JUSTIFICATION EFFECTIVENESS OF IMMUNE-STIMULATORY THERAPY IN BRONCHOPULMONARY PATHOLOGY IN CALVES

L. Ulko, T. Fotina, A. Berezovskyi

Sumy National Agrarian University
160, G. Kondratieva str., Sumy, 40021, Ukraine

Respiratory disease of young cattle despite the high efficiency of antibacterial drugs remain a number of important diseases. The organization of therapeutic care for respiratory problems weakest link is the etiologic pathogen verification.

The nature of the clinical course of pneumonia in calves caused by a background as an animal and properties of pathogens.

The aim was to avestim investigate the impact on immunological parameters young cattle for its use in combination with ceftioklyn for pneumonia.

Studying a bill respiratory microbiota calves showed that microbiocenosis habitat mucosa of the upper respiratory tract in calves includes regulated indygen kinds of microorganisms, transient pathogenic and opportunistic species and efficiently meet the usual indicators biocenosis nasopharynx of healthy animals. Total of habitat allocated 126 nasal cultures from 40 calves. By number of isolated cultures microflora of the pharynx almost twice exceeded the microflora of the nasal cavity. From calves with bronchopulmonary pathology allocated microorganisms genera: Streptococcus spp., Staphylococcus spp., Pseudomonas spp., Proteus spp., Pneumococcus spp., Klebsiella spp. Enterococcus spp. Enterobacter spp. 11,1%. Isolated microflora was presented Bacterial associations pit in which Streptococcus spp. caste or 16,3%, Staphylococcus spp. — 19,8%, Proteus spp. — 7, 6%, Pseudomonas spp. — 5,8%, Pneumococcus spp. — 21,5%, Klebsiella spp. — 22,7%, Enterococcus spp. — 2,9%, Enterobacter spp. —3,5%.

For the treatment recovered 100% of the animals in the first and second groups, and the timing of recovery bulls second group were much shorter and were on average 7,3 ± 0,9 days, which is 1.1 and 3.1 days less than in the first and third groups respectively. In the third group of animals recovered 62.5% 12.5% mortality.

In assessing humoral factors of nonspecific resistance calves suffering from bronchopneumonia when used avestim found that the second group of calf serum bactericidal activity increased by 13.4% (p <0.05). In the third group of calves after treatment serum bactericidal activity remained low compared with the first and second groups.
Application avesstim improves serum bactericidal activity by 28.6% compared with the initial performance and to 25.59% and 27.3% compared with corresponding first and second groups, respectively (p <0.05).

Also noted the increase in phagocyte index to 4,1 ± 0,5 with 2,8 ± 0,2 and 3,0 ± 0,8 to 2,7 ± 0,6 with animals first and second groups, respectively. Phagocyte index in the third group of animals remained within background indicators for the whole period of studies.

Phagocyte activity of blood leukocytes of patients with bronchopneumonia of calves at the beginning of the experiment the animals first and second experimental group was 47,6 ± 0,6 and 49,2 ± 0,8 respectively. After treatment the figure in the second group of calves was higher by 15.1% and 16.3% compared with the first and third group.

Biochemical analysis of blood serum for individual fractions revealed that albumin content as a result of avesstim increased by 25.4% (p <0.01) and remained within the physiological norm.

Globulin level — such as fractions α-globulin and β-globulin on the contrary decreased by 10.1% and 24.6% respectively. The content of γ-globulin increased by 62.4% (p <0.05). In animals, the first and third groups α-globulin content decreased by 2.8% and 3.8%, and β-globulins 2, 3% and 1.3% respectively.

It should be mentioned that all calves suffering from bronchopneumonia before treatment observed hypoalbuminemia, which affects the body's defense system.

**Keywords:** CALVES, BRONCHOPULMONARY DISEASES, CAUSAL TREATMENT, CEFTIOKLYN, AVESSTIM, IMMUNOLOGICAL PARAMETERS.