CHANGES OF PARATHYROID HORMONE, CALCITONIN AND VITAMIN D LEVELS IN THE COWS WITH MASTITIS

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Summary. The levels of vitamin D, calcitonin and parathyroid hormone and their relation with levels of Ca, P and Mg in cows with mastitis (n=30) were investigated experimentally. The level of parathyroid hormone and calcitonin were determined *in vitro* using *Roche Elecsys 1010/2010* and *Immulite* analyzers, respectively, and the amounts of 25-hidroxicholecalciferol were determined by ELISA. In addition, the level of macronutrients (Ca, P and Mg) was determined by *Eos-Bravo* analyzer and reagents of *Hospitex*.

The levels of Ca in cows with mastitis varied without exceeding the lower physiological norm (2.28±0.20 mmol/l), and the levels of P (1.56±0.12 mmol/l) and Mg (1.08±0.20 mmol/l) were in the range of normal. The blood level of PTH (3.97±0.50 pmol/l) in cows with mastitis did not differ statistically significantly compared to healthy control cows ($p>0.05$). The level of calcitonin (1.83±0.49 pmol/l) in cows with mastitis was comparable to the level of calcitonin in healthy cows ($p>0.05$). The level of vitamin D (23.72±7.19 nmol/l) found in the blood serum of cows with mastitis correlated inversely with level of Ca ($r = – 0.752$) and P ($r = – 0.901$).

Key words: mastitis, parathyroid hormone, calcitonin, vit D, Ca, P, Mg, cows.