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Preparation and Characterization Mustard Oil, Nutmeg and Cloves to Treat Headache

Mr. Bite Rushikesh Vishwanath[1], Prof. Bagwan L. R.[2], Dr. Hingane L. D.[3]
[1, 2, 3]*Aditya Pharmacy College, Beed 431122*

Abstract: ***Headache is an extremely common symptom and collectively headache disorders are among the most common of the nervous system disorders, with a prevalence of 48.9% in the general population.1 Headache affects people of all ages, races and socioeconomic status and is more common in women. Some headaches are extremely debilitating and have significant impact on an individual's quality of life, imposing huge costs to healthcare and indirectly to the economy in general. Only a small proportion of headache disorders require specialist input.***

The vast majority can be effectively treated by a primary care physician or generalist with correct clinical diagnosis that requires no special investigation. Primary headache disorders – Headaches, tension headache and cluster headache – constitute nearly 98% of all headaches; however, secondary headaches are important to recognise as they are serious and may be life threatening. This article provides an overview of the most common headache disorders and discusses the red flag symptoms that help identify serious causes that merit urgent specialist referral.

The current pathway of headache care in the UK is discussed with a view to proposing a model that might fit well in the financially constrained National Health Service (NHS) and with new NHS reforms. The role of the national society, the British Association for the Study of Headache, and the patient organisations such as Headaches Trust in headache education to the professionals and the general public in shaping headache care in the UK is described. The article concludes by summarising evidence-based management of common headache diagnoses.

Keywords: Headache, Headaches, tension headache, cluster headache, medication overuse headache

I. INTRODUCTION

Headache is a painful disorder of the head sometimes associated with pain of the face and/or neck.

1) Headaches are the most prevalent neurological disorders and continue to be a frequent cause of Emergency Department (ED) use, accounting for 2% of all visits. In 1988 the International Headache Society (IHS) published a first classification system for headache disorders. Now a third edition is now to being final.

2) This classification is hierarchical, and you must decide how detailed you want to make your diagnosis. This can range from the first-digit level to the fifth. First, one gets a rough idea about which group the patient belongs to. For this reason it could be adapted in different clinical setting. Moreover, this classification gives operative criteria for diagnosis, not only descriptions. This system is not easily applicable in clinical practice but it is useful to divide headache into two categories: primary and secondary headache. Primary headaches (Table 1)2 and itsassociated features occur in the absence of any exogenous cause. On the contrary secondary headaches recognize an exogenous cause as meningitis, intracranial, hemorrhage, brain tumor or the temporal arteritis. Although the majority of chronic pain cephalic-applicants are of benign origin, each case deserves a thorough study in the attempt to pursue and to establish the possible etiology for a correct prognostic and therapeutic diagnosis.

3) The objective of this monograph is to provide evidence based recommendations for the proper management of headache by analysis of the guidelines available to date.

