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| RESEARCH ARTICLE

An Overview of Migraine Diagnosis and Treatment

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| ABSTRACT
Migraine causes a severe headache and is accompanied by other characteristic symptoms. Migraines are often characterized by throbbing pain in one area of the head that lasts 4 to 72 hours and is accompanied by symptoms such as sensitivity to light or sound, nausea, and vomiting. Some people experience visual disturbances (auras), which may appear as zigzag lines or flashing lights before or during a migraine. Migraines are estimated to affect more than 10% of the population worldwide, occur most often in people between the ages of 20 and 50, and are about 3 times more common in women than men. Having migraines can be debilitating and lead to missed days of school or work, inability to perform household responsibilities. There is no definitive cure for migraines, but treatments and lifestyle can help reduce the number of attacks in a person and shorten or reduce the severity of the attacks. Hormonal changes in women act as a stimulus. It seems that fluctuations in estrogen levels due to menstrual periods, pregnancy or menopause cause acute headaches. Certain foods and beverages such as salty processed food, caffeine etc... can trigger this disease in both men and women. But one of the most important causes of migraine is stress. Migraine attacks usually develops over hours, increases with normal physical activity. Sometimes this disease can be relieved simply by changes in lifestyle and daily habits, but sometimes it may be necessary to consult a doctor and diagnose it for improvement. Medical treatment and lifestyle modification together can help in getting rid of this disease.

| KEYWORDS : Diagnosis, Migraine, Signs, Types, Treatment.

| ARTICLE INFORMATION

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1. INTRODUCTION

Migraine is a disease of the brain and nerves that has many symptoms. Migraine is mainly characterized by severe and debilitating headaches. Migraine symptoms usually include nausea, vomiting, difficulty speaking, numbness, and sensitivity to light and sound. Migraine usually occurs at all ages. One type of migraine is classic migraine, which affects approximately 12% of sufferers and is associated with relatively long symptoms of 20 to 48 minutes. Another type of migraine is simple migraine, which is seen in almost 80% of affected people, although this type of migraine is not associated with aura, but symptoms of the stomach and intestines can be a sign of its occurrence. This type of headache appears on both sides of the head. and it usually lasts less than two hours, but it repeats in weeks and months before it stops for a while. Usually, the effect of migraine attacks is different per week and life span. In most cases, the frequency of migraine attacks decreases with age so that it stops completely in the middle of a year. Some environmental factors such as fear, fatigue, white light and food allergies can cause migraine attacks. Migraine diagnosis is based on clinical records, symptoms and causes. The prevalence of migraine in women is higher than in men, and family history is an important risk factor for migraine (Sultanzadeh,2004:71).

Migraine is a special type of headache whose exact mechanism is not known, but it is believed to be caused by abnormal vascular phenomena. Migraine headaches often begin with different prelude sensations, for example, with nausea, loss of vision in a part of the visual field, visual aura, and other types of sensory hallucinations, usually the complaint begins about thirty minutes to an hour before the onset of the headache. become Any theory that justifies the migraine also justifies the prelude complaint. One of the theories related to the cause of migraine is that excitement and long-term mental pressures reflexively cause spasm of some arteries of the head, including the arteries feeding the brain (Shams, 2012:70-69).

According to the theories, spasm of blood vessels causes ischemia of parts of the brain and this is responsible for the prelude complaints. Then, as a result of severe ischemia, effects are created in the vessel wall. which may be in the form of smooth muscle contraction fatigue, blood vessels are relaxed and they are unable to maintain their vascular tone for a period of 24 to 48 hours. The blood pressure in the sweat causes them to expand and beat violently, and it is assumed that the excessive stretching of the arterial wall - including some extracranial arteries such as the vague artery - sometimes causes an acute migraine headache. Other theories about the cause of migraine include: Diffuse depression of the cerebral cortex, mental disorders and vasospasm caused by the increase of topical potassium in the extracellular fluid of the brain. There may be a genetic predisposition to migraine, as a positive family history has been reported in 65 to 90% of cases. prevalence of migraine headaches in women is twice that of men (Najarian, 1996:125).

2. MIGRAINE SYMPTOMS

The most common symptom of migraine is a severe one-sided headache. The pain is usually moderate to severe and throbbing, which worsens with movement and prevents normal activities. In some situations, the pain can occur on both sides of the head or involve the neck and face. Other symptoms that are usually associated with migraine include feeling sick, increased sensitivity to light and sound (Sultanzadeh,2004:107).

