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Migraine

Headaches represent one of the most common medical problems; most people suffer at some point in their lives. They can affect anyone regardless of their age, race and gender. Headache can appear anywhere on the head, on both sides or in a single area. The most frequent headaches include migraines, cluster and tension headaches. Not all headaches are migraines, nor all migraines with headaches. The headache is one of the most common forms of pain. Although its cause is unknown, the pain that causes it, is due to a dilation of the arteries located in the skull. It usually manifests itself in the form of repeated episodes of different intensity. The presentation is usually: Hemi cranial (i.e. pain is only felt in one part of the head), Pulsatile (intermittent, coincides with the heartbeat), Paroxysmal (abruptly, although many patients report certain premonitory symptoms).

Causes of migraine

It is complicated to explain the process by which the migraine occurs and what its causes are, partly because it is not completely clear. The neurovascular theory is now accepted. According to this theory, migraine is initiated by a mechanism that affects neuronal structures of the brain, which end up activating the vascular system of the meninges, ultimately responsible for pain. It is considered that the trigger of migraine is a stimulus against which the migraine person is hypersensitive, probably as a consequence of a genetic predisposition. This stimulus can activate different structures of the nervous system, so that the predominant activation in some of these areas correlates with the clinical characteristics of migraine. And in turn, this stimulus can be of different types; Hormonal: it is characteristic that the decrease in estrogen levels before menstruation triggers a migraine crisis. Diet: some foods that contain Tyra mine (cheese, nuts, some canned fish), alcoholic beverages, can cause a migraine. Environmental and psychological factors: situations with stress, anguish, changes in atmospheric pressure, etc. are potential causes to generate this situation.

Activation of a region called the hypothalamus would be responsible for the prodromes (previous sensations of discomfort), which are perceived by a percentage of migraine hours or days before the onset of migraine. The activation of the cerebral cortex, especially in the occipital part, would be related to the presence of the migraine aura, which is a phenomenon, usually of visual origin, that appears a few hours or minutes before the attack. Finally, the activation of the nuclei that are in the brain stem would trigger the activation of sensory fibers, especially of a nerve called trigeminal. This nerve innervates the blood vessels of the meninges and their activation produces vasodilation and inflammation of them, being responsible for the migraines crisis itself.

Migraine symptoms

The migraine can have very different symptoms. The most frequent are neurological, gastrointestinal and sensitive. The most common migraine symptoms are; photophobia: the noise and light can disturb terribly a person suffering from a migraine. Sometimes, even some smells can be uncomfortable. Gastrointestinal complaints: the occurrence of nausea, accompanied or not by vomiting, is very frequent. Pain: transmission by the trigeminal nerve makes migraine an intensely painful headache. It can hurt the neck and the muscles of the face (they can also be premonitory pains prior to a migraine attack). Paleness and changes in the temperature of the head.

There are other less specific migraine symptoms, but they can be very helpful for the diagnosis: anxiety, depression, insomnia, fatigue, palpitations.

Migraine treatment

Currently there are two forms of approach to the treatment of migraine: drugs aimed at alleviating attacks and drugs aimed at preventing them. In the case of palliative treatment during attacks (remember that migraine does not heal), these are the most commonly used; Analgesics: like paracetamol. Non-steroidal anti- inflammatories: such as ibuprofen, acetylsalicylic acid, naproxen, piketoprofen; can cause gastrointestinal problems (ulcers) and should always be administered with food. Ergotamine derivatives: such as ergotamine and dihydroergotamine. They can be associated with caffeine, to promote absorption. They continue to be marketed, but their use starts to be lower, in favor of other treatments with less adverse effects. Triptans: like sumatriptan, zolmitriptan, rizatriptan are serotonin agonists and, therefore, decrease the dilation of brain vessels. They are widely used and are very safe, although people with a history of heart conditions, or uncontrolled hypertension, cannot take them. It can also be very useful to use medication against vomiting a few minutes before taking these drugs, since migraine usually has this symptom; and also, prevent oral medication from vomiting, which would nullify its effectiveness.

Drugs to prevent migraine attacks

The preventive treatment of migraine is used in those people who have attacks very frequently (more than three attacks per month); if the symptoms are so intense that they prevent them from performing their usual tasks at least three days a month; or when they need to take migraine medication more than twice a week. Some of these medications for migraine are: beta-blockers (propranolol and metoprolol), certain antiepileptic drugs (topiramate, gabapentin and valproate), some antidepressants, calcium channel blockers; and ant serotonergic, such as cyproheptadine and pizotifen. In the case of children, pizotifen and propranolol are indicated. They should be taken every day, as they serve as maintenance treatment, thus preventing the onset of attacks. Methysergide, an ergotamine derivative used only in the prevention of migraine, is used less and less, due to side effects. There is a tendency to manufacture formulations that combine two or more drugs of this type.

New therapies to treat migraine

In some countries, injection of botulinum toxin and some of its derivatives into different areas of the subcutaneous tissue of the head has been successfully tested to prevent recurrent migraine. Other therapies still with controversial results are the administration of magnesium, vitamin B12, tansy extract and different therapies through acupuncture and homeopathy. Similarly, in countries such as Belgium, the United Kingdom and the United States, there is experience with a transcutaneous stimulator (adhesive electrode) that would be applied to the midbrow area and supraorbital region (slightly above the eyebrows) for 20 minutes daily receiving electrostimulation at very low intensities, showing a decrease in the intensity and frequency of crises. The doctor will prescribe the medication that best suits each patient.

References

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