 7: Left foot after 2 weeks treatment



Figure 8: Right foot after 2 weeks treatment



Figure 9: Left foot after 6 weeks treatment



Figure 10: Right foot after 6 weeks treatment

compression bandages were replaced. After two weeks of treatment, the patient was re-assessed; while the wound bed in each ulcer appeared dry, the overall condition had improved in that both toes looked healthier in colour and appearance. However, the peri-wound erythema remained (Figures 7 and 8). At this point the frequency of dressing changes was reduced to weekly.

After 6 weeks of treatment with Kendall AMD antimicrobial foam dressing the patient was reviewed, and the wounds and the peri-wound erythema continued to improve. The patient continued to tolerate the dressing and did not report any pain or discomfort associated with its use (Figures 9 and 10). However, this was the last time the patient was seen as he failed to attend for the last two appointments.

Case 4

Thirty-eight year old gentleman who sustained a trauma wound to his right knee. This required a surgical drainage and washout of the wound after which Negative



Figure 11: Wound at initial assessment



Figure 12: Wound after 12 days



Figure 13: Wound after 24 days



Figure 14: Wound after 34 days of treatment with Kendall™ AMD antimicrobial foam

Pressure Wound Therapy was applied. Eventually he was discharged home with a full leg Plaster of Paris in which a window had been cut to facilitate dressing change. The wound was treated at this time with a dressing which had the ability to sequester bacteria, with the aim of reducing the bacterial burden. However, on assessment the wound appeared to have developed a local infection (Figure 11). Kendall AMD antimicrobial foam dressing was applied instead to the wound and changed on alternate days by the Practice Nurse. The wound was re-assessed at 12 days (Figure 12) and 24 days (Figure 13) after the initial treatment commenced, and at 34 days the patient was discharged (Figure 14).

Case 5

Seventy-seven year old lady with a 17 month history of venous leg ulceration. On initial assessment by the District Nursing Team, she declined compression therapy and would not concord with a leg elevation programme. She was admitted to hospital by the Vascular Surgeon in April 2008 for bed rest and leg elevation. During this admission, she agreed to have compression therapy and 4 layer bandaging was commenced. At outset of the therapy, the ulcer was circumferential in the gaiter region of her right leg. The ulcer was sloughy and exuding a moderate volume of serous exudate. After 7 months of treatment, the ulcer was improving and she was tolerating compression therapy well, albeit reluctantly. She was re-referred to the Tissue Viability Service in July 2009, where it was observed that the ulcer was significantly smaller with the wound situated at the lateral malleolus only. It measured approximately 3cm x 3cm. There was evidence of epithelialisation although the ulcer bed appeared dry.



Figure 15: Leg ulcer prior to treatment



Figure 16: Wound progression after 3 weeks of treatment

At this stage a polyurethane foam dressing which contained a starch compound to boost absorbency, glycerin to moisturise and a non-toxic wound cleansing agent was introduced beneath the compression bandages to promote a moist wound healing environment. On review 6 weeks later, the ulcer had deteriorated significantly. The ulcer bed was larger and she had developed an infection for which she was taking oral antibiotics as prescribed by her General Practitioner. The decision was made to try an antimicrobial dressing, and as a result Kendall AMD antimicrobial foam dressing was applied beneath the compression bandages with a twice weekly dressing change undertaken by the District Nursing Team (Figure 15).

The wound was re-assessed after three weeks and Figure 16 demonstrates the progress to date.

Case 6

Ninety-seven year old gentleman with a solar keratosis to his scalp, which had been previously skin grafted. He presented at the Tissue Viability Clinic following a referral from his General Practitioner, with areas of hypergranulation and an extensive area of “crusty tissue,” some of which was adhering firmly (Figure 17). No obvious infection was observed, but the wounds were exuding a viscous exudate, particularly from beneath the edges of the crusty tissue. Kendall AMD antimicrobial foam dressing was applied, and a review planned for 6 weeks.



Figure 17: Solar Keratosis at assessment.



Figure 18: Solar Keratosis after 6 weeks of treatment with Kendall™ AMD antimicrobial foam

When the patient was re-assessed after 6 weeks of treatment with Kendall AMD antimicrobial foam dressing, the condition of the patient’s scalp had improved dramatically. Although the initial frequency of dressing change was alternate days, this reduced to twice weekly. Figure 18 demonstrates the reduction in hypergranulation tissue, the absence of what was previously described as “crusty tissue”, and the remaining wound areas granulating and epithelialising well.

Conclusion

The evaluation of Kendall AMD antimicrobial foam dressing was undertaken on 6 patients - all with varying and complex wounds and contributing factors which are considered to inhibit the healing process. This small sample is representative of the many different types of wounds which are managed on a day to day basis by clinicians in both the hospital and primary care settings. The challenge for clinicians is to achieve positive clinical outcomes, and maintain patient comfort and concordance with treatment.

Although this was a small scale evaluation, the dressing performed well on these patients. It was recorded to have managed the exudate effectively, be easy to use, and the patients found it comfortable in situ on the wound. Clinicians using the product observed that the dressing managed both low and higher levels of exudate. An additional benefit was that the condition of the peri-wound skin improved in some of the patients on which it was evaluated.

All of the wounds progressed over the evaluation period in which Kendall AMD antimicrobial foam dressing was used. One of the key benefits was that although the dressing was used on varying wound types and with different characteristics, it managed each challenge. However, the author recognises that this is a small scale evaluation, and a larger study would be beneficial in providing further scientific data to inform clinician choice.

Wounds UK

Presented at Wounds UK 2009.

This evaluation was sponsored by Tyco Healthcare Group LP d/b/a Covidien, Mansfield, MA, 02048, USA..

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