ISSN 2181-3187

UDK: 576.851.42:541.427.8

CAUSE AND EPIZOOTOLOGY OF BRUCELLIOSIS

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Abstract: The article describes the types of the causative agent of brucellosis of farm animals, the resistance of the causative agent, the manifestation of the epizotological state of brucellosis in livestock farms, the source of the disease, the ways of damage. 'data is written.

Key words: Brucella, biovariant, blood culture, myeloculture, lactoculture, urine culture, Hottenger, GPA, GPQ, R colony.

Enter. In our country, large-scale work has been carried out to ensure a stable increase in the number of livestock and poultry, to strengthen veterinary control and improve the quality of veterinary services, to effectively organize the protection of animal health, to ensure epizootic tranquility and the safety of food products. increased. Decrees and Resolutions of the President of the Republic of Kazakhstan issued in recent years on the development of livestock, poultry, fishery, and beekeeping in our country, decisions of the Cabinet of Ministers, decisions of the Central Committee of the Republic of Kazakhstan, and their implementation.

The development of livestock, poultry, fishery, and beekeeping in Uzbekistan has been included in the issues of state attention in recent years.

The President of the Republic of Uzbekistan Sh.M. In his speech at the event organized in connection with the "Day of Agricultural Workers" on December 9, 2017, Mirziyoev said about the importance of the veterinary system: "One of our main tasks is to provide the population with quality meat, milk, eggs and fish products. To achieve this, we need to pay special attention to the following issues. In 2018-2019, an additional 35,000 breeding cattle will be raised within the framework of 145 projects at the expense of bank loans. Based on 80 projects with a total cost of 280 billion soums, it is necessary to establish additional 3 million 200 thousand poultry farms. Therefore, in 2018, egg production increased by 10% and its total volume increased to 7 billion 800 million. it becomes possible to deliver grain. Next year, 2019, fish

ISSN 2181-3187

production will be 150 thousand tons. 280 projects worth 215 billion soums will be implemented, 1,650 artificial water bodies will be created. 13,000 tons in 25 water reservoirs, and about 15,000 tons in 37,000 hectares of rice fields based on Vietnam's experience. measures are being taken for fish breeding. Currently, each farm has 14,000 dairy cows, 21,125 farms have 50 heads, a total of 1,57,000 poultry, 66,000 farms have 329,000 bee hives, and 7,200 tons of honey can be produced.

We must also admit that there is a shortage of personnel who have thoroughly mastered the achievements of modern science in the field. There is a great need for veterinary specialists especially in the fields of livestock, poultry, and fisheries. Scientific works on improving the breed of livestock, early detection and treatment of diseases in poultry are not being carried out sufficiently. In our country, which has been a leader in the field of livestock breeding, today, bred cattle are brought from abroad. Such negligence and failure to think about the future development of the industry is completely inexcusable. Taking into account all these circumstances, Sam VMI-Samarkand Institute of Veterinary Medicine was established based on the decision of the President of the Republic of Uzbekistan on May 8, 2018, in order to organize an innovative approach in the field and to establish a system of training qualified personnel. On March 31, 2022, the Samarkand State University of Veterinary Medicine, Animal Husbandry and Biotechnologies was established in accordance with the model of world universities based on the Republic of Uzbekistan PQ-187. Currently, the university is training specialists in 21 fields of education, science programs and work programs for undergraduate and graduate students are prepared in accordance with the standards of XEB, JSS organizations. can solve the problem.

Relevance of the topic. Brucellosis (Lat., English: Brucellosis) is a chronic infectious disease, which is manifested in animals in most cases by abortion, placental abruption, endometritis, reproductive disorders. When brucellosis is detected in breeding cattle on the farm, firstly, there is a mass abortion (throwing of the child) in the strait cows, the milk production from the cows decreases sharply, secondly, breeding activities on the farm are lost, the production of calves is reduced, thirdly, quarantine and you have to spend a lot of money on farm health measures.

The main thing is that brucellosis is transmitted from animals to humans, the economic damage from it cannot be measured in soums, it becomes a huge social problem. It is known from the literature that in some cases, 10-20% of people with brucellosis are correctly diagnosed, unfortunately, 80-90% of people are completely different: flu, inflammation of the upper respiratory tract, radiculitis, arthritis (joint pain), prostatitis and other diagnoses are treated. Such treatments cause the body to become disabled. In Uzbekistan alone, 1,000 strains of Brucella were isolated from people in a short period of time. 929 of them were hemoculture (72.9%), 129 were

ISSN 2181-3187

myeloculture (12.9%), 33 were lactoculture (3.3%), and 21 were urine culture (2.1%). Brucella melitensis accounted for 96.1% of strains isolated from humans.

