Recurrence of Papillomatous Digital Dermatitis During the 11 Months after Treatment with Lincomycin

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Introduction

Previous treatment studies for papillomatous digital dermatitis (PDD) have found that recurrence of lesions is high and that treatment must be ongoing to control the disease. In a previous study we found that 18/22 lesions treated with lincomycin or oxytetracycline in a foot wrap appeared to be healed one month after treatment. When biopsies were examined we found that 10/18 (55%) of the lesions that appeared to be healed had some microscopic evidence of activity. We could not differentiate between lesions that were incompletely healed and those that were new infections. This study was designed to follow 30 cows with PDD for one year after treatment. Observations were to be made at monthly intervals.

Materials and Methods

Thirty cows with active, painful PDD on one or both rear feet were identified from a high-prevalence dairy. The dairy was milking about 1,200 cows in a free-stall facility. On day 1, cows were restrained on a hydraulic tilt-table and feet were examined, photographed, and treated with 10 g Lincomix® soluble powder. Cows with lesions on both rear feet had 1 foot selected for the study, although all active lesions were treated. The lincomycin was mixed with about 4 ml deionized water to make a paste, applied to a 4X4 gauze, and held in place with a Vetrap® bandage. Prior to treatment on day 1, 10 of the 30 cows were biopsied. These were biopsied again on days 10, 20, and 30. The other 20 cows were biopsied on days 1 and 30. Each month thereafter, all remaining cows were restrained on the tilt-table, where feet were examined and photographed. Cows with recurring lesions were biopsied and treated as necessary.

Results and Conclusions

During the course of the study, two cows were sold for mastitis and one for laminitis. In addition, two cows were missing for the month 8 evaluation and 3 cows were missing on the month 11 examination. This left 24 cows in the study on month 11. The month 7 observations were missed due to heavy rain during that month. The months 9 and 10 observations were missed due to the producer remodeling the dairy and removing the tilt table. The month 11 (day 341) observation was made using a commercial hoof trimmer and the study was concluded.

Histopathology is pending. Of the 24 cows present at the end of the study: 3 (13%) were treated only once, 14 (58%) were treated twice, 7 (29%) were treated three or more times. Of the 14 cows treated twice, 11 were treated only on days 1 and 341.

The rough recurrence rate for 11 months was 88%. This was on a dairy that had no regular hoof trimming program, no regular PDD treatment program, very poor free-stall management, and many concurrent hoof problems, most notably chronic laminitis. The dairy had a PDD prevalence of approximately 50% at the beginning of the study.