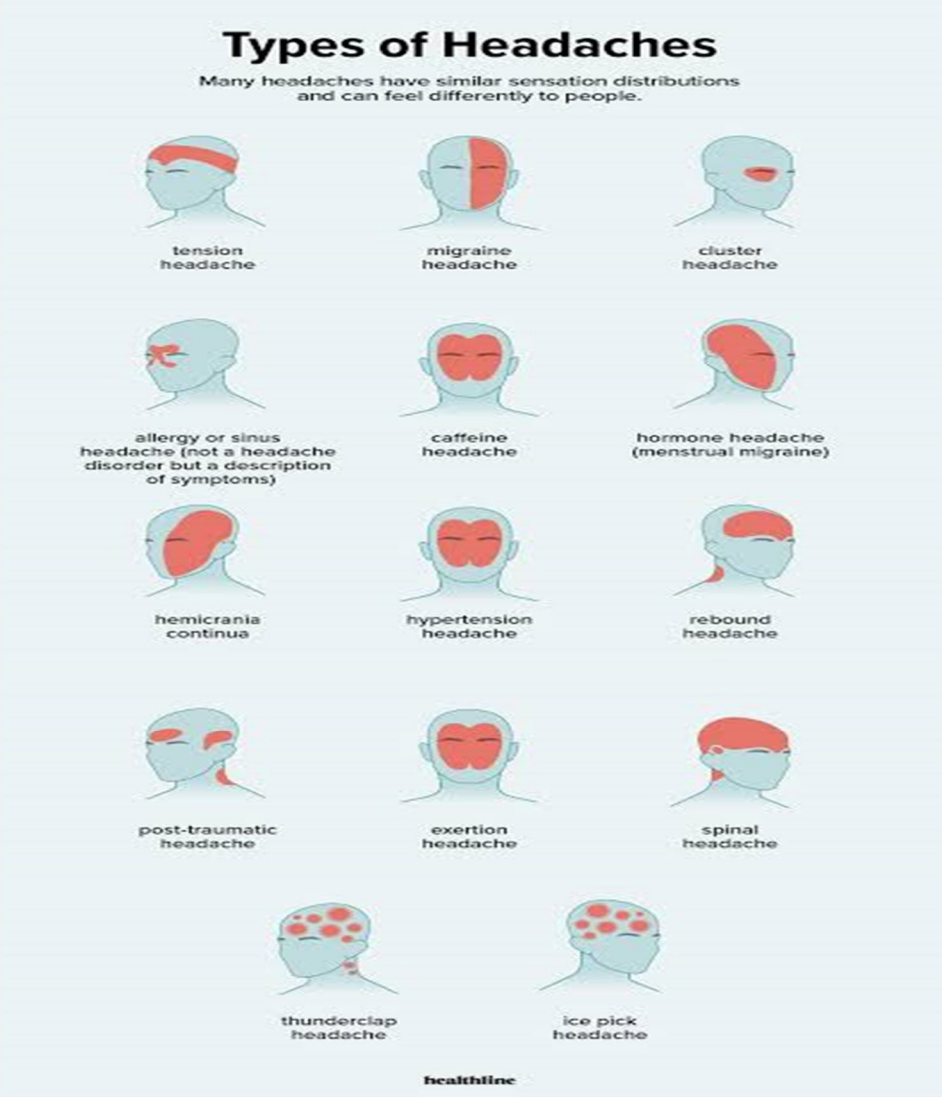
II. HISTORY OF HEADACHE

The history of headache, starting with the earliest records from Mesopotamia, and continuing through Hippocrates, Aerateus, and Galen, provides a glimpse into a malady that has endured through several millenia. In this chapter, we also explore the history of headache treatment from the ancients, through the Middle Ages, and to the end of the 19th century. Finally, we explore the development of the remarkable innovations in pharmaceutical therapies during the late 20th and early 21st centuries.

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III. TYPE OF HEADACHES

1) *Headaches without Aura (Common Headaches):* Most people with Headachess have common Headachess. This type of Headaches causes a throbbing pain on one side of the head. The pain is moderate to severe and gets worse with normal physical activity. You also may have nausea and vomiting and may feel worse around light and sound. The headache lasts 4 to 72 hours if it is not treated. A common Headaches doesn't begin with an aura.
2) *Headaches with Aura (Classic Headaches):* Some people with Headachess get an aura up to 30 minutes before they have a Headaches. Symptoms of the aura include seeing wavy lines, flashing lights, or objects that look distorted. Other symptoms include tingling or a "pins-and-needles" feeling. Other types of Headaches headache include:
3) *Menstrual Headaches:* Many women have Headachess around their menstrual cycle. These occur a few days before, during, or right after their period. The symptoms are the same as those of common or classic Headachess.
4) *Headaches Equivalent:* Headaches equivalent is a Headaches aura that is **not** followed by a headache. This form of Headaches often happens after age 50 if you had Headachess with aura when you were younger. The symptoms may include streaks or points of light moving across your field of vision. Complicated Headaches. These are Headachess that cause symptoms such as numbness and tingling, trouble speaking or understanding speech, or not being able to move an arm or leg. These symptoms go on after the headache goes away.
5) *Abdominal Headaches:* These Headachess usually occur in children. The symptoms include vomiting or dizziness, without a throbbing headache. The symptoms may occur about once a month.



