

Effects of Estradiol Benzoate on Postpartum Endometritis in Dairy Cows

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This study was aimed to examine effects of double injections of estradiol benzoate (EB) at a 14 d interval on postpartum endometritis in dairy cows. A commercial dairy herd with about 150 lactating cows was visited once a week for reproductive check. An average milk yield per cow per lactation in the herd was 11,392 kg. All cows at 15 to 21 d postpartum were clinically examined for endometritis. Cows showing purulent vaginal discharge on the vaginoscopic examination were diagnosed as having endometritis. Of 56 cows examined, 43 cows (76.8%) had endometritis and the other 13 cows were normal. The 43 cows were divided into three groups. The first group of 15 cows were injected intramuscularly twice with 2 mg EB at 15 to 21 d and 29 to 35 d. This was followed by PGF2 α administrations at 43 to 49 d and 57 to 63 d. Cows detected in estrus after the second PGF2 α were inseminated artificially. Those not showing estrus after the second PGF2 α were subjected for Ovsynch/Timed AI; the first GnRH was given 2 weeks after the second PGF2 α (modified Presynch/Ovsynch). The second group of 14 cows were treated with the double PGF2 α injections, followed by Ovsynch/Timed AI. The third group of 14 cows were not given any programmed treatment which were used in the other two groups. The percentages of cows with endometritis at 29 to 35 d, 43 to 49 d, and 57 to 63 d were 66.6, 13.3, and 6.7 % in the EB/PGF2 α treated group, 78.6, 64.3, and 14.3 % in the PGF2 α -treated group, and 85.7, 85.7, and 42.9 % in the control group, respectively. There was a significant effect of treatment on the percentage of cows with endometritis at 43 to 49 d ($P<0.001$) and 57 to 63 d ($P<0.005$). Conception rates after Ovsynch/Timed AI in the EB/PGF2 α -treated, PGF2 α -treated and normal groups were 42.9, 20.2 and 33.3 %, respectively. Intervals in days between the last calving and first AI were 64.3 ± 5.0 , 66.5 ± 31.0 , 73.7 ± 20.4 , 68.2 ± 9.8 days in the EB/PGF2 α -treated, PGF2 α -treated, control, and normal groups, respectively. The results indicate that double injections of EB at an interval of 2 weeks followed by a modified Presynch/Ovsynch protocol is effective on postpartum endometritis in dairy cows.

Keywords: cows, estradiol benzoate, PGF2 α , postpartum endometritis