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REVIEW OF THE LITERATURE ON SEPSIS IN CALVES AND MEASURES TO PREVENT IT

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Annotation
This article describes sepsis that occurs in calves, that is, colibacteriosis, the causes of occurrence, diagnosis, the causes of the occurrence of this disease, the morphological and physiological changes that occur in calves, the indicators and complications of death.

Keywords: Escherichia coli, enterotoxic, septicemic, syntomycin, caffeine, coli-salmonellosis vaccines, dizparkol, VIEV coliprotectant.

Аннотация
В статье описан сепсис, возникающий у телят, то есть колибактериоз, причины возникновения, диагностика, причины возникновения этого заболевания, морфологические и физиологические изменения, происходящие у телят, показатели и осложнения смерти.

Ключевые слова: Кишечная палочка, энтеротоксическая, септическая, синтомицин, кофеин, вакцины против кишечной палочки, сальмонеллинированные, дизпаркол, колипротектор VIEV.

Relevance of the Topic

Calf sepsis-colibacillosis is an acute infectious disease of young animals in 1-8 day old calves manifested in the form of diarrhea, enteritis, diarrhea, septicemia, toxemia, weakness and sudden death. The disease begins in young animals on the first day and is 10-20% fatal due to its acute nature. Calves are mainly affected by food. It can also be damaged through the nose, throat or in the mother's womb. There are 2 main forms of

colibacillosis: enterotoxemic and septicemic. Enterotoxemic forms are more common, with Escherichia coli developing in the small intestine and the spleen. There is a lot of exoenterotoxins, bacterial biomass that accumulates, releases endotoxins from dead bacteria and causes local inflammation. In addition, endotoxins pass into the lymphatic system, and the calf soon dies from toxemia. In septicemia, Escherichia coli first passes from the intestinal wall into the lymph nodes and then into the general lymphatic system, leading to enteritis and sepsis. The intestinal form of colibacillosis is caused by Escherichia coli, which produces more thermolabile and thermostable exotoxins.

Many authors believe that age-related anatomical and physiological features are important in the pathogenesis of colibacillosis: low acidity of gastric juice, increased permeability of intestinal epithelium, decreased resistance of lymph nodes and liver, low or no gamma globulins in the blood. The severity of colibacillosis during childbirth is characterized by an increase in virulence of the pathogen from calf to calf. Delayed delivery of cow's milk also contributes to the development of the disease.

Clinical Signs

In young animals, a sudden rise in body temperature, palpitations and shortness of breath are manifested by weakness. In addition, the nose is dry and the conjunctiva is congested. After 1-2 days, enteritis enters the septic condition. The stomach is watery, foamy, with air bubbles, white-blue in color, and has a foul odor. Undigested milk turns into a clot when you have diarrhea. He is lying on his side with his neck down. When the eyes are sunken, the wool loses its luster. Sticky sweat hardens on the skin and emits a foul odor. Comotosis occurs and death can occur if not treated in time.

Pathological Changes

The carcass of a dead calf is thin, the area around the back ejaculation and the hind legs are contaminated with feces, the mucous membranes are heavily anemic, red, bloody, and in the small intestine there is a liquid mucous mixture of food debris.

Treatment

In the treatment of sick animals, storage and feeding conditions are improved. Instead of colostrum, saline solution or bitter black tea is cooled. It is even more useful to mix 1l of chicken eggs in the above mentioned liquids. Before using antibiotics, it is necessary to determine the sensitivity of the isolated escherichia to them. Syntomycin is used for treatment. 40 mg first, then 20 mg every 4-6 hours. Biomycin, terromycin, tetracycline 2-3 times a day from 15-25 mg, colimycin 15-20mg, and polymyxin 4 mg are recommended. It is better to give antibiotics with milk.

Caffeine and camphor are used to improve cardiovascular function. Antibiotics and sulfonamides may also include sulfazole, sulsimide, disulfan, and phtholazole.

Subcutaneous or intra-abdominal administration of glucose-saline solutions helps maintain water-salt metabolism. By digging deep, the bowel is cleansed.

Disease Prevention and Control Measures

In order to protect against any diseases, the conditions of keeping and feeding animals must be in accordance with zoohygienic indicators. Hygiene rules should be followed during and after childbirth. Inflammation of the umbilical cord in the calf after birth should be prevented. It is also important that the calf's shelter and bottom are clean and comfortable.

Biopreparations Used

Newborn calves are given hyperimmune serum or gamma globulin (subcutaneously, intramuscularly, intravenously, orally) to prevent disease.

Vaccination of pregnant cows is also very effective. In doing so, the calf receives special antibodies with uvuz. Colostral immunity is also maintained for 2-3 weeks like serum immunity. Our country has developed a coli-salmonellosis vaccine that kills many strains of E. coli and several cultures of salmonella strains with formalin. Calves are vaccinated twice every 10-14 days. VIEV coliprotectants (escherichiae killed by heating) have been suggested to be given to calves several times with cow's milk during the first feeding.

Polyvalent coli-gertner-phage has also been successfully administered to calves by enteral, subcutaneous, and intramuscular injection. Its effectiveness is enhanced by the use of antibiotics or sulfonamides, nitrofuran.

In Uzbekistan, VITI has developed a radioactive vaccine against calf colibacillosis and salmonellosis, hyperimmune serum. They are made from local strains of E. coli and salmonella, which are common in calves in Uzbekistan, and are being used with great success.

Conclusion

This article describes the causes, clinical signs, pathologogenomic changes, treatment, and vaccines of colibacillosis in calves. To prevent the disease in calves, we need to take good care of them, follow the rules of feeding, give milk on time, pay great attention to zoohygiene requirements. To prevent any disease, we need to vaccinate them in a timely manner. The most effective tool is a vaccine.

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