Research Summaries 3

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A Preliminary Study on the Effect of Intra-uterine Infusion of Sodium Ceftiofur on Chronic Uterine Infections of Holstein Cows

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Introduction

Cows suffering from postpartum endometritis which may not be treated with conventional treatments, and thus may have long days-in-milk (DIM), are candidates for disposal from the herd. The aim of this study was to treat such animals with only one intra-uterine (IU) infusion of ceftiofur to keep them in the herd.

Materials and Methods

In four dairy herds, located in the Tehran province of Iran, 70 Holstein cows (first to fifth parities) suffering from chronic uterine infections and with long DIM (140-360 days) were selected for treatment. All cows had a history of unsuccessful response to conventional therapeutic regimens. Diagnosis was based on rectal palpation and finding a flaccid, thin-walled uterus and muco purulent discharge from the vulva. Sodium ceftiofur (Excenel®, Pfizer Animal Health, 2 g dissolved into 40 ml solvent) was infused by only one IU injection. Following the IU infusion of ceftiofur, estrus was induced either by two intra-muscular (IM) injections of PGF2a (14 days apart) or by IM injections of GnRH-PGF2a (11 days apart), based on presence or absence of a functional corpus luteum on the ovaries. Cows were culled in case of failure to respond to the first treatment.

Results

Results showed that 28 cows (40%) bearing calving-to-infusion interval of 237.2 ± 22.8 days, were in estrus and artificially inseminated by 13.9 ± 1.52 days after infusion and diagnosed as pregnant. In addition, 31 cows (44.35%) with calving-to-infusion interval of 257 ± 26.3 days needed 1.74 services to become pregnant on the average of 63.9 ± 5.3 days from infusion. Eleven cows (15.7%) with calving-to-infusion interval of 241.09 ± 22.2 days did not respond to IU infusion of ceftiofur and were discarded from the herd.

Significance

In conclusion, IU infusion of sodium ceftiofur, which is not a common route for administration of this product, would be a safe (zero residual in milk) and cost-effective (reduced dose) therapeutic approach in cows with chronic endometritis and may prevent the high-producing, ready-to-cull dairy cows from being discarded from the herd.