3. GENETIC BACKGROUND OF MIGRAINE

The accumulation of migraine disease in some families has been noticed for a long time, but no suitable Mendelian inheritance pattern has been found among these people. This issue is probably due to the fact that multiple inheritance patterns of variable penetrance and the possibility of multiple genes interacting with environmental factors of a multigene-multifactor pattern that is characteristic of complex diseases are involved in this disease. The co-occurrence of the disease in monozygotic twins with a probability of only)1-2% (is evidence of the genetic component as well as the significant role of environmental factors (Najarian, 1996:105).

4. TYPES OF MIGRAINE

4.1 A: Migraine with aura or classic

Before the headache, there are transient neurological symptoms (auras). The most common auras are visual changes, specifically hemianopic defects of the visual field, vasotomy and flashes that are enlarged and spread towards the environment. Following these manifestations Before or during them, a one-sided throbbing headache occurs. The frequency of headaches varies, but 50% of patients do not get headaches more than once a week. The duration of herepizod in most patients is more than 2 hours and less than 1 day. Recovery is common in the second and third trimesters of pregnancy and after menopause. Although pain on one side of the head is characteristic of classic migraine, headaches can also occur bilaterally. Therefore, bilateral headache does not rule out the diagnosis of migraine. Also, pain in the occipital region, which is usually characteristic of tension headaches, does not rule out migraine. In addition to headache, prominent accompanying symptoms are: nausea, vomiting, photophobia, irritability, fear of smell (osmophobia) and restlessness. Esomotor symptoms are common: lightheadedness, dizziness, ataxia, or altered consciousness may indicate vertebrobasilar ischemia (migraine). These phenomena can be distinguished from stroke due to their gradual onset (migraine march) and their spontaneous recovery. Very exceptionally, stroke may occur alone as a result of migraine. Uncommonly, migraine is associated with obvious neurological deficits that remain after the headache phase resolves. Especially after the age of 50, symptoms may occur without headache (including migraine). These symptoms include visual disturbances with or without hemiparesis, loss of one-sided sensation in speech disorder, which lasts about 15-60 minute (Najarian, 1996:106).

4.2 B: Migraine without aura (normal)

Migraine headache does not have the classic aura, it is usually bilateral around the eyes and is observed more often in bed. The pain is described as throbbing, especially when it is severe. Nausea, vomiting, and photophobia are common. With continued pain, contraction of the neck organs can be combined into symptoms. Often scalp tenderness is present immediately after the headache. If not treated, the headache lasts for 27-4 hours. In some cases, vomiting may end the headache. A useful clinical test for classic common migraine, during headache, is severe headache relief with bilateral carotid or superficial temporal artery pressure (Najarian, 1996:107).

4.3 C: Chronic migraine (transformed)

Periodic migraine can change over time over months to years and become a chronic headache syndrome, almost daily pain. Related risk factors include obesity, frequency of previous headaches and caffeine. The description of chronic migraine headache may vary from chronic to tension headache. A common subtype of chronic migraine is headache caused by overuse of medications that leads to headache with withdrawal of pain medication. This type of headache is associated with the use of pain relievers, opioids, horgotes and triptans. In these cases, it is necessary to stop the fast-acting drug at the same time as starting the prophylactic drug (Najarian, 1996:107).

5. CAUSES OF MIGRAINE

The causes of migraine are very complex. Unfortunately, in people with migraine, various causes can cause migraine attacks. Many factors such as genetics, hormonal changes, the type of food and medical conditions can cause migraine, and if the cause is unknown, it becomes more difficult to prevent migraine attacks (Shams, 2012:76).

6. THE DIFFERENCE BETWEEN MIGRAINE AND TENSION, CLUSTER AND SINUS

There are key features that distinguish migraines from tension headaches (the most common type of headache), cluster headaches, and sinus headaches.

