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SOMNOLOGY: SLEEP DISORDERS AND SLEEP HYGIENE

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ABSTRACT

Sleep is a physiological process necessary for eating. A person can live several nights without food, but if he does not sleep for three days, he will automatically fall asleep. A person spends almost a third of his life in sleep. Sleep is also necessary for highly developed animals. Therefore, in this article we will discuss somnology, that is, sleep disorders and sleep hygiene.

Introduction: Narcolepsy and insomnia, which are chronic sleep disorder diseases of the central nervous system, are pathological conditions in which drowsiness and insomnia accompany people throughout their lives, treatment measures usually have little effect, have a negative effect on work ability, and when the patient is in a socially unbalanced position during sleep attacks (for example, in a role, on the stairs, on the road).

Hygienic full-value sleep means sleeping and waking up at a clearly defined time of duration and depth of sleep in accordance with a person's age. Not only the duration of sleep, but also its depth is important for the complete and valuable rest of the body. Lack of deep sleep does not provide the body with enough rest. Lack of enough sleep makes a person weak, reduces work capacity, and causes various tragedies. Nowadays, most of the population sleeps 1.5-2 hours less. The speed of life, the influx of information to the central nervous system interferes with sleep. A person's lack of enough sleep increases his sleep debt, as a result of which mental and physical work activity decreases. To get rid of sleep debt, a person needs to get enough sleep. Experts distinguish more than 15 types of sleep disorders. The most dangerous of them is the temporary cessation of breathing while sleeping. This condition is more common in young children, which causes them to die suddenly. Considering sleep disorders as a big social problem, it is necessary to pay enough attention to their study and treatment. There are many causes and types of sleep disorders, and two of the most common and persistent types are narcolepsy and insomnia. Narcolepsy, which simply means excessive sleeping, is a chronic disease of the central nervous system characterized by complex sleep disorders with 4 main manifestations:

1) Attacks of acute daytime sleepiness and sudden falling asleep;
2) Cataplexy (sudden attacks of weakness, lassitude);
3) Sleep paralysis;

4) Hypnagogic (during sleep) and hypnopompic (while awake) hallucinations.

Narcolepsy is a pathological condition manifested by falling asleep for several days. Such a patient suddenly falls asleep and sleeps for 2-3 days or even longer, they do not wake up during the day or at night. It is an acute stress and mental illness that can be caused by hormonal changes, infections, sometimes inflammatory diseases of the brain (encephalitis) and brain injuries. However, the exact causes of narcolepsy are not fully understood by experts, the mechanism of which lies in the lack of orexin (brain neurotransmitter), which is responsible for awakening, and the reason for the lack of this substance is unknown. There is also a lack of hypocretin-1 neuropeptide in the cerebrospinal fluid, which leads to the destruction of HLA-linked hypocretin-containing neurons in an autoimmune process in the lateral hypothalamus. The symptoms and course of this sleep disorder are as follows: suddenly falling asleep during the day and staying asleep for several days, nighttime sleep disturbances, hallucinations, memory disorders, sometimes seizures, stiffness, behavior disorders. According to epidemiology, the prevalence of narcolepsy among the population is 5-7 per 10,000 people. In Europe, Japan, and the United States, the prevalence of the disease is 0.2 to 1.6 per 1,000 population. It usually develops between the ages of 20 and 50, is most commonly diagnosed between the ages of 15 and 30, and occurs equally in both men and women, although recent studies have shown that it is more common in men. The genetic basis of the disease has not been determined. Compatibility in twins is also low, equal to 25%. Characteristic manifestations of narcolepsy are manifested alternately, patients suddenly fall asleep in a position they do not want and in situations and conditions that are completely unsuitable for sleep. When they wake up, they feel full of energy and refreshed, cheerful, but soon, after a few hours, this feeling is replaced by severe fatigue, weakness and drowsiness, and again sleep attacks begin. This is the initial manifestation of narcolepsy, after which symptoms of cataplexy begin to develop. In this case, against the background of strong positive or negative emotions, a sudden state of weakness and lassitude occurs. Weakness is associated with a sudden loss of muscle tone. An attack can develop so quickly that in some cases the patient can fall and get injured, and the duration of this attack can last from a few seconds to several minutes. The next developing symptom is hypnagogic and hypnopompic hallucinations, which are vivid dream-like acoustic or visual hallucinations that occur during falling asleep or waking. They are also called "waking dreams" because a person realizes that he is not yet asleep, but has already begun to dream. This condition is usually accompanied by fear and anxiety.

One of the severe manifestations of the disease is sleep paralysis, a condition characterized by complete immobility after waking up. In this case, a person is fully conscious, adequately assesses the situation, but cannot act. Only eye blinking and movement are preserved. Sleep paralysis is more common in the morning, but it can also occur in the evening. This situation can be especially frightening if there are fearful hallucinations against the background of immobility, because the patient cannot respond with any action against the frightening image patterns that appear in his mind, and as a result, fear gives the patient secondary stress and depression. In approximately 10% of patients, all 4 of the above symptomatic signs are observed in the given sequence. The disease is divided into 2 categories:

I. Hypocretin deficiency narcolepsy with cataplexy (temporary muscle weakness or paralysis caused by sudden emotional reactions);

II. Narcolepsy with normal hypocretin without cataplexy.

The disease can take up to 10 years from the onset of symptoms to diagnosis. After a clear diagnosis of this disease, treatment by a somnologist is recommended. If the patient has sporadic episodes of sleep paralysis or hypnagogic and hypnopompic hallucinations, rare and partial cataplexy, and mild PDS, narcolepsy may not require treatment. In other cases, a group of stimulants and anti-cataplex drugs (modafinil or armodafinil, sodium oxybate, solriamfetol, pitolizant) are prescribed. Strict sleep hygiene is recommended, with enough nighttime and short daytime naps (less than 30 minutes, usually an afternoon nap) at the same time every day.

Insomnia, on the other hand, is a chronic disease characterized by inability to sleep. 10% of the population (20% in some developed countries) suffer from insomnia, the patient may not sleep well for months and years. According to statistics, about 30% of adult men, 37% of women, and 3 out of 4 pregnant women face this problem. Normally, a person should sleep an average of 7-8 hours from 6 to 10 hours a day, and this is mainly at night. Failure of the sleep mechanism, frequent awakenings and a reduction in overall rest time lead to the development of fatigue, decreased attention and concentration. This process can occur as a result of a violation of hormonal regulation. In particular, there is an increase in the amount of cortisol and adrenocorticotropic hormones at night.

Conclusion: The patient has difficulty falling asleep, inability to fall asleep after looking for a comfortable position for a long time, wakes up one or more times during the night, wakes up early in the morning, sleep duration does not exceed 6.5 hours. Not being able to sleep for a day or two is common to all of us, and such cases are especially common in neuroses. However, insomnia is a disease manifested by long-term sleep loss and requires serious treatment. A patient with insomnia goes to work like other people, and his mental and physical activity is no different from that of others. Even some people with insomnia write good works at night and make inventions. If other neurological disorders are detected in a patient with insomnia, then neurological and neuropsychological diseases can be detected. In the treatment of the disease, it is necessary to focus on the factor that causes it, to eliminate this cause. Drugs include sleeping pills (hypnotics), tranquilizers, melatonin, antidepressants, neuroleptics, anticonvulsants, and antihistamines.

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