EFFECT OF VITAMIN E AND SELENIUM ON BIOCHEMICAL PARAMETERS OF PIG’S BLOOD ON DIFFERENT STAGES OF GROWING

V. G. Yefimov

Dnepropetrovsk State Agrarian and Economic University
25, Voroshilova street, Dnipropetrovsk, 49600, Ukraine

The effect of intramuscular injection of vitamin E and selenium on biochemical indicators of pig’s blood serum at various stages of growing is studied in the article.

On the basis of pairs of analog was formed two groups (control and experimental) of cross-bred pigs 10 days old of ten animals in each. Weaning of piglets was performed on the 28th day of life, and the transfer from rearing to fattening group – on the 79th day of life. The animals of the experimental group on the 10th and 42nd day of life were injected the drug "E-selenium" (50 mg of vitamin E and 0.5 mg of selenium in 1 ml of preparations) at a dose of 0.2 ml per 10 kg body weight (production of "Nitapharm", Russian Federation). Blood for biochemical studies was collected from animals of both groups on the third day after weaning, 42nd and 110th day of life.

As a result of studies it found that there are no significantly affect on the studied biochemical parameters of blood serum of piglets on the third day after weaning by the use of "E-selenium".

In the serum of piglets on the 42nd day of life compared to 31st day life activity of creatine kinase increases. Use of the preparation "E-selenium" leads to probable decrease in activity of AST in blood serum of piglets by 32.8% (p <0.05). Probably it provided by a drug’s stabilizing influence on the structure of the cell membranes, which leads to a lower output of the enzyme in the bloodstream. Drugs has a similar effect on stability of myocytes membrane, as evidenced by significantly lower activity of creatine kinase in the blood serum of piglets of experimental group (by 48.1% at p <0.05). It is established slight (by 9.8% at p <0.05) reduction in alkaline phosphatase activity in serum of piglets of experimental group. In our opinion, this is due to less intensity lysis of hepatocytes. Decrease in activity of alkaline phosphatase explained by decreasing decay of hepatocytes membranes.

On the 110th day of life "E-selenium" has not significantly affected the the majority of studied biochemical parameters. At the same time, it was marked the increase in activity of alkaline phosphatase in 52.1% (p<0.05) and increased concentrations of total calcium (by 7.6% at p <0.05) for the uses of preparations. CK
activity in serum of piglets of experimental group was higher than control values at 2.78 times with high probability (p < 0.001).

Therefore, the use of "E-selenium" leads to a change in some biochemical indicators, that is primarily explained by a stabilization of cell membranes of metabolically active organs and tissues (liver and muscle) on the 42nd day of life, which is manifested by a decrease activity of AST, alkaline phosphatase and creatine kinase in blood serum.

In animals for fattening which previously administered the drug, there are biochemical changes associated with increased intensity of growth of bone and muscle tissue - increased activity of alkaline phosphatase and creatine kinase.

**Keywords:** PIGS, VITAMIN E, SELENIUM, BLOOD BIOCHEMISTRY.