

DRUGS THAT HELP WITH EPILEPSY AND THEIR MECHANISM OF ACTION

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Abstract. *Epilepsy is a common brain disorder in which the patient has recurrent seizures. A seizure or a seizure attack is a short-term change in normal brain activity, which is the main symptom of the disease. When two or more seizures occur, the patient is diagnosed with epilepsy. Some seizures may take the form of prolonged staring at one point. Other attacks cause a person to fall, shake, and not understand what is happening around them. Seizures can last from a few seconds to a few minutes. The disease is more common in children and the elderly, but can affect people of any age.*

Keywords: *epilepsy, origin, help in epilepsy, effect of drugs in epilepsy.*

Causes of disease

In about half of cases, the cause of the disease is unknown. In the second half, this situation is characterized by various factors, including:

Genetic influence. Some types of epilepsy, classified by seizure type, are hereditary. Certain genes can make a person more sensitive to environmental conditions that cause seizures.

Head injuries. Head injury from a car accident or other incident.

Brain anomalies. Brain disorders, including brain tumors or vascular malformations.

Stroke is the leading cause of epilepsy in adults over the age of 35.

Infections. Meningitis, HIV, viral encephalitis and some parasitic infections.

Injuries during pregnancy, infections in the mother, poor nutrition or lack of oxygen

Developmental disorder. Epilepsy sometimes goes hand in hand with developmental disorders such as autism.

Although the underlying causes of epilepsy are unknown, certain factors are known to trigger seizures in people with epilepsy. Avoiding these factors can help you live better with epilepsy:

- taking various medications;
- consumption of strong alcohol;
- use of cocaine, ecstasy or other illegal drugs;
- insomnia;
- other drugs that interfere with taking antiepileptic drugs;
- flashing lights, images and repeating patterns;
- exhaustion;
- nervous tension;
- climate change;

Epilepsy can develop at any age. The diagnosis is usually made in early childhood or after the age of 60. Epilepsy in young children is associated with lack of oxygen to the brain during pregnancy or during difficult labor. Sometimes, with age, the number of seizures decreases or disappears completely.

Manifestation of the disease

A seizure (seizure) is the main symptom of epilepsy. Symptoms vary depending on the type of seizure.

Seizures are of 2 types:

- spread out
- partial.

In diffuse seizures, all parts of the brain are affected and there are no focal symptoms. Disseminated attacks have the following forms:

- tonic-clonic seizures
- absences (absence of consciousness for short periods of time)
- mixed forms.

If seizures occur as a result of abnormal activity in only one area of the brain, they are called partial or focal seizures. In almost all cases, an aura is observed before an attack - a harbinger of epilepsy. A few hours before the onset of attacks, and sometimes a day or two earlier, the patient is sleepy, anxious, irritable, twitches appear in some parts of the face or body, and the corners of the lips begin to tremble. These symptoms are usually followed by major seizures. Partial (focal) attacks:

- simple
- complicated
- may be secondary spread.

Normal partial attacks do not cause unconsciousness and are divided into the following types:

motor focal attacks: the duration is not long, tonic or clonic, after the attack the muscles become weak;

sensory focal attacks: the characteristics of such attacks are hallucinations, twitching in some parts of the body;

vegetative focal attacks: observed when limbic structures are damaged, symptoms: - increased sweating, nausea, rapid heartbeat, "chicken skin" syndrome, emotional reactions.

Complex focal seizures affect people's consciousness and can lead to unconsciousness. Patients with complex focal seizures are usually not aware of what is happening around them during the seizure. They do not react to other people or the environment during the attack and cannot remember what happened. They may stare at the boss for a long time, appear dreamy, or suddenly wake up.

A large epileptic seizure or tonic-clinical seizure is the most characteristic manifestation of the disease. It is characterized by the following signs:

- loss of consciousness
- to shout
- involuntary muscle contractions
- frequent tremors
- cyanosis and drooling
- cessation of breathing
- biting the tongue
- involuntary urination and defecation

Such attacks usually last 1-3 minutes. After a seizure, the patient usually falls asleep or falls asleep, has muscle pain, and memory loss.

Depending on the location and cause of the epileptogenic focus, epilepsy has the following types:

temporal epilepsy (frequent loss of consciousness, without attacks, without vegetative manifestations, there is an aura, in 75% of cases it shoots only with an aura, EEG EEG changes are not observed);

forehead epilepsy (seizures, loss of consciousness, aura, without aura, sudden, lasting less than a minute, always the same);

parietal epilepsy (a rare condition, pain, paresthesias, changes in temperature sensitivity, disorders of the body scheme, etc.).

epilepsy of the nape of the neck (rare, hallucinations, limitation of the field of vision, blinking of eyelashes and various sensations in the area of the eyeball, dizziness).

Dangerous aspects

Severe widespread attacks are the most dangerous. Loss of consciousness, respiratory arrest, throat infection or bleeding can lead to death. If the attack continues, the heart and blood vessels will be burdened, the patient may die or fall into a coma due to lack of oxygen to the brain. Often, life-threatening seizures occur when anticonvulsant drugs are discontinued.

Epilepsy and pregnancy

Although most women with seizures give birth to healthy babies, a new mother may need special care during pregnancy. Seizures during pregnancy can cause:

termination of pregnancy due to lack of oxygen to the fetus

fetal heart rate slowing

miscarriage due to premature separation of the partner from the uterus or loss of consciousness

premature birth

The condition is sometimes passed down from generation to generation, but don't panic, most children do not inherit epilepsy from their parents. Among the general population, the risk of developing the disease at a certain period of a child's life is about 1%. If the mother has seizures, the child's risk of developing the disease increases, and the father's seizures have no effect on this indicator.

Treatment of epilepsy during pregnancy depends on the characteristics of the disease. Neurologists usually recommend continuing to take anticonvulsants during pregnancy. However, it all depends on the type of drug. It may be necessary to change the dose or switch to a new medicine, but it is not necessary to stop taking the medicine altogether. Some anticonvulsants are not recommended for pregnant women because they can cause problems with fetal development or birth defects.

Most pregnant women with epilepsy have uncomplicated babies. Epileptic women, like other pregnant women, can use pain relief methods during labor and delivery. Seizures during childbirth are rare. If a seizure occurs during labor, it can be stopped by intravenous medication. If the seizure lasts for a long time, the doctor may help the baby to be delivered by caesarean section.

Breastfeeding is recommended for most women with epilepsy, even those taking anticonvulsants. If the child develops insomnia, signs of chronic intoxication, the child can be transferred to artificial feeding or the mother's anticonvulsant drugs can be gradually canceled.

Prevention

Here are some tips to help reduce the risk of epileptic seizures:

Get enough sleep every night - set a regular sleep schedule and stick to it.

Learn stress management and relaxation techniques.

Avoid drugs and alcohol.

Take all medications as prescribed by your doctor.

Avoid bright flashing lights and other eye strain. It is forbidden to work with constantly moving devices, in high places, near fire, in places with a high risk of fatigue, for example, in shift work.

Follow a ketogenic diet: eat high-fat foods, limit salty foods, fluids, because water retention in the body leads to brain swelling and causes seizures.

Engage in light physical activity. For example, walking. It is necessary to prevent bleeding to the head during exercise

If you have been diagnosed with epilepsy, you are prohibited from driving.

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