

BIOCHEMICAL INDICATORS IN SERUM INFLUENCED BY THE DOWNER SYNDROME IN DAIRY COWS

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Abstract

Downer syndrome in dairy farm cows causes considerable direct and indirect economic damages and shows clinical, in particular prognostic, difficulties. The study aims at detecting biochemical indicators in the blood serum of cows with downer syndrome.

During the period January 2014 – March 2017 cases of downer cows' syndrome were studied in farms of Prizren area, in Kosovo. In 34 cows of different breeds and ages, diagnosed with downer syndrome blood samples were taken from jugular vein and serum was dissociated. Samples were analyzed using Biochemical analyzer EMP-168 Vet with respective kits, for following indicators: total proteins, albumins, overall calcium, inorganic phosphorus, magnesium, total bilirubin, creatinine, aspartate aminotransferases and alanine aminotransferases. The obtained data were statistically analyzed using ANOVA method (homogeneity of variances and normality) and compared with values of the reference according to averages of haemato-biochemical indicators of clinically healthy animals.

Obtained data showed that most influenced indicators were albumin (4.12 ± 0.71 from 2.1 - 3.6 g/L), overall calcium (1.69 ± 0.59 from 2.43 - 3.10 mmol/L), inorganic phosphorous (1.04 ± 0.38 from 1.08 - 2.76 mmol/L), magnesium (1.23 ± 0.33 from 0.74 - 1.10 mmol/L) and alanine aminotransferases (387.8 ± 33.6 from 35 - 350 IU/L). Changes in found biochemical indicators are statistically confirmed ($p < 0.05$). Our data are close with reports of other researchers.

Based on the obtained results we think that changes in haemato-biochemical indicators can be used to check the clinical status and prognosis in cows affected by the downer syndrome.

Key words: Downer syndrome, Albumin, Calcium, Phosphorus, Magnesium, ALT.