

PARAMETERS OF PROTEIN METABOLISM IN BLOOD SERUM AFTER TREATMENT OF WEANED PIGLETS WITH GASTROENTERITIS

Slivinska L.G., Lukashchuk B.O.

Stepan Gzhytskyi National University of Veterinary Medicine and Biotechnologies Lviv, Pekarska Str., 50, Lviv, 79010, Ukraine, lukaw4yk@gmail.com

On large industrial farms, gastroenteritis is recorded throughout the entire technological cycle. This prompts professionals to find natural and safe means that will enable them to reduce economic losses.

Research objective was to determine changes in parameters of protein metabolism in blood serum from weaned piglets in different treatment regimens of gastroenteritis. Were formed control and two experimental groups of weaned piglets aged 30 days (Landrace, n=30) with clinical signs of gastroenteritis. Control and experimental groups were treated with enrofloxacin hydrochloride 10 % injectable solution (0.5 ml/10 kg of body weight). Piglets of the first experimental group additionally used probiotic TOYOCERIN 10⁹ in a dose of 0.5 g/kg, the second – phytobiotic XTRACT™6930 0.15 g/kg of mixed fodder.

After treatment, the content of total protein in blood serum of weaned piglets in control group decreased ($p<0.01$) by 18.1 % (54.9 ± 1.21 g/l). In the first and second experimental groups, this parameter decreased by 12.3 (58.0 ± 0.96 g/l) and 11.7 % (59.6 ± 0.86 g/l), compared to animals before treatment, and was 5.6 higher ($p<0.05$) and 8.6 % ($p<0.01$), compared to control group values after treatment. A similar trend was observed regarding serum albumin content of control and experimental groups of piglets, the content of which decreased by 24.0 % (27.8 ± 1.06 g/l), 14.0 (31.3 ± 1.26 g/l) and 12.4 % (32.6 ± 1.17 g/l), compared to pre-treatment parameters. This parameter was higher by 12.6 ($p<0.05$) and 17.3 % ($p<0.01$) in piglets of experimental groups, compared to control group.

It is important to note that after treating serum albumin content of piglets of first and content of total protein and albumin in piglets of second experimental group, it did not differ from values of clinically healthy animals ($61,1 \pm 1.07$ g/l – total protein; $33,9 \pm 1.34$ g/l – albumins). Consequently, the values of serum total protein and albumin indicate a normalization of protein absorption in intestine. In addition, albumins are synthesized in hepatocytes, so use of probiotic and phytobiotic has a positive effect on formation of liver proteinsynthesizing function.