

DIETARY HABITS AND STRESS ON MIGRAINEURS

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Introduction

Migraine can be characterized as a chronic disorder with episodic attacks, with potential for progression to more frequent and severe patterns. People describe migraine pain as pulsating, throbbing, perforating, pounding and debilitating. It can also feel like a severe, dull, steady ache. The pain may start out as mild. But without treatment, it can become moderate to severe. Migraine pain most commonly affects the forehead area. It's usually on one side of the head, but it can occur on both the sides or shift. Most migraine attacks last about 4 hours. If they're not treated or don't respond to treatment, they can last for as long as 72 hours to a week.

Migraine is often accompanied by nausea, vomiting, and extreme sensitivity to light and sound. Migraine attacks can last for hours to days, and the pain can be so severe that it interferes with your daily activities. The frequency of a migraine could be once a year, once a week or any amount of time in between. Having two to four migraine headaches per month is the most common. For some people, a warning symptom known as an aura occurs before or with the headache. There are over 150 types of headaches, divided

into two categories: primary headaches and secondary headaches. A migraine is a primary headache, meaning that it isn't caused by a different medical condition. Primary headache disorders are clinical diagnoses, meaning there's no blood test or imaging study to diagnose it. A secondary headache is a symptom of another health issue. The four stages in chronological order are the prodrome (pre-monitory), aura, headache and postdrome. About 30% of people experience symptoms before their headache starts. The first stage or prodrome lasts a few hours, or it can last days. There may or may not experience it as it may not happen every time. It is known as "preheadache" or "premonitory" phase. Symptoms during this stage can include food cravings, depression, fatigue or low energy, frequent yawning, hyperactivity, irritability and neck stiffness. An aura can last from 10 to 60 minutes. Aura symptoms are reversible, meaning that they can be stopped/healed. An aura produces symptoms that may include seeing bright flashing dots, sparkles or lights, blind spots in vision, numb or tingling skin, speech changes, ringing in ears (tinnitus), temporary vision loss, seeing wavy or jagged lines, changes in smell or taste, etc. The postdrome stage goes on for a day or two. It's often called a migraine "hangover" and 80% of those who have migraines experience it. It can take about eight to 72 hours to go through the four stages. During this phase, there are usually changes in mood and feelings. These can range from feeling euphoric and extremely happy to feeling very fatigued and apathetic.. Migraines, which affect children and teenagers as well as adults, can progress through these four stages. Not everyone who has migraines goes through all stages. Though migraine causes aren't fully understood, genetics and environmental factors appear to play a role.

Stages and symptoms

Migraine attacks can include four stages: prodrome, aura, headache (pain and accompanying symptoms) and postdrome. An attack may include all of these stages or just some. This can vary from person to person, and from

attack to attack. The prodrome may occur from 12-24 hours preceding the headache. The migraineur may notice irritability, neck pain or stiffness, food cravings or yawning during this time, among other symptoms. The aura phase is defined as the experience of "focal neurologic features". These may be visual in nature, such as seeing flickering lights, spots or lines, or losing a portion of the visual field, but other senses can be involved as well such as a sensory aura where a person may experience numbness or feelings of "pins and needles". During this period someone may also experience confusion, dizziness or weakness. The aura may last for 5-60 minutes just before the headache begins. Approximately one out of five migraineurs experience an aura before an attack, although they may have auras with only some migraine attacks. The headache phase may last between 4-72 hours (or shorter if effectively treated). This phase is defined by moderate to severe head pain, but may also include extreme sensitivity to light, sound and odors, nausea and vomiting. These symptoms make it very difficult to function during an attack and migraineurs are commonly confined to bed during this time with a preference for dark and quiet. The postdrome phase occurs 12-24 hours after the headache phase has resolved. Much like the prodrome phase, during this time someone may report not feeling like themselves, feeling fuzzy headed, in a fog, or fatigued. This phase may involve difficulty with concentration, attention, motivation and fatigue. In light of all four phases, a migraine attack can last for several days and incapacitate someone or limit their ability to function for an extended period of time. Migraine can be divided into episodic migraine and chronic migraine (CM) based on the number of days per month that someone experiences headache. Episodic migraine is defined as meeting International Classification of Headache Disorders (ICHD-2) criteria for migraine with fewer than 15 headache days per month. Chronic migraine is generally defined as meeting criteria with 15 or more headache days 8 per month. Some people with chronic migraine experience headache every day, and some people have continuous headache pain (Buse et al., 2020).

Pathophysiology

Acute migraine attacks occur in the context of an individual's inherent level of vulnerability. The greater the vulnerability or lower the threshold, the more frequent attacks occur. Attacks are initiated when internal or environmental triggers are of sufficient intensity to activate a series of events which culminate in the generation of a migraine headache. Many migraineurs experience vague vegetative or affective symptoms as much as 24 hours prior to the onset of a migraine attack. This phase is called the prodrome and should not be confused with the aura phase. The aura phase consists of focal neurological symptoms that persist up to one hour. Symptoms may include visual, sensory, or language disturbance as well as symptoms localizing to the brainstem. Within an hour of resolution of the aura symptoms, the typical migraine headache usually appears with its unilateral throbbing pain and associated nausea, vomiting, photophobia, or phonophobia. Without treatment, the headache may persist for up to 72 hours before ending in a resolution phase often characterized by deep sleep. For up to twenty-four hours after the spontaneous throbbing has resolved, many patients may experience malaise, fatigue, and transient return of the head pain in a similar location for a few seconds or minutes following coughing, sudden head movement, or valsalva movements. This phase is sometimes called the migraine hangover (Blau, 1992).

