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INFECTION CONTROL AND INFECTION SAFETY

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Abstract: Infection is understood as a complex biological process that occurs between an animal organism and a pathogenic microbe - the causative agent of a disease in the external environment, and the effect of mutual struggle. Infectious disease is the most expressed form of interaction between organism and microbes. This is a state of the organism in which certain pathological processes develop in response to a stimulus. Environmental factors have a great influence on infectious processes. The infection takes the form of latent and obvious clinical symptoms, abortion, etc. Their importance in timely and correct diagnosis of the disease is very important.

Keywords: Infection, infectious disease, infectious process, macroorganism, pathogenicity, virulence, invasiveness, toxigenicity, capsule.

INTRODUCTION

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Infectious diseases:

1. Being a living pathogen or a special cause (RNA or DNA storing viruses and other organisms);

2. Transmission from a sick organism to a healthy organism;

3. Having a latent period of the disease;

4. Formation of antibodies (specific reactions develop in the body).

5. It is characterized by the formation of immunity in the recovered organism. Microorganisms entering the animal body do not always cause disease. Certain conditions are necessary for this. Infection

The appearance and development of the disease depends on the following:

a) pathogenicity of the microbe;

b) the immunological state of the macroorganism:

c) external environmental conditions.

MATERIALS AND METHODS

The microbe enters the body in certain ways, which are called the gates of infection.

In natural conditions, in most cases, the causative organism is introduced to the causative organism through alimentary-digestive tracts (with feed, water), aerogenous - through respiratory organs, in contact - by touching each other, when bitten by insects, by injection with a non-sterile needle. Damaged skin, eyes, mucous membranes of the urinary tract can also be a gate of infection.

Pathogenic microbes spread throughout the body in different ways: through blood (hematogenic), through lymph (lymphogenic), through nerve fibers (neurogenic). The multiplication of microbes in the blood and spreading through the blood to the whole body is called septicemia.

It passes very quickly and usually ends in death. The appearance of the microbe in the blood is sometimes very short-term, where the microbe does not multiply, but the blood spreads the microbe to all organs, this is called bacteremia. Some microbes multiply in the damaged area (tissue), and the resulting toxin enters the bloodstream and poisons the whole body. This is called toxemia.

RESULTS AND DISCUSSION

Types of infection. According to the cause of origin, there are exogenous and endogenous infections. Exogenous infectious agents enter the animal organism from the external environment. Endogenous pathogens are usually present in the body itself and develop the disease only when the condition of the body deteriorates. This includes conditionally pathogenic microbes, latent viruses, etc.

Depending on the type and amount of the stimulus that entered the body, it is observed in simple and mixed form. Diseases caused by one type of pathogen are called mixed infections, which arise from the introduction of two or more types of pathogens. Mixed infections are severe. Sometimes, an animal that has recovered from an illness does not develop immunity, and it becomes infected again and becomes ill again - this is called reinfection.

In some cases, during the development of the infection, there is an equilibrium between the organism and the pathogen. But when the pathogen enters such an organism in an additional amount, the disease worsens - this is called superinfection. Sometimes, even after the disappearance of clinical symptoms, the body is not free from the pathogen, and under certain conditions, the disease re-exacerbates and clinical symptoms of the disease appear, which is called relapse.

Many animals are carriers of pathogenic microbes and do not show symptoms of disease - this is called microbial carriage.

The speed of development of the infectious process depends on the entrance of the causative agent, if it is located closer to the place of development, the disease appears faster.

For example, in case of tuberculosis, if the causative agent falls on the lungs, and in rabies, if it falls on the nervous tissue, especially near the head or spinal cord, the infection process develops rapidly.

Importance of macroorganism and external environmental factors in the course of an infectious disease. The appearance and development of infection in the animal body depends on three conditions [2]:

1) to the immune state of the animal organism;

2) the level of pathogenicity of disease-causing microbes;

3) to external environmental conditions (influence).

First of all, we will focus on the role of the immune state of the animal organism in the emergence and development of infection. The resistance of the macroorganism to infectious

diseases depends on its anatomo-physiological characteristics, the innate protective means of the organism that prevent the entry and reproduction of the infectious agent into the tissues.

The reactivity of a set of protective means that appears in the animal's body creates a state of stress in the body. At this time, the interaction of harmful factors - pathogenic microbes with various organs and tissues that perform a protective function in the macroorganism is manifested. The hypothalamus and hormonal systems located in the brain perform the activation of defense mechanisms and the activation of neurohumoral control. That is, it weakens pathogenic microbes in the body, the disease does not develop, and if it appears, it passes easily. If the protective means of the animal organism are not fully engaged due to various influences (starvation, keeping and feeding in poor conditions), its normal condition is disturbed and the infectious process develops actively, resulting in an infectious disease [3].

One of the conditions for the development of infection is the influence of the external environment on micro- and macro-organisms. That is, the factors of the external environment that increase the susceptibility of farm animals to infection include starving animals, feeding them with poor quality food, colds that weaken tissue resistance (phagocytosis slows down, the permeability of blood vessel walls increases), unsatisfactory keeping under conditions: (lack of ventilation, increased humidity, increase of microbes in the air of the barn, dirtiness of the animal's body, activation of microbes on the skin and respiratory tract, etc.) and others.

CONCLUSION

According to the course, acute and chronic diseases are distinguished. When the disease is acute, the symptoms are obvious and pass in a short time. In case of chronic infection, the infectious process lasts for a long time and does not always end in death. In this case, deep changes occur in the body, it damages the external environment with inflammatory secretions.

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