6.1 Tension headache

This type of pain often starts at the back of the head and moves forward. Tension headache is the most common form of headache pain. Eye fatigue, stress and hunger are often the causes of tension headache and can be chronic. The
exact causes of tension headaches are not known. It is believed that in some people, the main tension headaches are due to the following reasons:

- It is some kind of internal or external stress
- Work pressures
- Child's birth
- Lack of sleep
- overwork Stress
- Hunger

Tension headache occurs with mild to moderate pain and usually does not prevent a person's daily activities. Mild tension headaches last from 30 minutes to several days and are bilateral, mild to moderate in intensity, and occur less than 15 times per month (Shams, 2012:49).

6.2 Tension headache

These headaches often occur when people are sick or feel congested. Sinus headaches are caused by swelling in the sinus canal, and as a result, in this type, pain is felt behind the cheeks, nose, and eyes (Shams, 2012:85).

6.3 Tension headache

These headaches are usually very painful and occur in "clusters". A cluster without this type of headache means that they occur daily (usually at the same time) and sometimes several times a day and last for months. Cluster headaches are caused by dilation of blood vessels in the brain due to the release of serotonin and histamine. These pains may be caused by intense physical activity, exposure to strong lights or even a change in altitude (Sultanzadeh, 2004:59).

7. THE DIFFERENCE IN THE TYPE OF PAIN IN HEADACHE AND MIGRAINE

One of the differences between a migraine and a tension headache is that a tension headache is accompanied by vague pain and stiffness or pressure, while a migraine headache causes a strong throbbing or pulsation on one or both sides of the head. One of the differences between migraine and cluster headache is that cluster headache causes severe burning in the head or near the eyes (Hall, 2016:108). Another differences between a migraine and a headache are that the inflammation that leads to a migraine headache may cause nausea, vomiting, abdominal pain, or stomach upset. This is despite the fact that usually tension headache does not cause digestive discomfort and cluster headache usually only leads to lethargy (Ghafarian, 2014:31).
One of the differences between migraine and sinusitis headache and other headaches is that light, sound, special smells and even touch (due to inflammation) and any activity can aggravate a migraine headache. While sensitivity to light or sound may occur with the onset of a tension headache, it is unusual (Najarian, 1996:108).

8. COMMON TRIGGERS OF MIGRAINE

8.1 Stress

Stress is probably the main trigger of migraine attacks. Stress is a trigger for about 70% of people with migraines. According to a study, a clear relationship between the amount of daily stress and the occurrence of migraines has been shown in 50-70% of people. When you add to that the constant worry about the next attack, it can feel like a never-ending and exhausting time. How to Adapt Make a list of things that cause stress and pressure and try to minimize these triggers in your life. Relaxation treatments, meditation, exercise and regular sleep plan play a significant role in stress management. This method cannot eliminate stress from life, but it causes a change in the body's physiological response to stress, which in this way reduces the strength of the effect of stress. Migraine attacks occur (Ghafarian, 2014:38).

8.2 Change in irregular sleep schedule

The connection between sleep and migraine is undeniable. Sleep renews and refreshes all parts of the body, such as the brain; Therefore, an irregular sleep schedule causes sensitivity and increases the possibility of migraine attacks. Another significant point is the onset of migraines during sleep, which increases the risk of sleep disorders in patients (about 50% of migraine attacks occur between 4 and 9 am happens (Ghafarian, 2014:39).

8.3 Hormones

The prevalence of migraine in women is 3 times that of men, and up to 75% of women experience migraine attacks around their menstrual period, which is caused by changes in estrogen and progesterone levels. How to adjust it, along with changes in lifestyle and diet, there are contraceptive methods that stabilize the level of hormones and prevent migraine attacks in the future. For this purpose, you must seek help from your doctor (Ghafarian, 2014:39).

8.4 Food

There is a general list of foods that trigger migraine attacks. The most common foods are those that contain histamine and MSG (monosodium glutamate), chocolate, cheese and other dairy products, artificial sweeteners (such as aspartame)., caffeine and anything with a strong smell. How to adjust it if you identify stimulating foods, avoid consuming them in excess. Many people adapt to a diet for migraine sufferers in which stimulating foods have been removed (Ghafarian, 2014:40).

8.5 The light

For many migraine patients, light is a natural enemy. This condition is called photophobia (fear of light) and it is actually one of the criteria for migraine diagnosis. Since both natural light and home lamps can be problematic, spending time at home and outside becomes more difficult for these people. How to adapt, wearing sunglasses dur Therefore, it is wise to always have sunglasses with you. When faced with artificial light, sit near the window and avoid being exposed to dancing lights and bright lights. Green light is the only light that causes problems for migraines, so using lamps that emit green light is not a problem (Bruner, 2018:7).

