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Research Article

HISTORY OF THE ORIGIN OF ANTHRAX DISEASE AND METHODS OF ITS STUDY

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ABSTRACT

Anthrax (Latin - Febris carbunculosa; English - Anthrax; Russian - sibirskaya yazva) is an acute and extremely dangerous infectious disease, characterized by septicemia, severe poisoning and the formation of carbuncles, all types of agriculture It infects domestic, domestic, and wild animals, and it is easily transmitted to humans mainly through animals.

KEYWORDS

Epizootic, infection, pathogen, infectious process, infectious disease, mutualism, immunoreactivity, protein, reservoir, zoonosis, zooanthroponosis, anthroponosis, susceptible organism, types of infection, alimentary infection, exogenous infection, dust infection, endogenous infection, virulence, transmissible path, horizontal path, vertical path, antigen, heterogeneous antigens, epitope, antibody, immune factors.

INTRODUCTION

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Historical information. Long before Christ, the disease was called "Persian fire", and ancient Greek scientists called it "divine fire". Hippocrates, Ibn Sina, Homers also called this disease "burning coal". Large epizootics of the disease were observed in Europe, America, Asia and Africa during the Middle Ages and the next 200 years.

The Russian scientist A. Eshke in 1758 and N. Nozhevshikov in 1762 gave the name sibirskaya yazva (anthrax) to animals and humans in Siberia. In 1786-1789, S. S. Andrievskii discovered that this disease is contagious, and in 1788 he contaminated himself with the blood of a sick animal, became seriously ill, and proved that the symptoms and course of the disease are the same in animals and humans.

I. Peterson and N. F. Gamaleya reported on the transmission of the pathogen by blood-sucking insects from one animal to another. In 1849, German scientist Pollender, in 1850, French scientists Rayne, Daven were the first to see the causative agent isolated from dead animals. In 1876, R. Koch really isolated the causative agent of the disease and proved that it produces spores. In 1877, Askole created a method for determining the disease in the precipitation reaction (PR-Askole reaction).

In 1881, L. Pasteur from a weakened pathogen, and in 1883, L.S. Senkovsky created a live vaccine against anthrax. In 1944, N.N. STI (Sanitary Technical Institute) by Ginsburg, GNKI in 1956 and S.G. in 1991-1992. Kolesov, N.A. Mikhailov Yu. Borisovich (VNIIVViM) created a vaccine from the bacillus form 55 strain of the anthrax pathogen.

According to S. G. Kolesov and G. I. Romanov (1976), anthrax caused great damage to animals and killed many people in ancient Rome in 463-452 BC. In the same source, 163 years before Christ, this disease was brought to Italy from Gaul with woolen fabrics, and anthrax was reported in several European countries - in Finland in 1758 and 1774, in Switzerland in 1774, in Russia in the 70s of the 18th century, in France in 1912, and in Germany in 1926 in Poland, It is written that it spread in Saxony.

In order to prevent anthrax, vaccination against it is required. For this, all susceptible animals (calves 1 time from 3 months of age, 2 times after 6 months and large cattle of all ages 1 time in a dose of 1 ml every year, lambs, goats 1 time from 3 months of age) - times, 2 times after 6 months and large sheep-goats of all ages 1 time in a dose of 0.5 ml and pigs also in a dose of 1 ml from the age of 3 months) and large pigs of all ages every year It is injected subcutaneously in a dose of 1 ml once.

It is necessary to vaccinate all susceptible animals, taking into account their fatness and physiological condition, every year in the risk areas for anthrax. Thin, sick and hypovitaminosis animals should not be vaccinated against anthrax, calves, lambs and piglets should be vaccinated as soon as they are 3 months old. Vaccinated animals can be slaughtered after 14 days.

