

## CORRELATION BETWEEN THE LEVEL OF CA, P, MG, GLUCOSE AND PARATHORMONE IN BLOOD AND THE SYMPTOMS OF POSTNATAL PARESIS IN COWS

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**Summary.** The experiment was carried out to study the correlation between the level of Ca, P, Mg, glucose and parathormone (PTH) in blood and the symptoms of postnatal paresis in cows. Seventeen 4-10 year old cows were divided into two groups - 7 cows with clinical hypocalcemia (experimental group) and 10 healthy cows served as control. Blood samples were collected from the tail vein on 140 and 210 days of pregnancy; 5, 4, 3, 2 and 1 day before calving; during calving and on 1, 2, 6 and 10 days after calving. The results showed that one day before calving the level of Ca in experimental and control groups slightly decreased to  $2,1\pm 0,13$  mmol/l and  $2,31\pm 0,2$  mmol/l. Further, one day after calving the level of Ca in experimental and control animals significantly dropped to  $1,34\pm 0,45$  mmol/l and  $1,74\pm 0,19$  mmol/l, respectively. The level of P one day before calving in experimental cows decreased to  $1,55\pm 0,53$  mmol/l. Furthermore, during calving and one day before calving the level P in experimental cows significantly reduced to  $1,11\pm 0,2$  mmol/l and  $0,75\pm 0,17$  mmol/l ( $p<0,005$ ). It should be mentioned, that simultaneously with reduction of Ca lower than 1,3 mmol/l and P lower than 1,7 mmol/l cows in experimental group suffered from postnatal paresis. No differences were found in the level of Mg during pregnancy, before and after calving. During lactation period in both groups the levels of glucose had tendency to decrease. It was shown that during the calving PTH significantly increased to  $16,0\pm 0,3$   $\mu$ mol/l, however, 2 days afterwards dropped to  $2,88\pm 0,78$   $\mu$ mol/l. The decrease of PTH levels coincided with the increase of Ca and P levels.

**Key words:** Ca, P, Mg, glucose, PTH, postnatal paresis, cows.