Risk factors and comorbidities

Migraine has several comorbidities and modifiable risk factors. Vascular accidents, depression, anxiety, epilepsy, and sleep problems are commonly associated with migraine. Attack frequency, caffeine, medication overuse, obesity, snoring or sleep apnea, psychiatric comorbidity, and stressful life events have been suggested as modifiable risk factors for migraine complications such as vascular events and chronic migraine (CM). All these factors will reduce the quality of life (QOL) of migraine patients. In addition,

psychiatric comorbidity and psychological distress may negatively affect the outcome of migraine patients (Serafini et al., 2012).

Furthermore, some interventions, such as aerobic exercise, can reduce migraine attack duration, pain intensity and decrease the number of migraine days/month. However, based upon current knowledge, migraine shows a wide range of risk factors, triggers, and comorbidities (Lipton et al., 1997). Age, female sex, and low educational status are the most important demographic risk factors for migraine chronification, while higher education can act as a protective factor against migraines (May et al., 2016). Migraines can develop at any age, but the prevalence rate appears to be highest before the age of 45. The prevalence rate rises throughout early adult life, peaking during middle age and then falls gradually. Multiple epidemiological studies have found significant sex differences in the prevalence of migraines, with three times as many women affected as men (Safiri et al., 2022). The findings from structural and functional brain MRIs have confirmed sex-related differences in migraine attacks. The higher prevalence of migraines in women could be related to several biological and psychological differences between men and women, such as sex hormones, genetic factors, exposure to environmental stressors, as well as the level and response to stress and pain. However, the increased prevalence of migraines with the onset of puberty and menarche, during menstruation, pregnancy, and menopause suggests that fluctuations in sex hormones, especially estrogen, play a critical role in the higher prevalence of migraines in women.

Treatments for migraine

Pharmacological treatment

A large part of the migraine attacks are treatable by regular pain medication or pain and nausea medicine combination. The basic guideline is much enough and early enough. During a migraine attack the absorption of the medicine taken orally may be diminished due to a poor gastric motility.

Before taking medicine or at the same time with the medicine (for example as a combined preparation) metoclopramide can be taken, because it accelerates pain management in the absorption of the drug. Aspirin and paracetamol are the most used drugs for migraine attack. Acetylsalicylic acid lysinate and metoclopramide combination of a water-soluble powder is an effective treatment (Farkkila et al., 2015).

Non-pharmacological treatment

Non-pharmacological treatment is described as a therapy that does not involve drugs. There are many ways to help alleviate migraine pain; acupuncture, physical training, and relaxation training. These methods can decrease the excitability of the neurons and desensitize the central pain receptors in the central nervous system and lead to decreased pain sensitivity or an increased pain threshold (Chatchawan et al., 2014).

Acupuncture and Massage

Acupuncture is a form of alternative pain treatment originating from Traditional Chinese Medicine (TCM), dating back >3000 years. In acupuncture fine needles are inserted into the body at specific locations. The needles stimulate the chi (the flow of energy through the channels within the human body). In illness an imbalance occurs and in health, energy is evenly balanced. It is suggested that acupuncture corrects the internal flow of energy (Griggs & Jensen, 2006).

Vitamins and other supplements

Eating a healthy diet that has a variety of vitamins and minerals is a way to help maintain or reduce the pain level of migraine. A menstrual migraine is associated with increased levels of prostaglandin levels (PG) in the endometrium. When levels of PG are increased this indicates the role of vitamin E, which is an anti-PG. Vitamins act as an antioxidant and they work effectively in oxidative stress to slow down the diseases progression. Women

suffering migraines from menstruation are advised to take also vitamin E. It is an anti-PG antigen with a reportedly low side effect profile effectively relieves headache pain and associated migraine symptoms. It also can reduce the need for emergent medications. Women using prophylactic agents such as nonsteroidal anti-inflammatory drugs and triptans can amend headaches, but many users tend to experience worsening of headache symptoms after the short-term treatment is stopped. By using vitamin E therapy 400 IU daily for five days during menstruation for three cycles, there were no headache breakthroughs reported (Shaik and Gan, 2015).

Prevention of migraine

The purpose of migraine prevention is to minimize the frequency, the acuity, and the disability accompanied with migraine attacks. Preventative measures do not eliminate migraines, but they reduce the severity of attacks.

Conclusion

Migraine is an inherited, episodic disorder involving sensory sensitivity. It is a condition that has been described almost since the beginning of recorded history, is now an area of increasingly intense interest and focus. Fundamental improvements in our understanding of this common and, at times, debilitating condition are emerging. A flexible system of categorization of the various headaches allows for proper management in the present and sets the stage for advancement of future discoveries.

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