SCIENTIFIC PROGRESS IN INFECTIOUS DISEASES AND THEIR PREVENTION

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Annotation: *This scientific article talks about the acute diseases that we encounter in the course of our life and ways of their treatment and prevention.*

Key words*: contagious, harmful infection, human health, rabies, cough, animals, food products*

Nowadays, there are a number of infectious diseases, and it is very important to learn and know about them. An outbreak of any infectious disease causes an epidemic. An epidemic is a widespread spread of infectious diseases in a country, region or country. In this case, the number of patients will be 510 times more than usual.

All infectious diseases of animals are divided into 5 groups:

Group 1 - alimentary infections. It passes through soil, feed and water. The digestive system is damaged. Such infections include anthrax, measles, mumps, and brucellosis.

Group 2 - respiratory infections. Damage to mucous membranes of the respiratory tract and pharynx. The infection is transmitted mainly by airborne droplets. These diseases include parainfluenza, exotic zotiljam, sheep and goat pox, plague of carnivorous animals.

Group 3 - transmitted infections. The blood-sucking joint moves with the help of legs. Triggers are present in the blood all the time or in separate periods. These diseases include encephalomyelitis, tularemia, infectious anemia of horses.

Group 4 - infections whose causative agents pass through the skin without the participation of intermediaries, whooping cough, rabies, cowpox are among these diseases.

Group 5 - infections of unknown origin.

The sources of the epizootics of extremely dangerous diseases are floods, floods, earthworks without agreement with the state veterinary service, imported animals, food products, fodder and other means, places where wild birds flying

from abroad gather, where there are outbreaks of highly dangerous diseases, there may be an increase in the number of rodents and insects and biological terrorism.

DISCUSSION AND RESULTS

Most of the diseases caused by it in humans are infectious. Their origin is related to the entry of living pathogens into the human body and their reproduction under certain conditions, as well as their return to the external environment. As a result, an infected person becomes a source of disease, spreading the germ (pathogen) of the disease to others.

Infectious diseases are caused by tiny, invisible organisms, viruses. Although they are very simple in structure, they breathe, feed and reproduce like other living organisms.

One of the characteristic features of infectious disease agents is that when they enter the body and multiply, they release toxins (poison) from themselves and disrupt the activity of tissue cells.

Each pathogen has its own appearance and causes "its" disease. Different pathogens produce different toxins that have different effects on the organism and have their own "habitat" in the human body, that is, for the reproduction of the pathogenic microbe. chooses the most comfortable fabric. These characteristics, which apply to one type of microbe, are called specific characteristics.

These specific characteristics of pathogens determine the presence of a certain infectious disease. For example, the sweat bacterium causes only sweat stomatitis. Therefore, any infectious disease is caused by the entry of a living specific pathogen into the body and its reproduction. If there were no barriers to the reproduction of viruses, people would have died from the effects of the toxins they secreted. However, the human body has the ability to fight against microbes, that is, to kill them and to neutralize (detoxify) the poisons released by them. This ability is resistance or immunity to infectious diseases.

There are different types of innate and acquired immunity. Innate immunity refers to the resistance to a disease that is inherited only in a certain species, that is, an animal or a person, which determines the resistance to certain diseases. For example, only pigs are infected with swine fever. Humans and other species of animals are not affected by this disease.

Acquired immunity is formed after being infected with a certain infectious disease or after a special vaccination.

Vaccination is an infectious disease that has been killed or weakened

It is said to artificially enter the human organism of the pathogens or their neutralized toxins (poisons). After vaccination, the pathogen is neutralized in the body with the help of antibodies developed against this pathogen.

Viruses can be transmitted from a sick person or animal to a healthy person in the following ways:

1. The contact route is the transmission of a microbe from a part of the body by being with a sick person, or by using the things of a sick person (items touched by urine, feces, and sputum).

2. Alimentary route – transmission of the disease through the mouth by eating food contaminated with feces, urine, sputum, etc.

3. Air-droplet route – infection due to the entry of microbes into the body through the respiratory organs in the droplets released when a sick person sneezes, coughs, and speaks.

4. Transmissible – transmission due to the entry of microbes into the body as a result of the bite of a tick or other insect.

Virus carriers can also be so-called virus carriers. There are people who have been sick before, but have not fully recovered, because they do not have symptoms and signs that indicate the symptoms of the disease. Such people have live disease viruses in their bodies, which a person does not notice, but they become an infectious factor for other people. We will consider several infectious diseases below.

Rabies. Rabies is an acute infectious zoonotic disease that affects the central nervous system. Rabies has been known since ancient times, and it was Aristotle who first discovered that rabies in humans is caused by dog bites. The clinic of rabies was first covered by Celsus in the 1st century and called it «fear of water».

