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COMPLICATIONS OF INFECTIOUS DISEASES

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Abstract

Infectious diseases can cause systemic and local complications in the human body of varying degrees. This topic will cover the pathogenesis of infectious diseases, immune responses, and the mechanisms of development of complications that result from them. Complications can occur in the early and late stages, and they negatively affect the cardiovascular, respiratory, nervous systems, and other organs and systems. Also, the severe course of the disease, improper treatment, or late detection increase the risk of complications. Compliance with preventive measures, early diagnosis, and adequate treatment are important in preventing complications.

Keywords

infectious diseases, complications, pathogenesis, immune response, early and late complications, prevention, diagnostics, treatment, epidemiology, rehabilitation.

INTRODUCTION

The true causes of infectious diseases were proven in the second half of the 19th century by the work of scientists L. Pasteur, R. Koch, I. I. Mechnikov, etc. Some diseases (cholera, typhoid, paratyphoid, dysentery, etc. intestinal infections) are transmitted through the digestive tract (through water and food contaminated with the feces of patients or through unwashed hands that have touched particles of these feces). Diseases caused by the entry of small mucus particles into the respiratory tract when a patient coughs, sneezes, or speaks (droplet infections) include influenza, whooping cough, mumps, diphtheria, measles, etc. Some diseases are transmitted by blood-sucking insects (lice, mosquitoes, fleas, ticks, ticks, etc.) (malaria, rash sweating, relapsing sweating, tick-borne and mosquito-borne encephalitis, tick-borne fever, etc.). A separate group of diseases that are transmitted when close to a patient or when using his or her hair, utensils, etc. (venereal diseases, anthrax, bald sores, etc.) constitute a separate group. Infectious diseases can last for several days (influenza, measles, scarlet fever) or several weeks (diarrhea, rash, etc.) or can last for months and even years (tuberculosis, leprosy, syphilis). The occurrence of infectious diseases depends on the number of pathogenic microbes that have entered the body, their virulence, the place of entry, the person's age, susceptibility to infection, as well as the external environmental conditions surrounding the microbe (the virulence of the microbe decreases in unfavorable conditions). Social conditions (housing, diet, cultural level, medical care) play a decisive role in the occurrence and spread of infectious diseases. Depending on the interaction of these conditions, various (typical - severe, mild, etc.) forms of infectious diseases appear. In the course of infectious diseases, the incubation period, the period of the appearance and increase of symptoms of the disease, the period of the peak of the disease, the period of remission of the disease and the period of recovery are distinguished. Each of these periods has its own characteristics. In some infectious diseases, such as internal sweating, the microbe of some infectious diseases remains in the body of the sick person and is released into the surrounding environment. Immunity remains after many infectious diseases. For example, in the diagnosis of infectious diseases, clinical signs of the disease, laboratory test results and epidemiological data are taken as the basis. Patients are treated in specially equipped infectious hospitals. Preventive measures play a decisive role in the fight against infectious diseases.

METHODS

Infectious diseases are diseases that occur as a result of pathogenic microorganisms entering the human body, multiplying and causing harm. An infectious disease can have a negative effect on any human body. A high level of human immunity is of great importance in combating pathogenic microorganisms. In our country, vaccination against 13 types of infectious diseases is carried out based on the National Calendar.

A vaccine is a biological preparation that increases immunity to a specific disease. A vaccine is made from weakened or disease-causing microorganisms. The agent stimulates the body's immune system to recognize, destroy, and "remember" it as foreign, which allows the immune system to more easily recognize and destroy any microbes it encounters in the future. Although the vaccine itself is not capable of causing the disease, the body's immune system treats it as if it were a virus. International experience has shown that, due to the widespread use of vaccines, common diseases such as polio, measles, diphtheria, pertussis, mumps, tetanus, and some types of meningitis are now rare. Vaccinated people develop antibodies that neutralize the disease-causing virus or bacteria. They are much less likely to get sick and spread the germs.

As a result of the targeted implementation of comprehensive preventive and anti-epidemic measures throughout the world, including in the Republic of Uzbekistan, great progress has been made in combating infectious diseases.

