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PREVENTION AND TREATMENT OF MIGRAINES

Introduction. The article discusses the principles of prevention and relief of migraine attacks. The main indications, methods of non-pharmacological treatment and modern classes of drugs that have shown the highest effectiveness in preventive therapy of the disease are discussed. The main criteria for choosing a symptomatic remedy are considered, which are the severity of headache and accompanying symptoms and the degree of disability during migraine attacks. An independent value in choosing a drug is its ability to stop not only headache, but also the symptoms accompanying a migraine attack.

Keywords: prevention, migraine attacks, methods, treatment, efficacy, therapy, headache.

Migraine is a common chronic disease that manifests itself in bouts of severe headache. In most cases, recurrent seizures have been bothering the patient for many years and in typical cases spontaneously regress in old age. Despite the episodic nature of the course of the disease, patients, especially with frequent and prolonged headaches, experience significant violations of daily activity and performance.

Epidemiological studies show that the prevalence of migraine in the population in most countries is 10-14%. According to the totality of economic costs, migraine is one of the most expensive diseases of the nervous system.

The medical significance of the migraine problem is largely determined by the severity and frequency of the actual migraine attacks. About 24% of migraine patients experience headaches with an average duration of 8 to 14 days, and 14% experience headaches for more than 14 days a year [2]. A large-scale study by American Migraine Study II showed that 25% migraine patients experience four severe attacks or more per month, and 35% have one to four attacks. At the same time, only 10% of migraine patients can work or fully function during a headache. Migraine patients consume about a third of the total sales of over-the-counter analgesics [7]. Given that, along with this, most of the indirect costs associated with migraines are losses due to the absence of patients at work or a decrease in their productivity, it is not difficult to understand the severity of the overall burden of migraines for patients and society in general as a whole.

The classification of migraine is quite complicated due to the variety of clinical forms of the disease [1]. The most common forms in clinical practice are migraine without aura (simple form) and migraine with aura. Along with this, complications of migraine are not uncommon (migraine status, migraine infarction, migraine trigger of an epileptic seizure, persistent aura without a heart attack, chronic migraine). Migraine it has many age—dependent forms (childhood periodic syndromes - precursors of migraine, migraine equivalents of old age). In addition, migraine includes neurological disorders that may not be manifested by the headache itself, which is commonly called "acephalic migraine".

Despite all the variety of clinical forms, the disease is mainly manifested by attacks of intense, throbbing pain, which increases with physical activity and is often accompanied by photophobia, phonophobia, nausea, and sometimes vomiting. The duration of a migraine attack ranges from 4 to 72

hours. As a rule, the attack develops with a sequential change of stages or phases: prodroma, aura, headache with associated symptoms, pain resolution and postdroma.

In most patients, migraine headaches occur spontaneously. Although a more thorough analysis reveals the connection of seizures with the effects of certain factors, which are commonly referred to as migraine triggers. As a rule, even one patient has several characteristic "provocateurs" of migraine. Among them are the following: stressful events, changes in sleep and wakefulness, menstruation, fatigue, physical overstrain, noise, pungent odors. Many patients notice that certain foods or drinks often provoke migraine headaches. These include cheese, chocolate, citrus fruits, red wine, beer, as well as all products containing food additives (glutamate mononitrate, aspartame), which are part of flavors, sugar substitutes, canned and frozen foods, carbonated drinks.

In many cases, a few hours or days before the headache develops, patients feel unapproachable symptoms in the form of emotional or depressive disorders, changes in appetite, difficulty concentrating, yawning. Then photophobia, phonophobia and osmophobia can join, which increase as the attack develops. Upon completion of the symptoms of the prodroma or at the height of their manifestations, the painful phase of the attack develops. In about 20% of patients with migraine, it is preceded by an aura, which is completely reversible (within 60 minutes) focal neurological (more often visual) disorders. The headache in these cases follows the symptoms of the aura. Migraine pain is traditionally described as pain in one half of the head (hemicrania), and this half can vary from attack to attack. At the beginning, the pain is dull, then it can become pulsating (increasing with each pulse beat), and as the attack develops, it develops into a constant one. During the development of the attack, the headache increases and almost always increases with any physical activity, bending and head movements. Migraine pain is most often localized in the occipital region, in the area of the inner corner of the eye and involves the frontotemporal area. At the same time, it can spread to the occipital, upper neck and even lower neck area and into the shoulder. In some patients, pain initially occurs in the upper cervical region and spreads anteriorly, in others it is strictly local in nature. The pain can be so intense that it completely limits any activity, which is why patients try not to move their heads and prefer to go to bed in a dark and silent room.