In 1887, Babesh and in 1903 found out that there were round spots-like structures in the so-called horn of the brain of animals that died of rabies. Later, they proved that those spots are caused by the rabies virus.

The famous French scientist Louis Pasteur discovered and developed a vaccine against rabies in the last century (1881-1888), and introduced vaccination of people bitten by dogs and wolves with this vaccine.

The origin of the disease. The virus that causes rabies is present in the saliva of a rabid animal and cannot survive in the environment for a long time. The virus is killed in 5-10 minutes under the influence of disinfectants, and in 2 minutes when boiled. It is kept alive for a long time when dried and at low temperature.

Epidemiology of the disease. The source of infection is rabid dogs, cats, wolves, foxes, badgers and other animals. In rare cases, the disease can be

transmitted from rabbits, rats and other animals. The virus begins to appear in the dog's saliva 7-10 days before the symptoms of rabies become apparent. It is not necessary for a dog to bite a person to be infected with rabies. In the development of rabies, the bitten area is also of great importance, the bite of the head and face is more dangerous than the bite of the limbs, because the virus reaches the brain faster than the face.The course of the disease. The incubation period of the disease lasts 1-2 months, sometimes it can be shortened to 2 weeks or up to 1 year. The short or long latent period depends on the location, size and depth of the wound caused by the bite of a rabid animal. If the injury is to the head or face, the latent period is shortened. In children, this period is generally shorter than in adults.

Three periods are distinguished in the clinic of rabies:

1) initial period;
2) period of excitation;
3) period of paralysis;

The initial period lasts 2-3 days. The patient's sleep is disturbed, his appetite is suppressed, a feeling of fear appears, his mood changes. Later, he lies around indifferently. The temperature rises a little. The wound in the place where the animal bitten hurts. Signs of fear of water and air appear. When patients are thirsty and try to drink liquid, the muscles of swallowing and breathing immediately contract and become very painful. At this time, the patient is in great agony, so much so that he is afraid to even see water, let alone drink it. Sometimes it's not seeing the liquid, but hearing its name that panics him. This condition is very characteristic of rabies. Breathing and swallowing muscles can also contract under the influence of air movement. The patient's temperature rises to 38 degrees, his voice is hoarse, his body sweats, saliva flows, hiccups, his pupils dilate, his limbs hurt, his eyes look as if he is afraid of something. It seems His blood beats frequently, his heart begins to beat irregularly. Breathing is irregular and shallow, occasionally taking deep breaths. Muscle contractions begin in the breathing and swallowing muscles and then spread to all muscles. Convulsions begin. In this case, a slight sound, sunlight and lamp light or a slight touch of something on the patient's body causes muscle contraction. During this period, the patient does not sleep, bites himself, and may repulse others. His consciousness goes in and out, he sees things that are not there and is distracted. This period can last from 2-3 days to 5-6 days.

In the period of paralysis, the fear of water decreases, the patient calms down, starts drinking liquids, but the temperature remains high. He cannot say words clearly, and in this case paralysis of the legs begins. After 15-20 hours, other

muscles of the body begin to become paralyzed. As this situation continues, the patient dies due to heart failure or paralysis of the respiratory center.

Differentiation from similar diseases. A dog or other animal bite, fear of water and wind, irregular breathing, and occasional deep breathing are important for the diagnosis of rabies. Rabies should be distinguished first from tetanus and then from atropine poisoning.

The diagnosis of vertigo includes muscle spasms, as a result of which there is a sarcastic grin on the face, absence of delusions and hallucinations, normal appearance of the pupil, the patient's lack of consciousness, and a history of being bitten by a dog or other animal. Lack of information can be the basis. In addition, the muscles of a rabid person do not contract when they are not having a seizure. It is known that in tetanus the muscles are always shortened. In case of atropine poisoning, the patient's pupils are dilated, apparently red, there are no phenomena of fear of water and wind.

The cure of the disease. There is no specific treatment for this disease. Symptomatic and pathogenetic treatment methods are used in the treatment of rabies. These methods calm the patient down a bit. The patient should sleep in a quiet, separate room, free from noise. The room should be slightly darkened and the door closed. He is given sedatives, tranquilizers, and pain relievers.

Disease prevention. Treatment against rabies should be aimed at eliminating this infection among animals, first of all – among dogs. If bitten by a rabid or unknown dog, a rabies vaccine is administered.

We use the Fermi vaccine. The amount of vaccine, the duration of vaccination depends on the size, depth and location of the wound. Along with the vaccine, anti-rabies gammaglobulin is also administered.

CONCLUSION

In conclusion, we can say that we must prevent any infectious disease from spreading, because it poses a serious threat to human life and health, the environment and the development of our country. As a result, people's lifestyle hinders the economic development of the country. Therefore, first of all, everyone should follow the rules of personal hygiene.

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