American Journal of Botany and Bioengineering
https://biojournals.us/index.php/AJBP
ISSN: 2997-9331

SPECIFIC PREVENTION OF BRADSOT'S DISEASE IN SHEEP.

N. B. Ergashev

Basic doctoral student, Tashkent branch of the Samarkand State University of Veterinary Medicine, Animal Husbandry and Biotechnology.

G‘. A. Mengliyev

candidate of veterinary sciences, Tashkent branch of the Samarkand State University of Veterinary Medicine, Animal Husbandry and Biotechnology.

Received: 2024 19, Sep
Accepted: 2024 28, Sep
Published: 2024 18, Oct

Annotation: This article provides information on the main methods of prevention of bradzot disease and the effectiveness of vaccines, the development of optimal methods of quantitative control of the intensity of immunity, and specific prevention of clostridiosis created by scientists from different countries.

Kalit so‘zlar: C. septicum, C. Oedematiens, C. Perfringens, vaksina, antigenlar, patogenez.

Relevance of the topic: Pathogens of diseases caused by anaerobic microorganisms (malignant tumor, bradsot, anaerobic enterotoxemia, anaerobic dysentery) cause severe damage to various systems and tissues of the body, accompanied by almost rapidly increasing toxicosis. 100% of cases end fatally. Bradsot is a serious problem in sheep farming not only because of the economic damage caused by the disease and death of animals, but also because of the appearance of persistent unfavorable conditions in the territory, poisoning by spores of the pathogen, and damage caused by the pathogen.

Level of study of the topic: Due to the widespread distribution of the pathogen in the external environment, acute or subacute course of the disease, and the severity of tissue damage, treatment of animals is ineffective in almost 100% of cases. The main method of preventing Bradzot's disease is specific prevention [1, 3].

The effectiveness of vaccines depends on many factors, including the quantity and quality of the antigen, preservatives, adjuvants, immunostimulants, the technology of production of the drug and the method of its administration. The immune status of the animal also plays an important role [5].

When creating specific preventive measures, researchers must try to develop the ideal vaccine that provides lifelong immunity to many infectious diseases with a single injection and is completely safe for the body. Unfortunately, such vaccines do not exist at present, but this should be addressed in the development of new immunobiological preparations. One way to achieve this goal is to develop appropriate vaccines that allow for the optimization of the vaccination schedule, reduce animal stress, and reduce labor costs [4,5].

Theoretically, the number of components in complex vaccines can be unlimited, but it should be taken into account that the interaction of antigens in the preparation often reduces its effectiveness. It is associated with a significant antigen load due to a large number of introduced foreign substances, a high concentration of protein compounds, etc., and is manifested by the appearance of undesirable systemic (allergy, anaphylaxis, abortion, etc.) and local diseases.

Side effects can be avoided by the correct selection of antigens and their concentration in complex vaccines. There are many examples where special prophylaxis is carried out using appropriate vaccines that provide a high level of immunogenicity. It is also necessary to take into account that the expected benefit from the use of the vaccine exceeds the risk of undesirable consequences [2,3,6].

Since clostridia are antigenically similar to other pathogens of infectious diseases of animals, they are more suitable for the creation of appropriate drugs. Despite the significant diversity of clinical forms of the disease, they have the same pathogenesis, in which the disease is caused by highly active toxins formed when bacteria enter the body tissues.

Since anaerobic infections are often caused by an association of pathogens, it is recommended to use appropriate vaccines containing pathogens of clinically important pathogens of diseases such as anaerobic enterotoxemia, bradsonosis, tetanus, etc. ¬[1,2].

The corresponding vaccines against clostrodiosis began to be created in the 20s of the last century. In 1925, Dalling carried out a complex immunization of sheep against emkar and bradsot. In 1926, G. Ramon developed preparations from antigens of a number of pathogens, and positive results were obtained from their use in both medicine and veterinary science. In 1928, Leclanche and Vallee achieved positive results by inoculating sheep with inactivated preparations from a mixture of C. septicum, C. Oedematiens and C. perfringens. [2,3].

At the same time, researchers began to gradually improve drugs against anaerobic diseases and began to use vaccines made from purified and concentrated toxoids rather than from clostridia cultures.

In 1942, Kolmer achieved satisfactory results in the formation of immunity to brazot toxins and dangerous tumor pathogens using polyvalent anatoxins, but noted that experiments on the prevention of necrotic hepatitis with toxins were unsuccessful.

To immunize laboratory animals, a complex toxoid was prepared and administered with the addition of potassium alum, which acted as an adjuvant, allowing C. perfringens and C. Oedematiengas to induce lasting immunity in animals.

In Yugoslavia in 1960, R.V. Katic achieved positive results in immunizing sheep against enterotoxemia and necrotic hepatitis. It was also established that when vaccinating against the listed clostridia, stable immunity can only be achieved with preliminary deworming, especially against fascioliasis. [4,5]

A vaccine against anaerobic diseases caused by C. septicum, C. perfringens and C. Oedematiens has been developed and its use has achieved positive results, resulting in the absence of cases of the disease in immunized sheep. [1,2,3].

Introduction. Based on the analysis of literature and our own research, we came to the conclusion that the creation of the drug requires studying the etiological structure to assess the optimal composition of the vaccine, improving the technology of producing monoantigens, and

developing optimal methods for quantitative control of the expression of immunity, as well as the development of clostridiosis, created by scientists from different countries, such as a variety of specific preventive measures, vaccination of livestock against clinically significant clostridia with our own domestic drugs. urgently needed the need for development was confirmed once again.

References.

1. Kapustin A.V. Study of the effectiveness of the polyvalent vaccine "Klostbovac-8" in the population of small ruminants unfavorable for malignant neoplasms, bradysitis and anaerobic enterotoxemia / Kapustin A.V. // Veterinary science, zootechnics and biotechnology - 2016.- No. 11.- P. 33-40.
2. Kapustin A.V. Study of the immunogenic activity of the tetanus component in the composition of the vaccine against cattle clostridiosis. // Kapustin A.V., Laishevtsev A.I., Gulyukin A.I., Shemelkov E.V., Sklyarov O.D. Kuban veterinary medicine. - No. 4. - 2016. - P. 15-17.
3. Kapustin A.V. Nutrient medium providing stable accumulation of toxins during cultivation of some strains of clostridia. / Kapustin A.V., Pivovarova O.S. // Medicines for animals (development, production, efficiency and quality): abstracts of lectures of the international scientific conference dedicated to the 80th anniversary of the establishment of VGNKI 2011. P. 54-56.
4. Redkozubova, L.I. Fight against clostridia – systemic vaccination / L.I. Redkozubova // Veterinary science. - 2016. - Vol. № 1. - P. 9-12.
5. Akhmetsadykov N.N., Suleimenova M.A., Khusainov D.M. Bradzot, a method for obtaining a polyvalent vaccine against malignant tumors of sheep, infectious enterotoxemia and dysentery of lambs Patent No. 16260, 14.10.2005.