Successful management of a non-healing traumatic foot wound in an elderly patient using a bacteria and fungi binding dressing.

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Background

An 89 year old male patient living in South East Asia with few medical co-morbidities, required amputation of his left great toe following a traumatic crush fracture. The injury was sustained after being run over by a vehicle on the 2nd August 2013, with surgical amputation of the toe conducted shortly thereafter. In the weeks following the procedure, the wound failed to heal while necrosis and infection of the underlying wound tissue set in (Figure 1).

Management of wounds

Wound management encountered significant difficulties from the outset. In addition to the humidity, access to medical treatment and high quality wound care products posed a serious risk to the outcome. With medical access realised, management of the wound was limited to antibiotics, silver based ointments and protective dressings. This regimen of care continued for 2 weeks with little to no improvement.

Figure 1. Wound presentation – day 7.

Figure 2. Wound review – after 21 days

Figure 3. Wound review – over a 6 weeks period

Wound management

Wound management consisted of sharp debridement followed by dressing of the wound using a bacteria and fungi binding wound dressing (Sorbact, ABIGO Medical), for both management and prevention of wound infection.

The above pictures as part of Figure 3, demonstrate the progression of healing over a 6 week period. Concurrently, pain and localised inflammation had significantly decreased (as reported by the patient) following the commencement of debridement plus Sorbact. No further incidence of infection or need to commence antibiotics were reported.

Discussion

The requirement in this case to try something and anything was emphasised with the threat of further amputation. In the absence of any underlying osteomyelitis and the relative confinement of infection and necrotic tissue superficially resulted in significant improvement from debridement alone. This result had been achieved on multiple occasions throughout the course of previous management and on each occasion the wound regressed to its earlier necrotic / infective state.

The addition of Sorbact to the management of this wound, in my opinion was the difference in allowing the patient's normal wound healing capability to be realised. The presence of Sorbact contributed no exogenous chemicals to the wound and provided an antimicrobial effect without exposing the normal cell lines responsible for healing to bactericidal chemicals. In addition to infection control and prevention, Sorbact has demonstrated an ability (in vitro) to effect the proliferation of fibroblasts. Clinically this is supported by good tissue granulation in this case.

Management of wounds using a hydrophobic dressing

This case has demonstrated a couple of reasons why the management of wounds with a bacteria and fungi binding dressing such as Sorbact should be considered. The absence of contraindications can allow Sorbact to be used by experienced health care practitioners to the patient themselves without fear of endangering healing. Sorbact also offers an economic advantage in the management of troublesome wounds given the antimicrobial effect is obtained physically without the need of expensive chemical based bactericidal dressings.

Conclusion

Sorbact in this case demonstrated quite effectively it's ability to assist the healing of an acute non-healing traumatic wound. The anti-microbial function of Sorbact allowed the normal healing function to be maintained without an exogenous impairment observed. Sorbact was clean, simple to use and economically superior to an advanced anti-microbial dressing or course of antibiotics.

References
