

7 Summary

Investigation on the influence of time of post partum examination and the initiation of a PGF_{2α} treatment of chronic endometritis in dairy cows.

The objective of this study was to compare two different intervals for the implementation of treatment of chronic endometritis in dairy cows. A field trial was conducted on two commercial dairy farms, in Brandenburg, Germany. Endometritis was defined as vaginal discharge and classified into three categories. In total 1377 cows were examined by rectal palpation for signs of endometritis between 20 to 26 days post partum (check 1) and classified into two groups. The overall prevalence of chronic endometritis was 28.7 % (n = 281).

In group 'Early' 123 cows with signs of endometritis were treated with 0.075 mg of R-cloprostenol (Preloban[®], Intervet Germany GmbH) twice in a 14 day interval, starting at day 20 to 26 post partum.

In group 'Later' an identical treatment was used but with a later start. Cows (n = 158), which were diagnosed with endometritis at the time of check 1, were not treated but re-examined two weeks later. By the time of the second examination (34-40 dpp, check 2) 106 out of 158 cows were diagnosed as clinically healthy and therefore not treated. 52 cows with signs of endometritis at check 1 and 2 received two treatments of 0.075 mg of R-cloprostenol in a 14 day interval, starting at 34-40 days post partum.

For the analysis of ovarian activity a blood sample was taken before the first and the second PGF_{2α}-injection for the analysis of progesterone. A concentration of 1.0 ng/ml progesterone was considered indicative of an active corpus luteum.

Prevalence of chronic endometritis at day 20 to 26 was 24.6 % and 43.1 % on farm A and B, respectively (p<0.05). Furthermore, on farm B significantly more first lactation cows were diagnosed with endometritis than multiparous cows (60.0 % vs. 30.4 %, p<0.05). Another significant difference between the farms existed regarding the prevalence of endometritis of heifer (farm A vs. B: 25.0 % vs. 60.0 %, p<0.05).

Cows with endometritis showed significantly worse results regarding conception rate after first service, conception rate, the proportion of pregnant cows (to day 200 p.p.) and extended number of days open compared to healthy cows. Furthermore, cows with endometritis are diagnosed significantly less often neither with follicle or with corpus luteum in comparison to healthy cows.

In the group 'Later' the cows showed poorer reproductive performance parameters (numbers of days to the first service and days open, conception rate after first service, conception rate and the proportion of pregnant cows to day 200 p.p.) than cows in group 'Early' and to the group of non-treated cows ($p>0.05$). Differences could be demonstrated between the farms. A significantly better conception rate was found for cows of group 'Later' on farm B in comparison to farm A. Numerically the best results regarding reproductive performance showed the non-treated cows from farm A and the treated cows of group 'Early' from farm B. Spontaneous cure between check 1 and 2 for all cows with endometritis but not treated was 67.1 %. There were differences between the farms, too. Spontaneous cure was a lot higher on farm A as on farm B (71.7 % vs. 57.7 %). The reproductive performance of the non-treated cows was similar to the cows of group 'Early'.

The analysis of the progesterone concentration in the blood showed that a corpus luteum could be diagnosed more often with extended time to calving. A significant influence of the cyclicity on the therapeutic efficacy could not be determined at the time of the treatment.