The main attention of veterinary specialists should be focused on the control of anthrax outbreaks, slaughtering of animals, especially forced slaughtering, and educational work on this disease among the population. Dead animals must be burned and disposed of quickly, the place where it lies must be disinfected, and the slaughtered animal and its products must undergo veterinary control. Transportation and processing of animals and their products should always be under the supervision of a specialist. Timely cleaning of farms from manure and neutralization of manure, current disinfection, disinsection and deratization, and keeping pastures, drinking water, places where animals gather, roads

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where they are driven clean, fence around the farm when entering it, arrange a dezobarrier, a sanitary conduit, do not allow strangers and animals to enter the farm, provide all employees with special clothes, shoes, face wash, and disinfectants, newly purchased animals must be tested for anthrax Taking them from the farm, keeping them under preventive control for 1 month, introducing only vaccinated animals to the farm will help prevent anthrax.

- not to introduce animals from other farms and settlements to the farm without the permission of a veterinary specialist, and to ensure that animals are not transferred from one place to another in the farm;
- to take purchased animals from a farm healthy for this disease, to keep the imported animals in preventive quarantine for 30 days, during that period to serologically check them for brucellosis and to add only brucellosis seronegative animals to the herd;
- do not mix livestock belonging to the farm and the population with other animals, even in the pasture, at the common watering place;
- feeding calves with pasteurized milk, regular disinfection, disinsection and deratization of the farm, providing nutritious feed to all species of animals on the farm, scheduled diagnostic inspection.

As soon as the initial diagnosis of this disease is made among susceptible animals in a farm, herd, herd, settlement or other enterprise, the veterinary specialist immediately informs the district veterinary department and the sanitary epidemiology control officer about it. As soon as a laboratory diagnosis of anthrax disease is detected among animals in a farm, herd or settlement, the district veterinary department writes a report on this situation, and on this basis, the farm, herd or settlement is quarantined by the decision of the district (city) mayor. The body temperature of the animals in the furnace is measured and the animals are divided into 3 groups (sick, suspected and conditionally healthy). Sick animals are treated, healthy ones are vaccinated. Milk from healthy but suspected infected animals is boiled, and milk from sick animals is discarded. Unhealthy and dangerous areas should be defined in the approval of the anthrax control action plan and farm health measures.

According to quarantine requirements, the following are prohibited:

- to remove the animal, its products (meat, milk, fat, skin, wool, horns, hooves), feed (hay, grain), vehicles from the quarantine area, and to enter the above-mentioned persons and strangers into this area;
- slaughtering an animal, cutting open a dead animal, skinning it, grouping or replacing animals, carrying out surgical operations;
- organization of flea markets, exhibitions, sports events in the settlement;
- drinking water from a common place.
- production of meat, milk, dairy products, leather, wool, hooves from the farm;
- use of sick animal milk, slaughter for meat.

A dezobarrier and a 24/7 guard post will be organized during the health care activities. Buildings where animals are kept are disinfected daily. A dead animal is cremated. Residual hay, manure and other waste are burned. A separate person is assigned to care for the sick and he is provided with special protective clothing. The milk of sick and suspected sick cows is boiled and discarded. Conditionally healthy cow's milk is considered suitable for consumption after boiling. The place where the animal died is disinfected with 10% caustic sodium, excavated to a depth of 15-20 cm, the

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soil is mixed with 25% active chlorine lime, buried to a depth of 2 m, and the top is concreted with the sign "Anthrax" and the date is recorded. Quarantine is removed from the farm 15 days after the last dead or recovered animal, after final disinfection by decision of the district governor. That land should be included in the agricultural land use map of the district. It is forbidden to carry out construction and reclamation works there. Residual hay, manure and other waste are burned.

Manure, manure and other waste before the outbreak of the disease are neutralized with 10% alkali.

10% caustic sodium, 4% formaldehyde, 10% monochlorinated iodine, 7% hydrogen peroxide, and 2% glutaraldehyde are used for disinfection.

Animals infected with anthrax, people in contact with their meat, skin, milk, wool and other waste will be monitored by medical staff for 8 days.

The soil layer is neutralized with alkaline formaldehyde (10.0 formaldehyde, 5 mg of chlorinated lime per 1m2 of surface). Manure is neutralized by biothermal method within 2 years. Liquid waste from the farm is neutralized within 5 days by adding 30 kg of ammonia to 1 m3 of liquid mass. In addition to this, disinsection and deratization activities will be held.

A list of the main textbooks and study guides useduse Basic textbooks and manuals

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