

THE INFLUENCE OF MEDICINAL PLANTS ON SOME PHYSIOLOGICAL FUNCTIONS OF ANIMALS

Shchetsina Anhelina, Yermalayeva Katsiaryna, Verameichyk Vadzim,
students

Scientific advisor – Vishniavets Zh. V.

Vitebsk State Academy of Veterinary Medicine, Vitebsk, Belarus

vishnevec@mail.ru

The world of plants is our healing wealth. With the help of medicinal plants, many physiological functions of the body can be regulated. The analysis of the literature indicates the multilateral use of various plants for medicinal purposes in folk and scientific veterinary medicine. Close attention is paid to the study of the effect on hematological parameters and the level of natural resistance, since the most important condition for the normal functioning of all cells in the body is the relative constancy of the blood composition and concentration of substances soluble in it. It is also important to study the effect of herbal preparations on digestive processes, in particular on the abdominal and parietal digestion, because digestive processes are closely related to metabolic processes, which affects the performance of productivity and dynamics of body weight. In general, the study of preparative forms of medicinal plants is an urgent task of science and practice [1, 2].

We have analyzed the literature data and selected medicinal plants that increase the viability and productive qualities of poultry [1, 2]. We have collected the following medicinal plants: wormwood grass (2 parts), dandelion leaves (1 part), nettle leaves dioecious (2 parts), yarrow grass (1 part), hypericum perforatum herb (1 part), dill seeds (1 part), meadowsweet grass (1 part).

Our goal is to study the effect of infusion of medicinal plants in broiler chickens on the morphological composition of the blood, humoral indicators of natural resistance and activity of proteolytic digestive.

Laboratory tests were performed in the laboratory of the Department of normal and pathological physiology and clinic of the Department of clinical diagnostics of the Vitebsk state Academy of veterinary medicine.

For the experiment, 2 groups of broiler chickens were formed at the age of 21 days, 12 heads in each group: the 1st group – the control one that did not receive the drug, the 2nd group – the experimental one, which received an infusion of medicinal plants at a dose of 1 ml per head for 21 days (starting from 21 days of age) individually orally in the form of an infusion of 1: 10.

Analyzing the results of the blood test, we have noted that the level of hemoglobin in chickens of the 2nd experimental group after 7 days of giving the infusion of fitosbora was higher by 9,4 % ($P<0,05$) compared with the control group and amounted to $89,5 \pm 0,45$ g/l. Prescribing the drug within 21 days did not cause a significant difference between the groups in the hemoglobin content in the blood of broiler chickens. The level of ESR in the blood of chickens of the experimental and control groups throughout the experiment remained within the normal range for this age group and did not differ significantly from each other.

The level of red blood cells in the blood of the 2nd experimental group during the experiment was higher compared to the control after both 7 days and 21 days, although not reliably. At the same time, their content did not exceed the norm for this age of the bird.

The number of leukocytes in the blood of chickens of the 2nd experimental group after 7 days of receiving the drug was significantly higher compared to the control by 22,7% ($P<0,05$). It is important to note that the leukocyte level in the blood of the bird remained within the normal range for this age group.

Analyzing the state of natural resistance, we noted a stimulating effect on the indicators of bactericidal activity of blood serum. Infusion of medicinal plants after 7 days led to an increase in bactericidal activity of blood serum by 5,5 %, but without significant differences, and within 21 days-by 14 % ($P<0,05$). Indicators of lysozyme activity of blood serum during the whole period of watering infusion fitopreparations the bird was observed higher compared to control at 8-16 %, although without significant differences.

In the mucous membrane of the glandular stomach, there is an increase in the activity of protease in the appointment of herbal infusion for 21 days – by 8,3 % ($P<0,05$). And in the content of glandular stomach enzyme activity was significantly higher by 6,6 % ($P<0,05$). In the

mucous membrane and the contents of the 12-duodenum, a significant increase in protease activity was observed only after 21 days of prescription of the infusion of medicinal plants by 26,5% ($P<0,01$) and 20,8% ($P<0,001$), respectively. By analyzing the enzymatic activity in the jejunum, it was found to increase the activity of proteolytic enzymes, both in the mucous membrane of the jejunum, and in its contents. So after 21 days in the content of the jejunum in chickens of the experimental group it was significantly higher by 10,2% ($P<0,05$), and in the mucous membrane-by 9,3 % ($P<0,05$). This indicates stimulation of both the cavity and parietal digestion.

Thus, the infusion of phyto-collectioning broiler chickens stimulates the activity of proteolytic enzymes and humoral factors of natural resistance.

References. 1. *Lipnitsky, S. S. Phytotherapy in veterinary medicine / S. S. Lipnitsky. - Minsk: Belarus, 2006. – 286 p.* 2. *Antiparasitic properties of wormwood (Artemisia absinthium L.): monograph / A. I. Yatusевич [et al.]. - Vitebsk: VSAVM, 2016. - 168 p.*

THE USE OF IRON-CONTAINING DRUGS FOR THE IRON DEFICIENCY ANEMIA IN ANIMALS

Veremeychik Vadim, student

Scientific advisor – Postrash I. Yu.

Vitebsk State Academy of Veterinary Medicine, Vitebsk, Belarus

jokerjoll@yandex.ru

Iron deficiency anemia (IDA) is a disease caused by a decrease in the number of red blood cells and hemoglobin per unit volume of blood. It causes hypoxia of animal tissues, which is manifested by drowsiness, loss of appetite, decreased activity and weight of the animal, pallor of all mucous membranes; increased heart rate and respiration, etc. [1]. With iron deficiency anemia, iron metabolism is first disturbed and iron deficiency states (IDF) occur. To diagnose these disorders, it is necessary to determine the content of iron in blood serum, the total iron binding capacity of blood serum (OGSS), the degree of transferrin