8.6 Drug abuse

If you use acute medications prescribed by a doctor for more than 10 days in a month, it can lead to more attacks. This phenomenon is known as headache caused by drug abuse (Headache Overuse Medical). How to adapt it, in case of MOH, you should stop taking the medicine before controlling the pain. For better use of medicines, you should consult your doctor or pharmacist. Avoiding personal stimulants for migraine. Therefore, the easiest task is to prepare a program to manage factors related to migraine, in order to reduce their effect on migraine (Fortun, 2016:89).

9. MIGRAINE ATTACK DISORDER

In migraine attack disorder, people suffering from classic migraine experience an attack caused by vascular insufficiency along with several neurological symptoms such as sensory damage, especially visual sense, deafness, movement disorder and aphasia. Of course, the exact symptoms of damage to the related arteries are a stroke. In this type of disorder, the back artery of the brain is often damaged (Hall, 2016:109).

10. MIGRAINE TREATMENT

Acute migraine attacks may respond to simple pain relievers (aspirin, histamine, or NSAIDs). Otherwise, headaches usually respond to 5-hydroxytryptamine (5-HT serotonin) agonists such as triptans or ergot agonists (dihydroergotamine). For the maximum effectiveness of drugs in acute migraine headache, they should be taken as soon as the symptoms start. In severe cases, the drug is taken subcutaneously, intravenously, intramuscularly, or intravenously. Unfortunately, nausea, which is an obvious symptom of migraine, is a complication. It is also a side effect of some drugs. Therefore, simultaneous use of an anti-nausea drug (metoclopramide) is necessary. Alkaloids and 5-HT agonists are potent vasoconstrictors and are contraindicated in patients with significant hypertension or heart disease. Fully established migraine headache may respond to injection of dihydroergotamine or narcotic analgesics or morphine. Prophylactic treatment should be done in patients who have at least two attacks per week or those in whom the treatment of attacks is useless. In this case, tricyclic drugs, anticonvulsants should be tried. Migraine during pregnancy only with meperidine should be treated because other drugs are likely to cause teratogenicity or Baradari's side effects are raised. Migraine treatment goes beyond acute and maintenance treatments. Non-pharmacological treatments such as lifestyle changes should also be considered to control migraines. It is possible to treat migraine with specific drugs in acute attacks, compounds ergotamine together with caffeine can reduce the contraction of blood vessels in the brain in other words, reducing the expansion of the wall of blood vessels, which is the cause of headache. In most patients, headache tolerance is better in a dark environment. The most suitable treatment for nervous headaches is the treatment of neurological disease, in headaches caused by muscle contraction, anticonvulsant drugs and heat therapy are effective (Hall, 2016:113).

11. TYPES OF ACUTE MEDICATIONS, INCLUDING

11.1 Painkillers

These drugs include non-prescription pain relievers such as ibuprofen, acetaminophen and prescription pain relievers such as opioids which consist of:

Triptans : This class of drugs is specific to migraine pain. There are seven different types of triptans available that are used to treat moderate to severe migraine attacks (Bruner, 2018:36).

Ergot alkaloids : These drugs are not routinely used and are typically used in patients who do not respond to triptans and analgesics (Bruner, 2018:83).

Prophylactic drugs : Preventive medications are used in people who experience more than 4 migraine attacks per month or who experience very severe migraine attacks. These medications are used daily and are associated with acute medications. Types of preventive medications include:

Blood pressure reducers : Beta blockers, calcium channel blockers and angiotensin receptor blockers are types of antihypertensive drugs (Bruner, 2018:29).

Anticonvulsant drugs : Topiramate and sodium valproate are anticonvulsant drugs used to prevent migraines (Bruner, 2018:29).

Antidepressants : Along with the treatment of depression, antidepressants such as amitriptyline and venlafaxine can be effective in the prevention of migraine treatment (Bruner, 2018:30).

12. Four Actions That Should Be Done If Migraine Treatment Fails

12.1 Having a history of migraine

Write down the time of migraine attacks, intensity and drugs used for treatment and the result of treatment. A note of migraine attacks can help the doctor to prescribe the best medicines (Shams, 2012:84).

