ANOSMIA IN COVID-19

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Purpose of work: to consider the effect of SARS-CoV-2 virus on the human body and to identify the causes of anosmia.

The current topic is Covid-19 and its manifestations. A distinctive feature of this disease is a complete or partial loss of sense of smell and taste. However, even after recovery, some patients do not recover their taste buds, and sometimes even distortion of odors and flavors is characteristic, for example, meat begins to smell rotten. This phenomenon is one of the manifestations of postcovid syndrome, which is now included in the International Classification of Diseases (ICD-10). So what is the cause of this phenomenon and how does Covid-19 affect our body?

Material and methods: The materials of the study are scientific articles. Methods of theoretical research were used in the work.

Findings and their discussion. Scientists have conducted a number of studies which have proven that the SARS-CoV-2 virus affects the human brain. It has been proven that the virus enters the body through the interaction between the virus' own S-protein and the human ACE2 receptor. Scientists suppose that infection of the body occurs through the terminal nerve (there are many ACE2 receptors on the cells of the terminal nerve, located near the olfactory epithelium of the nose) [2].

During autopsies of Covid-19 patients, pathologists found the virus in human brain cells. They concluded that once in the body, the virus leads to inflammation of brain tissue and the death of neurons or loss of connections between them.

There is an assumption that SARS-CoV-2 virus penetrates through the blood vessels of the brain, as the virus particles were also found on their walls. ACE2 receptors were also found in the blood vessels of the frontal lobe of the cerebral cortex. The presence of the blood-encephalic barrier between blood cells and brain cells plays an important role, the main function of which is to protect nervous tissue from microorganisms and blood toxins. The specific S-protein of SARS-CoV-2 violates this barrier, resulting in disruption of nerve impulse transmission between neurons and development of anosmia and hyposmia (complete or partial loss of sense of smell) [1].

Anosmia and hyposmia negatively affect a person's emotional state because the lack of sense of smell distorts the taste buds, which means that eating food is no longer enjoyable. Many patients who have had a coronavirus infection have

complained of distorted tastes, namely the inability to distinguish between sour, salty and sweet.

Complete or partial loss of sense of smell in the typical course of the disease develops on day 3 to 5. Complete recovery of the sense of smell usually occurs from 3 weeks to 4–6 months. Some patients who have previously suffered from anosmia show distortion of the taste buds even 6 months after the disease. Doctors attribute this to the gradual recovery of the olfactory nerve function.

So far, scientists have proven that patients with anosmia or hyposmia are more prone to develop neurological complications after Covid-19.

In order for the sense of smell to be restored more quickly, it should be exercised. To do this, you can use aromatic oils of lemon, peppermint and eucalyptus. It is necessary to inhale them 3 times a day for 20 seconds. You can also use strongly smelling products and objects, such as garlic or perfume.

General recommendations for Covid-19 include:

1. Adherence to a sleep regimen, since nerve activity is restored at night;
2. Proper diet and drinking regime;
3. The absence of stress;
4. Breathing exercises.

Conclusion: The hallmark of Covid-19 is a complete or partial loss of sense of smell and taste. Since anosmia is an early symptom of coronavirus infection, special testing for anosmia can help early diagnosis of Covid-19 and, accordingly, timely treatment. This can help to avoid serious consequences of this disease.

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2. COVID-19: angiotensin-converting enzyme 2 (ACE2) expression and tissue susceptibility to SARS-CoV-2 infection [Electronic resource]. – Mode of access: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7778857/. – Date of access: 07.11.2021.

ECOSYSTEM SERVICES OF GREEN PLANTS OF PECHERSKY FOREST PARK, MOGILEV

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Depending on their properties (structures and processes), ecosystems have the ability to provide certain services for human society.

Ecosystem services (ES) are the benefits that people receive from ecosystems [2]. The rationale for ES is to better integrate environmental services (free natural resources) into decision-making processes and to ensure sustaina-