

Effect of ancillary anti-inflammatory treatment of mild clinical mastitis cases in dairy cows

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INTRODUCTION

Banamine[®] Transdermal, MSD Animal Health, is a nonsteroidal anti-inflammatory drug (NSAID) that contains flunixin meglumine in a transdermal formulation. It is indicated for the reduction of fever and the relief of clinical signs associated with Bovine Respiratory Disease (BRD) and Mastitis.

OBJECTIVE

The study aimed to evaluate the impact of using an ancillary NSAID treatment along with an intramammary antimicrobial (IMM) treatment on somatic cell count (SCC), rumination, and clinical outcomes in cases of mild clinical mastitis (CM grade 1).

MATERIALS AND METHODS

Lactating cows with milker-defined CM were enrolled in the study. The severity of CM was assessed daily by a veterinarian using a three-grade scale.

A total of 207 dairy cows with CM grade 1 (abnormal milk, no quarter inflammation, no systemic symptoms) were eligible and randomly assigned to two treatment groups:

- ▶ Control Group (CG, n=101) received a two-day IMM therapy with cephalexin/kanamycin (Ubrollexin[®], Boehringer-Ingelheim).
- ▶ Study Group (SG, n=106) received the same IMM treatment as CG, supplemented with a single dose of transdermal flunixin meglumine (Banamine[®] Transdermal, MSD Animal Health).

Cows were monitored daily until clinical cure or retreatment.

Every cow was wearing a behavior monitoring collar (SenseHub[™] Monitoring Neck Tag, MSD Animal Health) to monitor rumination pattern.

At onset of CM (Day 0), and 7 and 21 days thereafter, milk samples were taken to determine SCC of the affected quarter by an electronic counter.

Dairy cows with mild clinical mastitis (CM1) treated with transdermal flunixin meglumine in conjunction with IMM antimicrobial therapy had lower SCC at day 21 and reduced the number of days with low rumination than cows treated with the IMM alone.

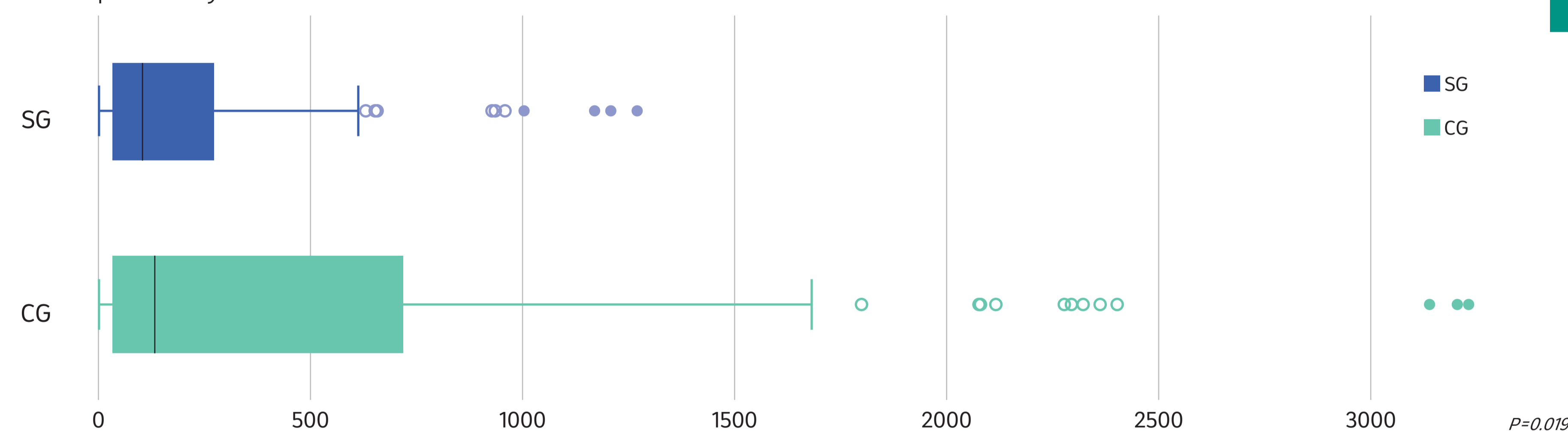


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RESULTS

- ▶ At enrollment, there were no differences in age, DIM or rumination between the CG and SG groups.
- ▶ No significant differences were observed in clinical cure at day 7 among groups with 30 (28.3%) and 23 (22.7%) of no cured cases in CG and SG, respectively ($P=0.30$).
- ▶ Retreatment rate did not differ among groups with 15 (14.8%) and 10 (9.4%) of retreated cases in CG and SG, respectively ($P=0.26$).
- ▶ Animals with a low rumination case (defined as having a decrease in daily rumination time of 100 minutes or more the day the CM was diagnosed) showed differences in number of days with low rumination (2.7 vs 1.7 for CG and TG, respectively, ($P=0.053$)).
- ▶ At day 21, SCC of the affected quarters were lower in SG (558 000 SCC/mL) compared to CG (1706 000 SCC/mL) ($P=0.019$).

SCC of affected quarter 21 days after clinical mastitis detection



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