12.2 Be careful of headaches again

In the case of frequent use of acute migraine medications, there is a possibility of headaches caused by overuse of the medication, which is known as recurrent headaches. Anti-migraine medications that are available without a prescription (such as ibuprofen) if more than 8 times Used for a month, it can lead to recurrent headaches. Over-the-counter migraine medications and triptans can lead to recurrent headaches if used more than 10 days a month (Shams, 2012:84).

12.3 Considering other medical conditions

When treating migraine attacks, the treatment staff will ask for medical records. Some medicines cannot be used in a number of medical conditions and there is also a possibility of interaction between some medicines. If you are pregnant or trying to become pregnant, let your doctor know (Shams, 2012:85).

12.4 Consultation with an expert

If you experience the first migraine, you can discuss the problem with your general practitioner. But if the drugs are no longer effective or the frequency of the attacks is high, food is effective and harmless for people with migraine, while others can be harmful (Bruner, 2018:9).

13. Dietary Supplements And Migraine Treatment

Dietary supplements are food-derived products that contain vitamins and minerals that may have beneficial therapeutic properties. Some of these supplements can play an effective role in migraine treatment (Shams, 2012:11).

14. Migraine Management With Exercise

Being active can reduce stress, improve sleep and even reduce migraine attacks. Just as exercise affects the health of the body, it also affects the health of the mind, which is very effective for people with migraines. Studies have shown that exercise can be effective in reducing the frequency of migraine attacks; Exercise not only reduces stress, which is the most common risk factor for migraines, but also helps regular sleep, better effects of painkillers, and increases endorphins. Exercise can also fight obesity, which is a factor that aggravates migraines. Exercise controls the symptoms and risk factors of migraine from several aspects. Exercise releases endorphins, the body's natural pain reliever. Endorphins cause a feeling of relief and relaxation in people with migraines, who are more prone to anxiety and depression. Pay attention to your body's ability and do not put pressure on it, be also because it can be the cause of migraine. Many people with migraines are under control in terms of diet to reduce the risk of migraines caused by food (Shams, 2012:12).

15. CONCLUSION

The results show that migraine is a common neurological disease. It usually includes a headache with nausea. Vomiting, sensitivity to light, smell or sound, dizziness, visual disturbances and tingling or numbness of the face, hands or feet. Migraine attacks may occur suddenly without warning or may be triggered by specific triggers such as skipping a meal, exposure to smoke or air

pollution, or menstrual periods and changes in hormone levels. Most migraine attacks last from 4 to 72 hours. Although effective treatment can shorten them to a few hours. On the other hand, some migraine attacks can last even more than 72 hours. Having migraines can be debilitating and lead to missed days of school or work, inability to perform household responsibilities, and loss of family, social, and leisure activities. You should note that the main cause has not been proven yet, but some doctors believe that the brain of people who have migraine reacts more strongly to environmental stimulus such as stress or sleep disorder than the brain of people who do not have this disease. There is no definitive cure for migraines, but treatments and lifestyle can help reduce the number of attacks in a person and shorten or reduce the severity of the attacks. In the following, we will introduce and examine some types of migraine. There is no single test that can lead to the diagnosis of migraine. Rather, the doctor will prescribe blood tests and special imaging based on your evaluation and family history, as well as to rule out other causes of headache. Hormonal changes in women act as a stimulus. It seems that fluctuations in estrogen levels due to menstrual periods, pregnancy or menopause cause acute headaches. Certain foods and beverages such as cheese and salty processed food, caffeine, wine, coffee etc... can trigger this disease in both men and women. One of the most important causes of migraine is stress. Stress and tension at home or at work are known factors that can cause this disease. Some medications can trigger migraine attacks. Like oral contraceptives, they can cause hormonal imbalance and vasodilation. Therefore, it can make changes in the sleep pattern. Sometimes too much sleep, exposure to strong light such as sunlight, loud noises or strong smells can trigger migraines. Migraine attacks usually develops over hours, increases with normal physical activity, and is often associated with nausea, sensitivity to light and sound. Sometimes this disease can be relieved simply by changes in lifestyle and daily habits, but sometimes it may be necessary to consult a doctor and diagnose it for improvement. Medical treatment and lifestyle modification together can help in getting rid of this disease. Some lifestyle changes can help you reduce the frequency and severity of attacks.

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