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IV. CAUSES OF HEADACHE

1) Stress
2) Lack of sleep
3) Fatigue
4) Hunger
5) Caffeine withdrawal

Abrupt cessation of medications that contain caffeine, such as some pain-relieving medications like ibuprofen (Advil) or acetaminophen (Tylenol) weather changes food and drinks, such as chocolate; processed foods that contain monosodium glutamate (MSG); or alcohol Many of those triggers for tension headaches—especially stress, hunger, fatigue, and lack of sleep—can also set off a Headaches headache. But nailing down causes of headaches in the Headaches category is a little trickier; the headaches may stem from many factors, or combinations of factors. The particular combination is specific to an individual. Potential culprits include

- Being around smoke
- Certain smells
- Bright light, such as sunlight, or flashing lights
- Foods, such as aged cheeses, avocados, bananas, chocolate, peas, pork, sour cream, nuts, peanut butter, or yogurt alcohol changes in estrogen levels for women taking certain prescription medications, such as nitroglycerin (Nitrostat), prescribed for a heart condition; and estrogen, prescribed for birth control or menopausal symptoms abrupt cessation of caffeine

Abrupt cessation of medications that contain caffeine, such as some pain-relieving medications like ibuprofen (Advil) or acetaminophen (Tylenol) food additives, such as monosodium glutamate (MSG) and nitrates (found

V. SYMPTOMS OF HEADACHES

The primary symptom of Headaches is a headache. Pain is sometimes described as pounding or throbbing. It can begin as a dull ache that develops into pulsing pain that is mild, moderate or severe. If left untreated, your headache pain will become moderate to severe. Pain can shift from one side of your head to the other, or it can affect the front of your head, the back of your head or feel like it's affecting your whole head. Some people feel pain around their eye or temple, and sometimes in their face, sinuses, jaw or neck.



A. Other Symptoms of Headaches Include

1) Sensitivity to light, noise and odors.
2) Nausea and vomiting, upset stomach and abdominal pain.
3) Loss of appetite.
4) Feeling very warm (sweating) or cold (chills).
5) Pale skin color (pallor).
6) Feeling tired.
7) Dizziness and blurred vision.
8) Tender scalp.
9) Diarrhea (rare).
10) Fever (rare).

B. Prodrome Symptoms

1) Problems concentrating.
2) Irritability and/or depression.
3) Difficulty speaking and reading.
4) Difficulty sleeping. Yawning.
5) Nausea.
6) Fatigue.
7) Sensitivity to light and sound.
8) Food cravings.
9) Increased urination.
10) Muscle stiffness.

C. Aura symptoms: IMG.04 –Other Symptoms

1) Numbness and tingling.
2) Visual disturbances. You might be seeing the world as if through a kaleidoscope, have blurry spots or see sparkles or lines.
3) Temporary loss of sight.
4) Weakness on one side of the body.
5) Speech changes.

D. Headache Symptoms

1) Neck pain, stiffness.
2) Depression, giddiness and/or anxiety.
3) Sensitivity to light, smell and sound.
4) Nasal congestion.
5) Insomnia.
6) Nausea and vomiting.

E. Postdrome Symptoms

1) Inability to concentrate.
2) Depressed mood.
3) Fatigue. **IMG.05 -HEADACHE**
4) Lack of comprehension.
5) Euphoric mood.

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VI. DIAGNOSIS

If you have migraines or a family history of migraines, a doctor trained in treating headaches (neurologist) will likely diagnose migraines based on your medical history, symptoms, and a physical and neurological examination. If your condition is unusual, complex or suddenly becomes severe, tests to rule out other causes for your pain might include Magnetic resonance imaging (MRI). An MRI scan uses a powerful magnetic field and radio waves to produce detailed images of the brain and blood vessels. MRI scans help doctors diagnose tumors, strokes, bleeding in the brain, infections, and other brain and nervous system (neurological) conditions. Computerized tomography (CT) scan. A CT scan uses a series of X-rays to create detailed cross-sectional images of the brain. This helps doctors diagnose tumors, infections, brain damage, bleeding in the brain and other possible medical problems that may be causing headaches.

A. Treatment

Migraine treatment is aimed at stopping symptoms and preventing future attacks.
Many medications have been designed to treat migraines. Medications used to combat migraines fall into two broad categories:
Pain-relieving medications. Also known as acute or abortive treatment, these types of drugs are taken during migraine attacks and are designed to stop symptoms. Preventive medications. These types of drugs are taken regularly, often daily, to reduce the severity or frequency of migraines. Your treatment choices depend on the frequency and severity of your headaches, whether you have nausea and vomiting with your headaches, how disabling your headaches are, and other medical conditions you have.

