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SERUM Ca, K, AND Na LEVELS IN DAIRY COWS WITH RETAINED PLACENTA AND DYSTOCIA

Hallouz Hadj Feghoul¹, Meliani Samia^{2*}, Benallou Bouabdellah¹

¹*Institute of Veterinary Sciences, University of Tiaret, Algeria;*

^{2*}*Faculty of Natural Sciences and Life, University of Tiaret, Algeria;*

*Corresponding Author Meliani Samia, e-mail: meianisamia@hotmail.com;

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ABSTRACT

The aim of this study was to determine the evolution serum levels of Ca, K, and Na in dairy cows with retained placenta (RP) and dystocia. Forty-five cows between 3-10 years old were used in the study. Jugular blood samples were collected via hiparined vacutainer tubes. The samples were centrifuged and the serum samples were stored at -20°C until analyse. Calcium (Ca), Sodium (Na), and Potassium (K) were determined in all samples using a Roch® COBAS Integra 400. In this study, Na serum levels were significantly higher ($p < 0,05$) in 48 post-partum hours' cows with $139,91 \pm 7,1$ mmol/l compared with dry period with $131,09 \pm 11,09$ mmol/l. However, mean serum calcium levels were $79,50 \pm 10,47$ and $79,25 \pm 8,39$ mg/l in cows with retained placenta in dry period and 48 hours' post-partum, respectively. The mean serum sodium levels in cows with retained placenta in dry period and 48 hours postpartum were $134,00 \pm 10,99$ and $137,88 \pm 5,64$ mmol/l respectively. Whereas, in case of cows without retained placenta, the sodium values for the same period were $130,46 \pm 11,15$ and $140,35 \pm 7,37$ mmol/l, respectively. In this study, the serum Ca, Na and K concentrations of the cows with RP did not change significantly from other cows without. Furthermore, it was detected that these variables had no significant effect on serum Ca, K and Na concentrations when type of parturition and sex of calves were evaluated in the RP and control group.

Keywords: serum Ca, K, Na levels, dairy cows, retained placenta, dystocia, control group