

MEASURES TO PREVENT AND COMBAT LEUKEMIA IN CATTLE .

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Annotation: В этой статье изучалась Распространенность лейкоза среди крупного рогатого скота, а также его этиологические факторы. Для этого была проверена эпизоотическая ситуация на инфекционные заболевания крупного рогатого скота в 3 хозяйствах Республики Каракалпакстан. Отобран для обследования по рекомендации работников ветеринарной службы. Проведено научно-практическое разъяснение заболеваемости лейкозом в животноводческих хозяйствах, фермах, кластерах, ООО и частных предпринимателях Республики Каракалпакстан. Вирус лейкоза крупного рогатого скота имеет сферическую структуру, размер до 90 нм. Он состоит из кубического ядра, окруженного липопротеиновой мембраной. Две спирали содержат геном, содержащий молекулу РНК.

Annotation: This article studied the prevalence of leukemia among cattle, as well as its etiological factors. To do this, the epizootic situation was checked for infectious diseases of cattle in 3 farms of the Republic of Karakalpakstan. Selected for examination on the recommendation of veterinary staff. A scientific and practical explanation of the incidence of leukemia in livestock farms, farms, clusters, LLC and private entrepreneurs of the Republic of Karakalpakstan was carried out. The bovine leukemia virus has a spherical structure, up to 90 nm in size. It consists of a cubic core surrounded by a lipoprotein membrane. Two helices contain a genome containing an RNA molecule.

Key words: Leukosis, vaccine, immunity, immunophone, antigen, epizootology, clinical, pathologoanatomics', bacteriologist, virologist, epidemiology, pathobiology.

Relevance of the topic. The agricultural sector of the economy of our republic

Livestock farming has a special place, and our government has promoted this sector. great importance is attached to development.

In recent years, food security in our country has been In order to ensure food security, develop livestock farming and meet the demand for livestock products (meat, milk), our government has developed a number of resolutions. In particular, the Decree of the President of the Republic of Uzbekistan dated 28 May 2022 Decree No. PF-60 of January 2022 "On the Development Strategy of the New Uzbekistan for 2022-2026", Decree No. PQ-2841 of March 16, 2017 "On Additional Measures to Deepen Economic Reforms in Livestock Breeding", Decree No. PQ-4576 of January 29, 20 of Livestock Breeding", Decree No. PQ-2841 of March 16, 2017 "On Additional Measures to Deepen Economic Reforms in Livestock Breeding", Decree No. PQ-2841 of March 16, 2017 "On Additional Measures to Deepen Economic Reforms in Livestock Breed "On additional measures for state support of the livestock sector", No. PQ-121 dated



February 8, 2022 "On further development of livestock farming" "On measures to develop and strengthen the food base", 2022

PQ-120 dated February 8, 2018 "On the livestock sector and It will serve to a certain extent in the implementation of the tasks set out in the resolutions of the Government of the Republic of Uzbekistan "On Approval of the Program for the Development of its Sectors for 2022-2026" and other legal and regulatory documents related to this area.

The purpose of the study is to study the epidemiology of bovine leukemia in the Republic of Karakalpakstan and to improve diagnostic, preventive and control measures. consists of.

Research object and methods. Experimental part of scientific research in the Republic of Karakalpakstan for 202 4 -202 6 years In the laboratory and vivarium of the Nukus branch of the Samarkand State University of Veterinary Medicine and Animal Husbandry and Biotechnology , in the laboratory and food safety center of the Republic of Karakalpakstan , in livestock farms, measures for the prevention and control of bovine leukemia and methods for diagnosing the disease, based on general rules. is held .

Results of the study. The prevalence and etiological factors of canine leukemia among cattle were studied. For this purpose, the Republic of Karakalpakstan The epizootic situation of cattle on 3 farms was examined for infectious diseases. They were selected for examination based on the recommendations of veterinary service workers. Republic of Karakalpakstan Scientific and practical explanation of leukemia was carried out in livestock farms, farms, Cluster, LLC and private entrepreneurs . Bovine leukemia virus has a spherical structure, up to 90 nm in size. Consists of a cubic core surrounded by a lipoprotein membrane. Contains a genome consisting of a double-stranded RNA molecule.

Antigenically, bovine leukemia viruses are related but distinct from retroviruses. Based on similarities and differences, they can be classified into a special group - type E.

Bovine leukemia remains a pressing problem to this day. This disease was first described in 1871, and the causative agent was isolated in 1969. Bovine leukemia (cancer, white blood cell) is a chronic infectious disease of a tumor nature , manifested by an increase in internal and external lymph nodes, weakening of cardiac activity, an increase in the spleen, liver; an increase in the number of leukocytes , and a asymptomatic course.

Basically, cattle leukaemia is widespread not only in Russia, but also in Europe, the UK and South Africa. Leukaemia is causing irreparable damage to the livestock industry. This is due to the increased need for herd destruction, waste disposal, cleaning and other work .

