

## SUMMARY

### **Effect of Prepartum Treatment of Vitamin E-Selenium on Postpartum Reproductive Problems of Dairy Cattle and Heifers**

The aim of this study was to investigate the effect of prepartum vitamin E and selenium injection on postpartum retentio secundinarium, puerperal acute metritis, puerperal mastitis and ratio of postpartum oestrus.

The material of the study was composed of 104 broodstock holstein breed heifers (22-24 months of age) from a dairy cattle farm in İzmir. These 104 animals were divided into 2 groups as application group (n: 52) and control group (n: 52). To application group animals, 15 ml vitamin E and selenium preparation (1ml solution contains: 100 IU vitamin E equivalent of 100 mg vitamin E asetat + 3,0 mg sodium selenit 5 H<sub>2</sub>O equivalent of 1,03 mg pure selenium, Seleject, Bremer Pharma GmbH) was intramuscularly injected 10 days before the expected date of birth. And to control group animals, 5 ml isotonic NaCl was intramuscularly injected.

As a result of study; retentio secundinarium was determined in 3 animals of application group (5,8%) and 10 animals of control group (19,2%). Rates of metritis were 23,1% (n=12) and 42,3% (n=22) respectively in application and control groups. Postpartum mastitis was determined in 12 animals (23,1%) of application group and in 7 animals (13,5%) of control group. The number of heifers in which oestrus signs are observed postpartum 45 days were; 17 (32,7%) and 18 (34,6%) respectively in application and control groups. The differences of retentio secundinarium and metritis rates between application and control groups were statistically significant ( $p < 0,05$ ). But the differences of clinical mastitis and postpartum oestrus rates between application and control groups were found statistically non-significant ( $p > 0,05$ ).

According to results of this study; however prepartum vitamin E and selenium injection is reduced the rates of retentio secundinarium and puerperal metritis, it doesn't effect on the rates of puerperal mastitis and postpartum oestrus.

**Key words:** Cattle, period, postpartum, selenium, vitamin E