The purpose of the study. Identifying the causative agent of brucellosis in livestock farms, determining the resistance of the causative agent, determining the epizootological condition, determining the causes of brucellosis, protecting people and animals from brucellosis.

The task of research. Currently, the task of veterinary medicine specialists is to determine the epizootology of brucellosis, to perform it scientifically based on the veterinary regulations. Determining whether or not products obtained from sick animals are completely disinfected and suitable for consumption based on special instructions. Another problem is to stop the spread of the disease, to carry out health measures based on veterinary instructions.

The causative agent of brucellosis. 31% of cultures isolated from farm animals and rodents were Br.abortus and its 9 biovariants, 64% were Br. melitensis and its 3 biovariants, 2% of Br. suis and its 4 biovariants, 1.2% of Br. canis and its 1 biovariant, 1% Br. ovis and its 1 biovariant and 0.8% Br. neotomae and its 1 biovariant. Of the 9 biovariants in Br.abortus, 1, 2, 6 and 7 are virulent. Br. of 3 biovariants in melitensis, 1st one - 71%, 2nd one - 4.5%, and 3rd biovar - 20.6%. The 1st biovar is virulent, the 3rd is very virulent. At the same time, Br. melitensis also Br. abortion occurs. Brucellosis is 30-35% in the city, 70-75% in the countryside. In 70.9% of cases, the disease is transmitted by contact with small horned animals, in 73.7% of cases by food from large horned animals, and in 45% of cases by food or contact from small and large horned animals. All Brucella species do not differ much from each other morphologically, they have polymorphic, coccioid, ovoid and rod forms (0.6-1.5 x 0.5-0.7μm). They are inactive, stain well with aniline dyes, gram negative. Some strains form a capsule. When separating types of strains, their ability to produce growth, growth in medium with some dyes, formation of agglutination with monospecific serum, and biochemical activity are taken into account when separating biovars. Brucella grows very well in agar made from liver, meat-liver medium, 10% whey, and potatoes. The pathogen grows in normal and serum media, Hottenger, GPA, GPQ (pH 6.6-7.4), develops well at 36-38°C. It also grows well in liver medium supplemented with glycerol and glucose. Depending on the nature of growth in a solid environment, there are S-typical, smooth, R-changed bumpy and M-mucous colony options. It has internal O and surface S antigen. There are A and M variants of C antigen. Br. more A in abortus, Br. melitensis has M antigen. In the R colony, the S antigen disappears.

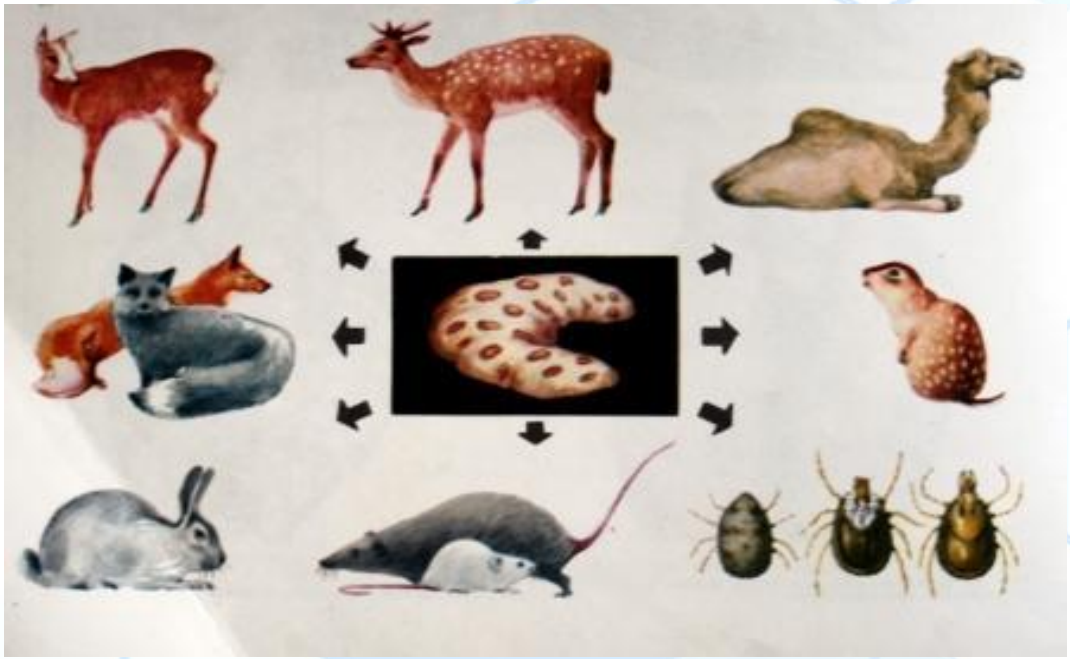
Resistance of the causative agent of brucellosis. Resistant to physical and chemical effects. 30 minutes at 60 °C, 5-10 minutes at 70 °C, immediately deactivated at 90-100 °C. 4-7 days in milk, cream, 14 days in clothes; it is actively stored for 67 days in cheese, fat, brine and salted skin, 3 months in salted meat, 5 months in frozen

