7 Summary

A study on efficiency of flunixin-meglumin for supporting treatment of acute toxic endometritis in dairy cows

Two treatment strategies against toxic metritis were compared on a large dairy farm in Sachsen-Anhalt. The strategies were a combination of a systemic antibiotic treatment with the application of a non steroidal anti-inflammatory drug (trial group) and the sole use of a systemic antibiotic treatment (control group).

All calved cows during the trial period underwent a postpartum (pp) examination on the fourth to fifth day postpartum.

All cows assigned to the trial group received 2,2 mg/kg Flunixin at the first day and 1,0 mg/kg Ceftiofur on three consecutive days. The animals in the control group were only treated with 1,0 mg/kg Ceftiofur once daily on three consecutive days.

Vaginal and rectal examinations were carried out in all trial animals between 18 and 22 days pp (PK2) and between 32 and 35 days pp (PK3). At these examinations all animals in the trial received 0,5 mg Cloprostenol regardless of the clinical findings. After a voluntary waiting period of 55 days all trial animals were inseminated on the first observed estrus. All cows that had not expressed estrus by day 80 pp underwent a treatment for infertility.

To evaluate the two treatment strategies, clinical cure rate, reproductive performance measures and the concentrations of haptoglobin and fibrinogen in blood were compared between the groups.

Cure rate at day 6 after first treatment was 87,4 % in the trial group and 86,6 % in the control group. Differences were not significant ($p>0.05$). Signs of chronic endometritis were found in 52,2 % of the cows in the trial group and in 64,3 % of cows in the control group at PK3 ($p>0.05$).

Differences were more pronounced in first lactation animals. In the trial group, 49,2 % showed abnormal vaginal discharge at PK3, while in the control group 67,9 % had a chronic endometritis. But these differences were also not statistically significant ($p>0.05$).

Referring to reproductive performance measures, there were no significant differences between treatment groups. In trial group, more cows were inseminated than in control group (85,7 % vs 74,8 %, $p>0.05$). However, days to first service (80,1 vs 76,8 days) and days open (101,6 vs 107,8 days) were not significantly different.

First service conception rate was 34,4 % in the trial group and 31,5 % in the control group. The conception rates were 31,3 % in the trial group and 34,8 % in the control group.

In first lactation cows, first service to conception rate was 44,6 % in the trial group and 34,6 % in the control group. However, this difference was also not significant. In first lactation cows days open were 97,7 days in the trial group and 106,7 days in control group. In contrast with days to first service, that were 80,0 days in trial group and 75,7 in control group.

There was a significant difference in the culling pattern between the two treatment groups. Until PK3, 5,0 % of the cows in the trial group and 15,1 % of cows in the control group were culled.

Concentrations of acute phase proteins were not different between the two groups. A random sample of some healthy cows showed significantly lower concentrations of haptoglobin and fibrinogen compared to the trial animals.

The results of this trial indicate, that a single supportive treatment with Finadyne RP is of limited benefit for cows with acute puerperal disease. However, these limited benefits may be more pronounced, if Finadyne RP is used repeatedly along with antibiotic treatment.