The causative agent is bovine leukemia virus (VLKRS).). The leukemia virus is virulent only in the leukocytes of patients and infected animals. Goats, sheep, pigs, rabbits, mice are susceptible to it. The virus easily multiplies on the membrane of human cells and has a genetic relationship with the AIDS and leukemia viruses in humans. At all stages of the disease, the animal excretes the virus with blood, milk, urine, feces. The virus can be transmitted during animal treatment - hemotherapy, treatment, anesthesia, castration, tail docking, vaccination, insemination, as well as from sick cows to young calves through blood - sucking insects and milk .

Clinical signs of bovine leukemia are asymptomatic in the early stages of the disease , with clinical signs only becoming apparent in the later stages. Symptoms become more pronounced after changes in the blood composition: The animal becomes weak, has difficulty breathing , loses weight , has gastrointestinal problems , has swollen udders and abdomen , has limping in the hind legs , has swollen lymph nodes , has lethargy and weakness, all of which are the result



of poor absorption of nutrients from the feed. Milk production decreases. Altered lymphocytes do not perform their protective functions, so the animal becomes more sick.

Diagnosis of bovine leukoplakia ; the first case of leukoplakia , which is mainly characterized by white blood cells in the enlarged spleen , was described in 1858. Since the end of the 19th century, for almost 100 years, scientists have been trying to find the causative agent of bovine leukoplakia virus . It was discovered only in 1969. Leukoplakia came to our country with the import of purebred cattle.

Diagnosis of leukemia is based on serological, hematological, clinical, and is performed using pathoanatomical methods.

The basis of the diagnosis of leukemia disease is serological methods immunodiffusion (IDR) and immunoenzyme assay (IFT) reactions. Cattle that react positively to leukemia virus antigen in immunodiffusion or immunoenzyme assay reactions are examined hematologically and clinically, and leukemia disease is detected in them. Cattle that have reacted positively to the leukemia virus antigen in the immunodiffusion or immunoenzyme assay reaction are considered to be infected with leukemia if, after a single hematological examination, they show hematological changes characteristic of leukemia according to the "leukemia key".

To determine which type of leukemia is the first to be diagnosed on a farm or in a herd, an animal suspected of having the disease is diagnostically slaughtered and subjected to pathological and histological examination.

The primary method is used on farms. It is based on pathological examination of dead animals, blood tests, epizootological and serological data. Histological sampling is mandatory.

Treatment of leukaemia in cattle . To date, no effective treatment has been found. The main therapy involves the destruction and slaughter of cows. In order not to complicate treatment and not lose profit, it is recommended to slaughter the animal at the initial stage of the disease. It is prohibited by law to obtain milk from leukemic cows. The same ban is imposed on the consumption of meat from sick animals. Milk obtained from virus carriers is subject to mandatory pasteurization. Then they are disinfected and used without restrictions.

According to veterinary regulations, dairy farms with bovine leukemia are forced to completely slaughter their livestock. Treatment is long-term and can last for years.

Farms with a small number of cases - up to 10% of the livestock - isolate sick cows and put them for slaughter. Serological tests are carried out every 2 months.

If the number of cases exceeds 30%, not only serological studies are carried out, but also hematological studies after 6 months. Livestock is divided into groups that have successfully passed the study and virus carriers. Sick animals are isolated for slaughter.

bovine leukemia includes the following measures :

- annually, in spring and autumn, animals over 6 months of age should be tested for leukemia ;
 - Purchased animals must have blood samples taken and sent for testing for leukemia only to veterinary laboratories ;
 - keep healthy animals separate from sick ones and prevent them from coming into contact ;
- The most reliable way to eliminate the outbreak is to quickly absorb the pathogen and carry out appropriate disinfection measures;

The causative agent of the disease is extremely unstable in the external environment, dying in 76 and 16 seconds. Boiling water kills it instantly. It is destroyed by various disinfectant compounds:

2-3% sodium hydroxide solution;

3% formaldehyde;



2% chlorine solution.

also dies in 30 minutes under ultraviolet light . In direct sunlight - 4 hours. Sensitive to various solvents - acetone, ether, chloroform. Farms affected by this disease are placed under control and are closed. According to the rules for combating bovine spongiform encephalopathy, a number of restrictions are imposed on them to reduce the spread of infection. Quarantine measures do not allow :

Driving livestock within populated areas without the permission of a veterinarian.

Free mating of cows with bull producers.

Using contaminated equipment when treating animals and buildings.

Keeping the healthy and the sick together.

Free import and export of animals.

combat cattle leukaemia include quarantine of all newly arrived livestock. The sale of meat and dairy products is only permitted with the permission of the veterinary station.

During the quarantine period, buildings where livestock and animal care items are stored will be regularly disinfected.

Conclusions . Cattle leukemia is not curable , and even the most modern veterinary science and practice do not have effective drugs against this disease, so timely immunodiagnosis of cattle is necessary. As a result, immunodiagnosis determines only the presence of leukemia virus infection in the latent period of the disease, without the manifestation of morphological changes in the body.

To protect healthy farms from this disease, it is necessary to test cows and heifers once a year, and breeding bulls twice a year using the Immunoenzyme Analysis (IFA) reaction. As a result, the IFA reaction identifies the causative antigen or the specific antibody produced against it in a relatively short time .

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