



Adapting burn wound management strategy to help improve outcomes: use of ACTICOAT[◇] FLEX 3 Antimicrobial Barrier Dressing, VERSAJET[◇] Hydrosurgery System and BIOBRANE[◇] Temporary Biosynthetic Skin Dressing

Presentation

An otherwise healthy 21-year-old male student (with no known comorbidities) presented at the emergency room with a partial thickness burn to the face, neck, both arms and hands, caused by explosion of a full cooking vessel. The arm wounds were full length from shoulder to wrist (width: 12cm, depth: 1.5 to 2.0cm); the neck burn wound had a length of 18cm, a width of 4.0cm and a depth of 0.2cm. The patient was depressed and anxious that he would not be able to take his written examinations and this would affect his long-term career plans. He reported pain and discomfort and was unable to perform everyday activities unaided. Potential scarring of the face was also a concern.

Treatment

The patient was admitted to hospital for 48 hours, treated with a burn shield, given pain relief and discharged.

Visit 1



The first hospital outpatient appointment was on the day of discharge. The wound management plan was to reduce inflammation and lymphoedema, prevent and manage infection, encourage granulation tissue formation and manage fluid from extensive blistering. Therefore, ACTICOAT FLEX 3 Dressing and EXU-DRY[◇] Speciality Absorptive Wound Dressing were applied and secured with crepe bandages.

Visit 2



At the next hospital outpatient visit, approximately four days later, the severity and extent of the burn had become apparent; there were no clinical signs or symptoms of infection, but the patient was not eating or sleeping well, and reported high pain levels (score of 8 where the maximum is 10). As the burns had not progressed as expected with initial treatment, the wound management plan was adapted accordingly.

The patient was admitted to hospital for surgical debridement using the VERSAJET[®] Hydrosurgery System and pain management. BIOBRANE[®] Temporary Biosynthetic Skin Dressing was applied, secured with staples, and covered with crepe bandages before discharge.

Negative pressure wound therapy was considered as a potential alternative option for later use if necessary.

ACTICOAT[®] FLEX 3 Antimicrobial Barrier Dressing



BIOBRANE[®] Temporary Biosynthetic Skin Dressing



EXU-DRY[®] Specialty Absorptive Wound Dressing



VERSAJET[®] Hydrosurgery System



Visit 3



Epithelialisation was progressing by the time of the next follow-up outpatient visit at the wound clinic four days later; BIOBRANE Dressing was trimmed and covered with crepe bandaging.

Use of negative pressure wound therapy had been considered as a potential next step to help promote healing, but due to the presence of epithelialisation tissue, it was no longer considered necessary.

Visit 4



At the final outpatient visit, approximately nine days later, epithelialisation had increased, and the maturation process had begun; BIOBRANE Dressing that was starting to peel away was removed. The patient and his family were advised how to bathe the burn wound areas so that they could safely remove any remaining BIOBRANE Dressing.

Use of crepe bandages alone was sufficient and some areas were left uncovered to help increase range of motion. An antihistamine was prescribed to help control pruritis at night.

Follow-up continued with a plastic surgeon and the patient received compression garments from an occupational therapist to help reduce scarring and contractures.

Outcomes



Burn wound
healed with no residual
immobility



Inflammation
and oedema reduced;
no infection occurred



No need
for hospital readmission
(except for surgical
debridement)

Daily activities resumed
within 2 weeks
and the patient sat
their written examinations



Considerations and summary

ACTICOAT[®] FLEX 3 Dressing, the VERSAJET[®] Hydrosurgery System, and BIOBRANE[®] Membrane were used in the management of these burn wounds:

- ACTICOAT FLEX 3 Dressing was used initially to help reduce inflammation and prevent infection
- As healing did not progress as expected, the wound management strategy was reviewed to help optimise outcomes. Burn wounds were debrided using the VERSAJET Hydrosurgery System, followed by application of BIOBRANE Dressing to help support epithelialisation and progression to the maturation phase of healing

Acknowledgements: With kind permission of M Second, Specialist Nurse, Waterfall City Hospital, Midrand, South Africa

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