

Effect of Lesion Stage on the Treatment of Digital Dermatitis

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Introduction

Hairy heel warts disease (digital dermatitis, papillomatous digital dermatitis or PDD) continues to plague the nation's dairies with corresponding profit loss.² While extensive studies have been conducted on specific treatment compounds and their effects, there has been minimal investigation into the various stages of the disease and their susceptibility and/or resistance to treatment. In this study, correlation between the stage of the disease at which treatment is initiated, and effectiveness of the treatment, is investigated.

Materials and Methods

The objective of this study was to examine initial lesion stage (proliferative, granulomatous, ulcerative) and its effect on treatment. In three blind bandage studies, 174 lesions were evaluated. Effectiveness of treatments in reducing pain, color and size of the lesions was evaluated according to standard methods.^{1,3}

Treatment Procedure

The wart is first doused with 25 cc of treatment product, then 8 gm of cotton balls saturated with 35 cc of treatment are placed directly against the lesion. The cotton is anchored in place with a flexible bandage wrap. Finally, duct tape is wrapped fully around the bandage to protect it from moisture, dirt, etc. After four days, the bandages are removed and the lesions evaluated.

"Improvement" is defined as a decrease in score of at least one full unit for color, stage, and pain and a minimum decrease in size of 0.25 cm.

Results and Conclusions

Previous published and unpublished research has shown a range of effectiveness of treatment products for PDD. It has also been reported that products effective in one trial are less effective or ineffective in another trial. Potential reasons for the trial-to-trial difference can be attributed to a range of factors, including housing conditions, weather, nutrition and method of application. In this paper we have attempted to determine whether there is a correlation between the initial stage of the lesion and the treatment results.

The results indicate that the ulcerative Stage 3 lesion showed the greatest color change. The Stage 1 proliferative lesion showed the greatest improvement in pain. However, reduction of size is not differentiated based on initial stage.

References

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