B. Medications for Relief

Medications used to relieve migraine pain work best when taken at the first sign of an oncoming migraine — as soon as signs and symptoms of a migraine begin. Medications that can be used to treat it include:
Pain relievers. These over-the-counter or prescription pain relievers include aspirin or ibuprofen (Advil, Motrin IB, others). When taken too long, these might cause medication-overuse headaches, and possibly ulcers and bleeding in the gastrointestinal tract.
Migraine relief medications that combine caffeine, aspirin and acetaminophen (Excedrin Migraine) may be helpful, but usually only against mild migraine pain. Triptans. Prescription drugs such as sumatriptan (Imitrex, Tosymra) and rizatriptan (Maxalt, Maxalt-MLT) are used to treat migraine because they block pain pathways in the brain. Taken as pills, shots or nasal sprays, they can relieve many symptoms of migraine. They might not be safe for those at risk of a stroke or heart attack. Dihydroergotamine (D.H.E. 45, Migranal). Available as a nasal spray or injection, this drug is most effective when taken shortly after the start of migraine symptoms for migraines that tend to last longer than 24 hours. Side effects can include worsening of migraine-related vomiting and nausea.

VII. MATERIALS AND METHODS

A. Mustard Oil

1) *History of Mustard Oil:* Mustard and its oil is used as a spice, condiment, herb, cooking oil and medicinal agent and has been referenced several times since 6th Century BC in various historical scriptures. Mustard oil was very popular in the Indian subcontinent and was an integral part of our cuisines.



Mustard Oil

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2) *Uses:* Mustard seeds are also effective when you are suffering from headaches and Headachess. The seeds are packed with magnesium that soothes our nerve system and relieves the pain and strain in any different parts of our body.

a) May block microbial growth.
b) May promote skin and hair health.
c) May alleviate pain.
d) May slow cancer cell growth.
e) May support heart health.
f) Reduces inflammation.
g) May help treat cold symptoms.
h) High smoke point

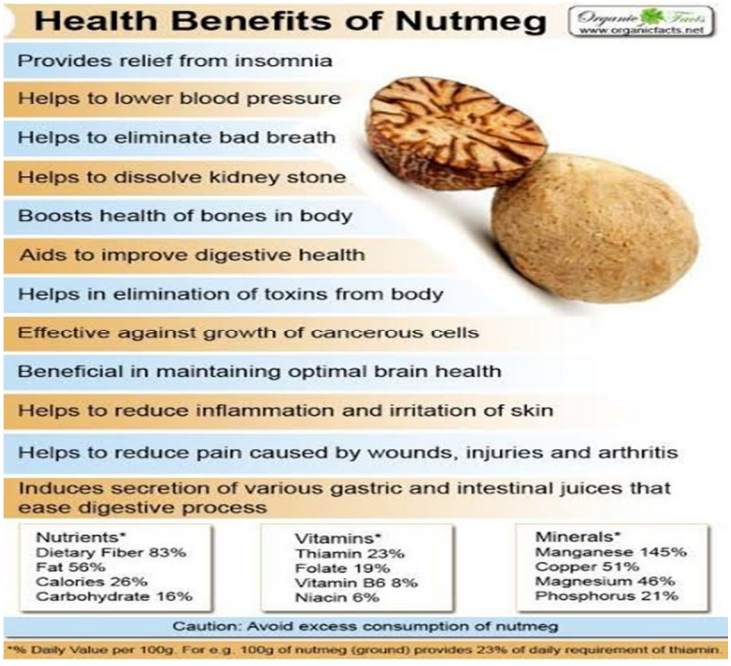
B. Nutmeg

1) *History of Nutmeg:* By the end of the 12th century, most wealthy and elite Europeans had tried these exotic spices and fell madly in love with them. 1512 Portuguese explorers 'discover' the source of nutmeg and establish themselves on and around the Banda islands, stocking up on mace, nutmeg, and cloves.



