Prevention of influenza and SARS

The problem of prevention of acute respiratory viral infections (ARVI) and influenza currently seems to be very relevant in view of the exceptionally high incidence rate. Bursts in the number of infected and sick with SARS and influenza usually have the character of seasonal epidemics.

The high incidence of SARS and influenza is associated with the exceptional ease of spread of viruses in crowded groups of people (at work, in transport, within the family, etc.) and the almost complete lack of opportunities to prevent the spread of viruses through the air. Persons from the so-called risk groups are most susceptible to seasonal morbidity: children, the elderly, patients with various types of immunodeficiencies, bronchopulmonary diseases, kidney diseases, diabetes mellitus, and cardiovascular diseases. SARS and influenza gradually undermine the human cardiovascular system. In severe cases, irreversible damage to the cardiovascular system often occurs, provoking diseases of the heart and blood vessels.

How infection occurs

Viruses are very easily transmitted. The most common route of transmission of infection is airborne. It is also possible (although more rare) and the household route of transmission - for example, infection through household items.

When coughing, sneezing, talking, particles of saliva, mucus, sputum with pathogenic microflora, including viruses, are ejected from the nasopharynx of a patient or virus carrier. For a short period of time, an infected zone is formed around the patient with a maximum concentration of aerosol particles. Particles larger than 100 μm (coarse droplet phase) quickly settle. The range of their dispersion usually does not exceed 2-3 m.

The degree of concentration of viruses and the duration of their stay in suspension in the air primarily depend on the size of aerosol particles. The latter is determined by the strength and frequency of physiological acts - sneezing, coughing, talking. These data clearly confirm the need for specific sanitary promotion of observance by patients with influenza and other acute respiratory infections of elementary hygiene rules. It is worth convincing the patient to sneeze with his mouth closed, as the number of aerosol particles emitted into the air can be reduced by 10-70 times, which means that the concentration in the air is reduced.

After infection, viral particles linger on the epithelium of the respiratory tract. Normally, cells in the lining of the nose, throat, and respiratory tract "sweep" viruses, thus preventing infection. However, in some cases, virus particles enter directly into the alveoli, bypassing the body's primary defense mechanisms.

Reproduction of viruses proceeds at an exceptionally high rate: if one viral particle enters the upper respiratory tract, after 8 hours the number of infectious offspring grows 10 times. The virus then enters the bloodstream and spreads throughout the body. The virus, getting into the blood, causes oppression of hematopoiesis and the immune system, contributing to the development of various complications.

Symptoms

The incubation period usually lasts 1-2 days, but can last up to 5 days. Then the period of acute clinical manifestations begins. The severity of the disease depends on many factors: general health, age, whether the patient has previously been in contact with this type of virus. Depending on this, the patient may develop one of 4 forms of influenza: mild, moderate, severe and hypertoxic. Symptoms and their strength depend on the severity of the disease.

In the case of mild (including erased and subclinical) forms of influenza, body temperature may remain normal or rise no higher than 38 ° C, symptoms of infectious toxicosis are mild or absent.

In the case of a moderate (manifest) form of influenza, the temperature rises to 38.5-39.5 ° C and the classic symptoms of the disease are noted:

1. Intoxication
2. Profuse sweating
3. Weakness
4. Photophobia
5. Joint and muscle pain
6. Headache
7. Catarrhal symptoms
8. Hyperemia of the soft palate and posterior pharyngeal wall
9. Conjunctival hyperemia
10. Respiratory symptoms

11. Damage to the larynx and trachea
12. Dry (in some cases wet) painful cough
13. Phonation violation
14. Pain behind the sternum
15. Rhinitis (runny nose)
16. Complications and consequences

The most common complication of SARS and influenza is pneumonia, and, as a rule, this is a secondary bacterial infection (caused by Streptococcus pneumoniae, Haemophilus influenzae, or Staphylococcus aureus). More rarely, a combined infection (viral and bacterial pneumonia) occurs. Primary viral pneumonia is a rare complication with high mortality. It occurs when a virus of the highest virulence causes influenza. At the same time, "lightning" fatal hemorrhagic pneumonia develops, lasting no more than 3-4 days. True primary influenza pneumonia can be observed, first, in patients suffering from chronic diseases of the heart and lungs, accompanied by congestion in the lungs. Other secondary bacterial infections that often occur after the flupa - rhinitis, sinusitis, bronchitis, otitis. Complications from the cardiovascular system are more common in the elderly. Myocarditis, pericarditis (an inflammatory disease of the muscles of the heart that can lead to heart failure) may develop.

At present, mainly symptomatic methods for the treatment of SARS and influenza have been developed. Therefore, much attention is paid to prevention.

Recommended preventive measures include:

- avoid large crowds if possible;
- when going outside, use oxolinic ointment or petroleum jelly (lubricate the nasal passages 2-3 times a day);
- regularly wash with soap not only hands, but also face;
- do daily wet cleaning and regularly (every 2 hours);
- ventilate the room;
- after consulting a doctor - antiviral drugs (rimantadine, anaferon, arpetol);
- vitamin-mineral complexes (teravit, oligovit, revit, undevit, hexavit, antioxycaps, pikovit, etc.);
- onion, garlic (you can use it for food or inhale the vapors of the crushed product);
- essential oils (fir, pine, cedar, juniper, tea tree, lavender, eucalyptus, menthol) using aroma lamps, in the form of inhalations, inhalation of vapors while taking baths;
- use substances that increase the overall resistance of the body (aloe, honey, dog rose, sea buckthorn, tinctures of ginseng, echinacea, eleutherococcus, magnolia vine, pantocrine) - be sure to consult with a medical professional;
- an important weapon in the fight against influenza and SARS viruses is regular walks in the fresh air.

One of the effective preventive measures is the use of a protective hygienic bandage (mask).

Vaccines have been and remain a reliable means of combating influenza and SARS. Vaccination reduces the risk of disease by up to 90%. First of all, it is necessary to vaccinate people suffering from chronic diseases and workers in professions who have constant contact with the population (doctors, transport, trade, service workers).

If the disease could not be avoided, then when the first signs of ARVI and influenza appear, it is necessary:

go to bed and call a doctor;

bed rest is mandatory;

the room where the patient is located should be frequently ventilated and subjected to wet cleaning 2-3 times a day;

the patient should be given separate dishes, a towel, a disposable mask, disposable handkerchiefs;

before prescribing treatment by a doctor, use plenty of warm drink.

Relatives of the patient are advised to wear a gauze mask of 4-5 layers of gauze or use disposable masks, and follow the rules of personal hygiene.