Upon birth, the baby's vaccination against infectious diseases is monitored in maternity complexes. On the first day of birth, the baby is vaccinated against viral hepatitis "B", and on the 2-5th day, the BSJ vaccine is administered against tuberculosis. Thus, medical workers ensure that the child is fully vaccinated according to the National Calendar.

RESULTS

Prevention of infectious diseases is mainly divided into the following three areas:

- Primary prevention - compliance with the rules of personal and public hygiene. Prevention and regular sanitary control, promotion of knowledge about infectious diseases and methods of their prevention, preventive vaccinations, healthy lifestyles;
- secondary prevention - early detection of cases and monitoring of persons in contact with patients (therefore, knowledge of the symptoms of the disease), restrictive measures (quarantine, observation), isolation of patients;
- tertiary prevention - timely, adequate and effective treatment, medical examination of convalescents (rehabilitation).

The first line of defense (after preventive vaccination) against various infections is compliance with hygiene rules. By following these simple rules, you not only protect yourself, but also prevent the spread of infection among people.

To do this, you must adhere to the following:

- wash your hands thoroughly with soap (at least 20 seconds) or - use an alcohol-based hand rub;
- do not touch your eyes, nose and mouth with unwashed hands;
- make it a habit to cover your mouth and nose with your elbow when sneezing and coughing. Use disposable paper tissues for your mouth and nose whenever possible. Do not reuse used tissues;
- try to stay at least 1 meter away from people with symptoms of acute respiratory infection;
- do not share personal items and personal hygiene items (toothbrush, towel, handkerchief, scissors);

- if you are sick or have mild symptoms of the disease (low fever, runny nose, headache), stay home until you recover. If you have a high fever, cough and difficulty breathing, seek emergency medical care;
- treat minor injuries or wounds carefully. In case of serious injuries or injuries caused by animal bites, be sure to seek medical attention or follow the instructions of a doctor;
- avoid swimming in contaminated water, in reservoirs;
- do not swim in a pool (swimming pool) if you have diarrhea or open wounds. Take a shower before swimming in a pool (swimming pool). Do not walk barefoot in the locker room and shower room;
- do not forget to wash raw meat, vegetables and fruits under running water or several times before preparing food. Use different utensils and cutting boards for each type of food. Do not neglect the rules of heat treatment.

Consult your doctor before traveling abroad. Make sure that you and your loved ones have all the necessary vaccinations. It is recommended to do this not at the last minute, but at least 4-8 weeks before the trip. If you are going to travel to an epidemiologically unfavorable country, try to get advice and take measures 2-3 months before departure. Avoid using ice in the country of temporary residence, use only bottled water for drinking, brushing teeth and washing. Be careful when eating raw vegetables, salads and fruits that have been previously peeled and cut. Use insect repellent. Try to wear closed clothes.

DISCUSSION

The problem of complications of infectious diseases is one of the most urgent areas of modern medicine. Studies show that the development of complications directly depends not only on the virulence of the pathogen, but also on the immune status of the organism, the patient's age, concomitant diseases, and timely diagnosis and treatment. In particular, in people with weakened immune systems, complications are more severe and manifest with multisystem damage.

The analysis of the results shows that early complications of infectious diseases are often associated with acute inflammatory processes, while late complications are characterized by autoimmune reactions or chronic pathological changes. For example, some bacterial and viral infections can cause myocarditis in the cardiovascular system, and neurological disorders in the nervous system. This indicates the need for a comprehensive approach to treating the disease.

In addition, in clinical practice, incorrect or inadequate treatment strategies have been shown to increase the risk of complications. Inappropriate use of antibiotics, late initiation of antiviral therapy, or limitation to symptomatic treatment can lead to exacerbation of the disease. Therefore, strict adherence to treatment protocols and an individual approach are important.

The number of complications can be significantly reduced by preventive measures, including vaccination, adherence to sanitary and hygienic rules, and increased epidemiological surveillance. In addition, early identification of patients and their regular monitoring are effective methods for preventing complications.

In conclusion, a comprehensive approach to reducing the complications of infectious diseases - early diagnosis, correct and timely treatment, as well as the use of effective preventive measures - is essential. This not only reduces the consequences of the disease, but also plays an important role in maintaining public health.

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