

Use of Silver Sodium Zirconium Phosphate Polyurethane Foam Wound Dressing on Wounds of the Distal Forelimb

Maureen E. Kelleher, DVM, Diplomate ACVS*; Isabelle Kilcoyne, MVB;
Julie E. Dechant, DVM, MS, Diplomate ACVS, ACVECC; Emma Hummer;
Philip H. Kass, DVM, PhD, Diplomate ACVPM; and
Jack R. Snyder, DVM, PhD, Diplomate ACVS

Application of a silver sodium zirconium phosphate polyurethane semi-occlusive foam wound dressing improved measures of wound healing compared with a control dressing. Authors' address: 1202 Calle Maria, San Marcos, CA 92069; e-mail: maurkell@gmail.com. *Corresponding and presenting author. © 2013 AAEP.

1. Introduction

The SPF dressing is a semi-occlusive polyurethane foam, impregnated with an ionic silver exchange resin and antimicrobial dyes proposed to be useful in the management of open wounds. The objective of this study was to determine if the SPF dressing wound improved second-intention healing of experimental wounds of the distal forelimb in horses.

2. Materials and Methods

A full-thickness 6.25-cm² wound was created on each metacarpus, with one limb for treatment and control. During the study period, granulation tissue was graded, wound area was calculated, and granulation tissue was cultured. Wound areas and granulation scores were analyzed with the use of a mixed-effects linear regression model. Time for complete wound healing was compared with the use

of a log-rank test. Significance levels were set at $P < 0.05$.

3. Results

SPF wounds had significantly decreased wound area ($P = 0.035$) and decreased granulation tissue scores ($P = 0.010$), although healing times were not significantly different. Bacterial contamination was seen on all wounds at varying times throughout the study period.

4. Discussion

The proposed mechanism of action for the SPF dressing is release of antimicrobial elements to the wound, reduction of contamination, and absorption of microbial products. The SPF dressing was associated with significantly improved measures of wound healing in this experimental model. Further studies are needed to document the benefit of the SPF dressing in clinical equine wounds.

Research Abstract

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