ISSN 2181-3187

meat and wool. It keeps its activity for 4 months in soil, water, manure, hay. It quickly loses its activity in rotting material. Brucella can live from a few minutes to 2-3 hours under the influence of direct sunlight. It lives in the sunlight for about a week. It is kept active for 37 days in a slowly drying place. It does not lose its virulence up to 160 days at cold temperatures. It is stored in frozen pathological material for up to 1.5 years. Brucella dies quickly in a boiled environment. Its preservation in the external environment depends on physical, chemical and biological factors. For disinfection, 1% chlorinated lime, 10-20% lime solution, 3% lysol, 3-5% carbolic acid, 2% alkali, and 1-2% formalin give good results.

Epizootology of brucellosis. All farm animals are susceptible to brucellosis. Cattle, yaks, buffaloes, camels and horses to Br.abortus; sheep, goat, buffalo Br. to melitensis; pigs and deer Br. suis to; dogs Br. to canis, rams Br. prone to ovis. Poultry is resistant to brucellosis, the disease cannot be called even in experiments. Br. melitensis from sheep to cattle and pigs, Br. suis has been proven to be transmitted to sheep and goats. Brucellosis occurs epizootically in cattle, sheep, goats, pigs, reindeer, and sporadically in horses, dogs, and other animals.

The source of the disease is sick animals, especially when clinical symptoms are manifested or when the fetus is aborted, their amniotic fluid, the fetus itself, mucus from the genitals, milk, urine, feces, bull semen. serves. The causative agent of brucellosis is stored in the udder of a cow for 7-9 years, in the udder of a sheep for 3 years, and is always excreted in milk. For 15-30 days after abortion, a large number of Brucella are released from the genitals of a cow. It is very dangerous if the aborted fetus is not neutralized in time. The disease is rarely transmitted in pasture conditions. It mainly occurs when cattle are standing in one place.



The source of the disease

ISSN 2181-3187

Agent transfer factors feed, water, pasture, bedding, and inventory used in animal care are considered to be sick animals, their milk, feces, and mucus from genital organs.

Ways of damage - young animals are affected by alimentary, and adult animals are affected through mucous membranes and skin during alimentary and contact (sexual intercourse). In natural conditions, brucella infects a healthy organism through food, water and food, eyes, nose, mouth and genitals. In most cases, brucellosis is spread from drinking water sources. Bulls and rams infected with brucellosis play a major role in the transmission and spread of the disease. The disease can also be spread through animals bought from healthy farms without being checked for brucellosis. Rams and heifers are the most dangerous, because the disease is often hidden in them. When dairy products are not pasteurized to the required level, dairies can also become a source of disease.

Brucellosis is transmitted when a sick animal is brought to the farm, when the quarantine conditions are violated, when sick and healthy animals are fed together in the pasture, when watering from the same place, or through dogs and rodents. Usually, in a new epizootic outbreak, 60% or more animals can be infected for several months. In the herd, first 1-2 heads are observed, and then a mass abortion is observed. If new healthy cattle are brought to such a farm after 2-3 years, first brucellosis is observed in those cattle, and then exacerbation of the disease is observed in the cattle of this farm. Regrouping of animals leads to the origin of a new breed.

Wild animals, rodents and insects also play a major role in the spread of the disease. It has been proven that they carry brucella in nature. Migration of Brucella between animal species is also very strong, they pass from one species of animal to another. This happens especially when the natural resistance of animals decreases or when new biovariants of the pathogen appear.

Inadequate feed, non-observance of zoohygiene requirements, failure to quickly remove discarded fetuses, lack of timely disinfection, too many animals in a small area, failure to clean manure on time and other factors reduce general resistance and spread the disease leads to development.

Conclusions

1. The causative agent of brucellosis spreads in epizootic form.
2. Brucellosis is a clinical manifestation in all unhealthy areas.
3. It is necessary to carry out epizootological inspection methods for the purpose of timely prevention of brucellosis in unhealthy areas.

ISSN 2181-3187

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