Nutmeg Powder

2) *Uses of Nutmeg:* A pinch of this exotic spice powder is used in baking, curries, sweets, beverages like tea and mulled wine. Jaiphal is valued as a potent aphrodisiac, digestive stimulant, essential oil easing the pain associated with headaches and treats common cold, cough and asthma.



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C. Clove

1) *History of Clove:* As early as 200 bce, envoys from Java to the Han-dynasty court of China brought cloves that were customarily held in the mouth to perfume the breath during audiences with the emperor. During the late Middle Ages, cloves were used in Europe to preserve, flavour, and garnish food.



2) *Uses Of Clove*



D. Method

1) *Stability Studies:* The stability of herbal Paste was carried out by storing a measured amount of different temperature i.e. 25°C, 37°C, 40°C, for 1 week. During stability studies no change in colour and no phase separation were observed in the formulated Herbal Paste.
2) *Adultration Test for Mustard Oil:* To begin with, measure 5 ml mustard oil in a glass test tube. Next, add 5ml of Nitric acid to the test tube filled with oil and shake it gently. If the mustard oil is pure there will be no change in composition or colour. But, if the oil is adulterated there will be change in the colour of the acidic layer.

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VIII. FORMULATION

A. Procedure

50 gm The Powder of Nutmeg add in minimum 100ml of mustard Oil .
Then well mixed that solution and keep for 15 minutes.
Then in That Herbal Paste add 30 gm of clove Powder and then shake Well.
Then That Herbal paste Keep under the room Temperature.

B. Formulation Table

Sr.No	Ingredient	Quantity	Mode Of Action
1	Mustard Oil	100 ml	Antimicrobial properties and mode of action of mustard and cinnamon essential oils and their combination against foodborne bacteria
2	Clove	30 gm	antibacterial, antifungal, insecticidal and antioxidant
3	Nutmeg	50gm	neurological response, but in large doses, both raw nutmeg Anticholinergic drug

IX. EVALUATION PARAMETER

A. Physical Evaluation

1) Colour: It was determined visually.
2) Odour: It was determined manually.
3) Appearance: It was determined visually
4) PH: The pH was determined by using digital pH meter and the pH of herbal Paste was found.

X. RESULT

Evaluation Parameter	Result Obtained
Colors	Raddish Brown
Odour	Pungent Flavor
PH	4.1
Homogenicity	Goood
Irritability	No irritability
Stability	Stable
Taste	Pungent Flavor
Use	Easy

XI. DISCUSSION ON HEADACHES

Dr. G. J. V. Crosby: At 6.45 on a fine summer morning last year, I was summoned urgently to see a middle-aged pharmaceutical chemist who had wakened at 5 a.m. with an intolerable headache. I found him prostrated but fully conscious. He had recently been suffering from headaches which he attributed to his eyes but they had not been serious enough to seek advice and he had doctored himself with reasonable success. This, however, was such a headache as he had never before experienced. He had vomited and the pain had subsided to some degree but was still severe. The pupils were small and reacted sluggishly and he had some rigidity of the neck. Plantar reflexes were doubtful but that on the right side appeared predominantly extensor. The pulse was slow. Obviously there had been an intracranial calamity and a leaking aneurysm seemed a possibility. Unfortunately he did not make the journey to hospital as he suddenly went into epileptiform convulsions, with extreme neck retraction and expired in a matter of minutes. Autopsy that afternoon showed an extensive subarachnoid hiemorrhage. This was the most dramatic instance I could recollect when considering cases of headache occurring in my own practice during the past year or so. But, the comparative rarity of conditions of this type made me feel that here was not a true example of headache in acommonly presenting guise. So f returned to my case book. Here are three more short histories. Some five months ago I was consulted by a man of 45 who complained of severe morning headaches, usually, but not always, unilateral. They had been increasing lately, both in duration and intensity and now lasted regularly twenty-four hours culminating in nausea and vomiting.

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XII. CONCLUSION

Headaches is an extremely prevalent and disabling neurologic disorder that manifests as periodic attacks of severe head pain and is accompanied by associated symptoms of interference with activity, nausea/vomiting, and sensitivity to light and sound.

