Use of a Silver Impregnated Wound Cleanser on an Infected Below Knee Amputation (BKA)

Rhoda Kahn, RN, MSN, CFNP, WCC, Doctoral Candidate, POH Regional Medical Center

Introduction

A diabetic patient with PVD (peripheral vascular disease) underwent a BKA (below the knee amputation). The site became infected with Pseudomonas and the patient underwent an AKA (above the knee amputation). Following the procedure 40 sharp surgical debridements on the necrotic stump over the period of one year. Wound care consisted of wet to dry dressings and ADLs were compromised.

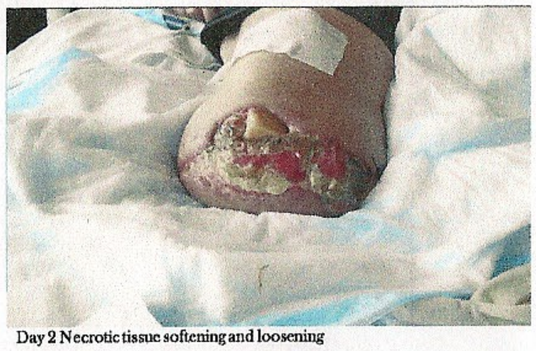
Since progress was not observed during that time the family had the patient transferred to POH Regional Medical Center in August 2009. The patient was admitted to the Rehab unit at POH with an infected, painful and non-healing stump. Bone could be observed at the proximal portion of the AKA site.

An alternative approach to wound healing was chosen with daily irrigation using a silver impregnated wound cleanser followed by the use of a medical grade honey dressing. In addition IV antibiotic administration continued during the weeks of in-house rehabilitation. The many needs of the patient were provided by the physician in charge of rehabilitation and its staff, Infectious Disease, and Internal Medicine and the Wound Care Specialist.

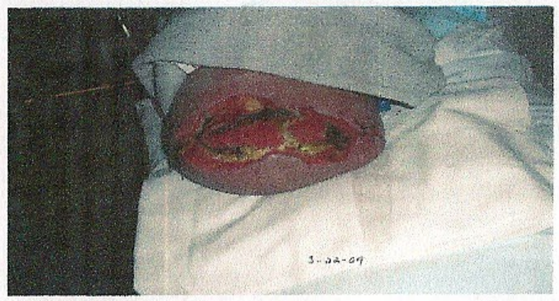
After making good progress in activities of daily living and transfer techniques the patient was discharged from the Rehab unit and continued wound care on an out-patient basis. This course of treatment took approximately 5 months to achieve closure of the infected wound.

Cleansing or irrigating a wound prior to dressing applications is generally the first step and normal saline or a safe wound cleanser are advocated. Silver dressings are often utilized with infected lesions, however combining silver with the wound cleanser is a fairly recent development.

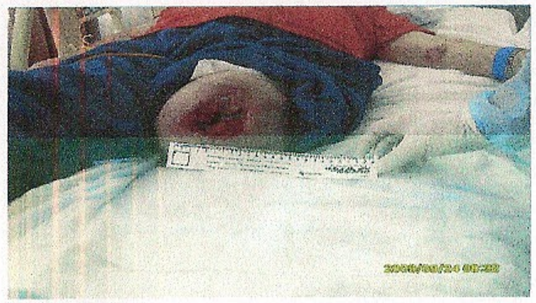
Day 1 Initial wound consultation visit

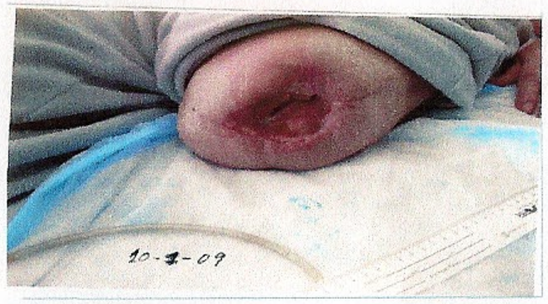


Day 2 Necrotic tissue softening and loosening

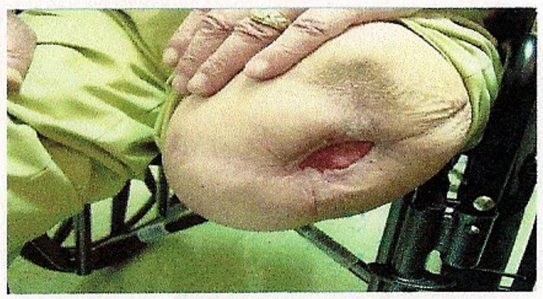


Day 3 Increased red clean tissue

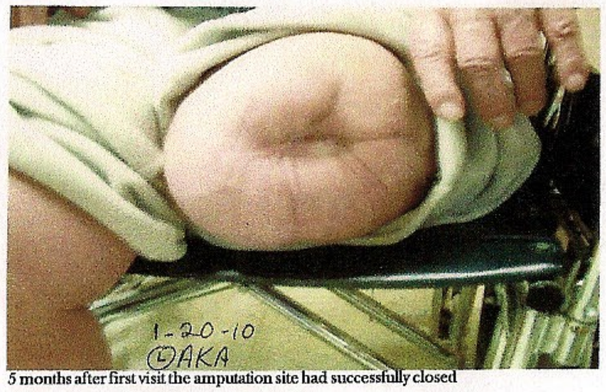




Progress toward healing is slow but steady



11-18-09 No depth to wound



5 months after first visit the amputation site had successfully closed

Conclusion

- Although the patient had multiple serious co-morbidities, including diabetes and cardiac involvement, a marked change in the wound was noted within days. Healing was slow but steady, taking approximately 5 months to achieve closure.
- The use of a silver impregnated wound cleanser and medical grade honey dressings facilitated closure of a chronic, painful, infected amputation site that had been unresponsive to serial debridements and wound care for a year.
- In January 2010 the patient reported that after a year of either being confined to home or hospital he was once again able to attend holiday parties, go out for lunch with his wife, and enjoy interacting with others.
- The patient had been helped to achieve a pain-free lifestyle and again enjoy normal activities, even though he had to use a wheelchair or walker for mobility.
- The inclusion of a WOCN or Wound Care Certified Practitioner in the rehab team and use of advanced wound care techniques makes a significant difference in the rate of wound healing and the outcome.

References

Collier, M. (2004). Recognition and management of wound infections. *World Wide Wounds,* (1), 1-11.

Cooper, RA & Jenkins, L. (2009). A comparison between medical grade honey and table honeys in relation to antimicrobial efficacy. *Wounds, (21),* 2.

Stillman, R M. (2010). Wound Care, *The Journal of Hospital Infection, 60*(1),1-7.