Various alternative treatment methods are of particular clinical interest, which are practically devoid of side effects, and their use is possible for migraines. These include vitamins such as riboflavin, coenzyme Q10, thioctic (α -lipoic) acid, magnesia, and phytotherapeutic agents [4]. Riboflavin (vitamin B12) is used as a means capable of counteracting the inhibition of mitochondrial respiratory function by nitric oxide and enhancing oxygen utilization in the tricarboxylic acid cycle. Clinical data on the effectiveness of riboflavin at a dose of 400 mg/day they have been confirmed in clinical studies. Riboflavin is characterized by a very slow onset of therapeutic effect: the maximum clinical effect is manifested by the end of the 2nd month of therapy. Therefore, such treatment is indicated to a greater extent in patients with a moderate degree of maladjustment. Coenzyme Q10 is an essential element of the mitochondrial electronic transport chain and has antioxidant properties. Several studies have shown that the use of coenzyme Q10 at a dose of 150 mg/day for 3 months reduces the number of days with headache. Therapeutic The effect is characterized by a 50% decrease in the frequency of seizures in 46.3% of cases and a decrease in the level of maladaptation on the MIDAS scale. A favorable tolerance profile was also noted. But insufficient knowledge, the lack of comparative studies with traditional pharmacological means of prevention and the very high cost of the drug significantly limit the widespread use of coenzyme Q10 in patients with migraine. Thiocyte (α -lipoic) acid can stimulate mitochondrial oxygen metabolism and ATP production. There is clinical evidence on the effectiveness of thioctic acid at a dose of 600 mg / day and for migraines. Botulinum therapy is an

alternative treatment method, especially in patients with chronic and resistant to other treatments for migraine. Several studies have shown the effectiveness of magnesium sulfate at a dose of 600 mg: after 3 months of treatment, the frequency of attacks decreases by almost half.

Pharmacological preventive treatment of migraine is a complex and lengthy process that pursues several goals: 1) Frequency reduction, the intensity and duration of migraine attacks, 2) improved response to seizure relief, 3) improved daily functioning and reduced maladaptation. Preventive treatment of migraine is prescribed to patients in accordance with indications that relate not only to the frequency and severity of headache attacks, but also to the degree of its influence on daily functioning and many other factors [3].

When prescribing preventive therapy, it should be borne in mind that its effectiveness depends on a number of circumstances. Negative factors may include low patient compliance, inadequate dose and insufficient duration of therapy (less than 6-8 weeks), excessive use of symptomatic drugs and the formation of excessive headaches, incorrect initial diagnosis, the presence of symptomatic headaches due to structural or systemic disorders (new or previously undetected). It is necessary to explain to the patient the goals of treatment, the actual prognosis, possible side effects and the estimated amount of time needed to achieve a therapeutic effect. The patient should understand that the most effective preventive remedy is only 20-50% better than placebo, and only 10% or less of patients completely get rid of headaches as a result of preventive therapy. A tangible result of preventive treatment is usually not achieved after short courses of therapy. Most experts define a minimum period of 8-12 weeks.

Migraine attacks in general are characterized by extreme variability: their course is different in different patients, in addition, they are characterized by individual variability — according to the severity, presence and spectrum of associated symptoms, the level of maladjustment, the degree of influence on physical and social functioning. The efficacy and tolerability of individual drugs also vary.

Therefore, treatment should be tailored to the individual needs of the patient. The choice between specific and non-specific antimigrainous. The means may depend on the characteristics of migraine attacks; not all attacks in the same patient may require the same means. So, mild and sometimes moderate attacks can be treated with acetylsalicylic acid or NSAIDs, sometimes in combination with drugs that improve their absorption, such as metoclopramide.

Specific antimigrainous drugs, ergotamine preparations and triptans are more effective than non-specific drugs. In addition, it is possible to increase the effectiveness of migraine relief by using rational combinations of medicines products or ready-made combined forms. Such combined preparations may contain antimigrainous agents in combination with analgesics of other classes.

For example, ergotamine, traditionally used as an antimigrainous agent, has been studied in several studies both in monotherapy and in combination with caffeine and has shown its effectiveness in various, including severe, migraine attacks. Such combined products include Syncapton, which contains 1 mg of ergotamine tartrate, 100 mg of caffeine and 25 mg of dimenhydrinate. Action ergotamine is associated with vasoconstriction of pathologically dilated extracranial vessels, caffeine increases the absorption of ergotamine in the intestine and increases the tone of extracranial vessels, and dimenhydrinate affects symptoms such as nausea and vomiting. As the attack progresses, nausea and vomiting develop in the vast majority of patients, making it difficult to use oral tablet drugs.

Therefore, patients should be advised to take a cupping agent as early as possible — at the first symptoms of an incipient attack.

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