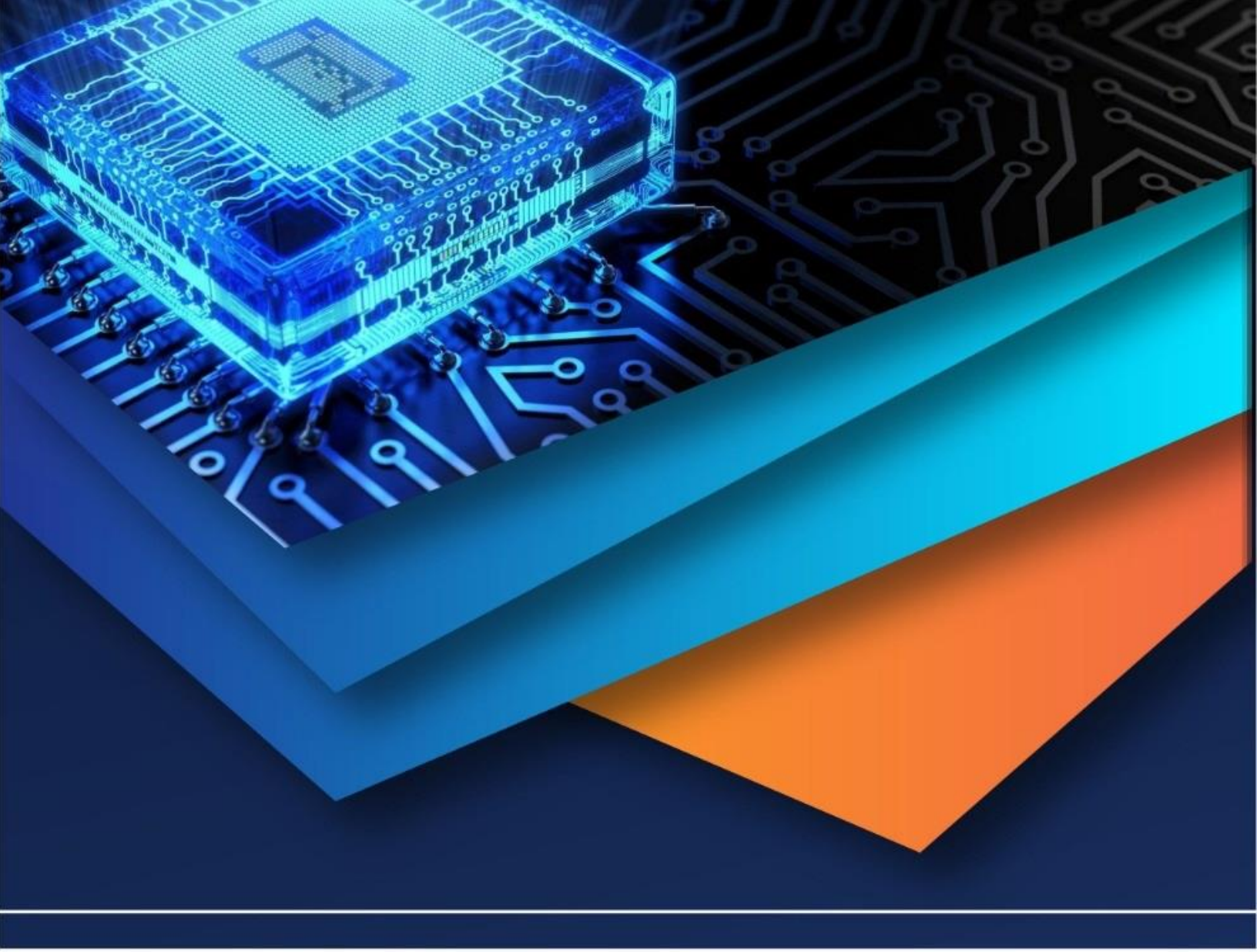
Headaches is a disorder associated with significant psychosocial impact. The diagnosis of Headaches requires a good clinical history, and exclusion of other causes of headache. However, further investigations are needed when the findings from the history and clinical examination are atypical of Headaches, or if there is a recent change in the character of the patient's headaches.

Current pharmaceutical anti-Headaches treatments have revolutionized Headaches management. Optimal treatment needs to be individualized, taking into consideration side effects of medications, duration and severity of symptoms, and outcome of previous treatments.

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