

Managing Moisture and Bacterial Burden in Acute Wounds.

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Second week, right breast



Second week, left breast



Five weeks, right breast



Five weeks, left breast



Six weeks, left breast

AIM

Wound healing may be impeded or delayed by the presence of bacteria, resulting in the development of local infection or even sepsis. In modern medicine we have access to very effective tools for managing moisture and bacterial burden. For the normal repair process to resume, the barrier to healing must be identified and removed through application of correct techniques. Experts in wound management consider that wound bed preparation is an important concept in facilitating wound healing and to control excess moisture.¹

Wounds are not isolated from the patient, thus the principles of effective wound management must incorporate a holistic approach which identifies and incorporates the patient's needs. A wound care dressing is used to mimic the skin, so that a local wound environment is created to maintain moisture levels and control the bacterial burden. A physiologic wound environment involves promoting and maintaining a moist environment, which is neither too dry nor too wet using exogenous materials. These materials serve to maintain adequate moisture on the wound bed, and absorbs excess moisture within the wound bed.²

An evaluation was conducted to evaluate a new ultra-soft antimicrobial foam dressing impregnated with 0.5% PHMB*. Eight patients were identified and found suitable for this evaluation.

RESULTS:

Patient 1

A 34 year old female patient that presented with an abscess on her left breast. The abscess was drained in theatre, and conventional dressings were applied. A calcium alginate was used with an ultra-soft antimicrobial foam dressing impregnated with 0.5% PHMB* and changed 3 times per week. The wound progressed to closure.

Patient 2

A 43 year old male patient with an umbilical hernia repair. The wound closed but later developed an abscess which was drained in theatre. Conventional dressings were applied which consisted of calcium alginate and an ultra-soft antimicrobial foam dressing impregnated with 0.5% PHMB*, which were changed three times per week until complete wound closure was achieved.

Patient 3

A 64 year old male patient that developed a wound dehiscence after surgery to his colon due to cancer. He had a very deep cavity wound that had high exudate levels and was macerated around the peri-wound area. The wound was plugged with a calcium alginate and covered with an ultra-soft antimicrobial foam dressing impregnated with 0.5 PHMB*. The wound was initially changed on a daily basis, but soon the moisture levels were under control and the dressings were changed every second day until complete wound closure was achieved.

Patient 4

A 63 year old female patient presenting with bilateral wounds following a breast reduction, which did not respond to the current standard wound treatment. The wound presented with obvious signs of infection and bleeding of the wound bed, which was confirmed by a bacterial swab. An ultra-soft antimicrobial foam dressing impregnated with 0.5% PHMB* was applied and changed every 48 hours. Treatment was continued for 6 weeks with swab results confirming a negative bacterial result. Following this a scar reducing dressing was applied until complete epithelisation of the wound bed.

Patient 5

A 51 year old female patient referred for wound care after she was operated for Ovarian Cancer. She had a wound dehiscence. The swab that was taken confirmed Staph Areus and she had a high bio load on the wound bed. An ultra-soft antimicrobial foam dressing impregnated with 0.5% PHMB* was applied and the dressing was changed every second day. She achieved complete wound closure within 5 weeks and started her chemotherapy.

Patient 6

A 28 year old female patient developed an abscess after her caesarean. The abscess was drained surgically. She presented with a very painful, highly exudating wound. A calcium alginate dressing was applied in the cavity and an ultra-soft antimicrobial foam dressing impregnated with 0.5% PHMB* was applied, which was changed every second day. She achieved complete wound closure in 4 weeks.

Patient 7

An 88 year old male patient was referred for wound care on the forehead after a carcinoma of the skin was removed. He had treatment of radiation therapy over a 4 week period. After the necrotic tissue was debrided surgically, a gel was used inside the wound bed and an ultra-soft antimicrobial foam dressing impregnated with 0.5% PHMB* was applied on a daily basis. Complete wound closure was achieved in 8 weeks.

CONCLUSION

The use of this new ultra-soft antimicrobial foam dressing impregnated with 0.5% PHMB* appeared to control both gram positive and gram negative wound bacteria, even including the resistant strains of MRSA. This is critical for optimal wound healing, as well as the total holistic assessment and care of the patient. It is therefore important to differentiate between colonized and infected wounds, and it seems that topical antimicrobial therapies such as an ultra-soft antimicrobial foam dressing impregnated with 0.5% PHMB* are important tools in controlling this tremendous problem.³

REFERENCES

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

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