Postpartum use of Lutalyse*/Dinolytic* Sterile Solution in Problem Cows

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Objective

To evaluate the effect of Lutalyse/Dinolytic on future reproductive performance when administered to problem cows postpartum either once on days 21-28, or twice on days 21-28 and again 14 days later, when compared to non-treated control cows.

Materials and Methods

Cows that have problems at calving (abnormal calving or health problems) benefit from postpartum prostaglandin treatment.[1,2] Treatments have been administered using both single- and double-injection programs, and the time of administration of the first injection has varied. This well controlled study compared single- and double-injection programs in problem cows (acute metritis, assisted calving, dead calf, twins, and/or retained placenta). Treatment groups were: (1) non-treated control, (2) 5 mL of Lutalyse/Dinolytic given once on days 21-28 postpartum, and (3) 5 mL of Lutalyse/Dinolytic given twice on days 21-28 postpartum and again 14 days later. Primary variables were: (1) first-service conception rate, (2) interval from calving to first service, (3) interval from calving to fertile service and (4) services per conception. At each location, three problem cows or heifers were grouped to form a block and animals in each block were randomly assigned to each of the three treatment groups. Cows and heifers were not mixed within a block. Thus, there were heifer blocks and cow blocks. A problem cow or heifer was defined as an animal that exhibited one or more of the following conditions at, or shortly after, calving: acute metritis, assisted calving, dead calf, twins, and/or retained placenta.

Results

Survival analysis was used to compare treatment groups for interval from calving to first estrus, interval from calving to first service, and interval from calving to fertile service. The cumulative rate of first estrus, first service and conception were calculated. Analysis of variance was used to compare treatment groups for first-service conception rates. The first-service conception rate for each location-treatment combination was used for analysis. An arsine transformation was applied to the first service conception rate prior to analysis. Both the single- and double-injection prostaglandin programs resulted in statistically significantly better reproductive performance, compared to the non-treated controls.

Conclusion

Lutalyse/Dinolytic administered to problem cows (acute metritis, assisted calving, dead calf, twins, and/or retained placenta) 21-28 days postpartum, and repeated two weeks later, resulted in improved reproductive performance.

References

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2. Schofield SA, Kitwood SE, Phillips GJC: The effects of a postpartum injection of prostaglandin $F_2\alpha$ on return to oestrus and pregnancy rates in dairy cows. *Vet J*, 175:172-177, 1999.

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