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

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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 heparinized 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