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Review Article

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Evaluation of Headache Diagnostic and Management Approach in General Practice, Literature Review

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ABSTRACT

In clinical practice, there are common complaints of pain including headaches. There are three major types of headaches, namely migraines, cluster headaches, and tension types. Identifying and treating the headache syndromes is important as it helps to take a load of the associated disability to daily living. Electronic database PubMed was used in this review and data was collected from relevant journal articles, randomized controlled trials, and observational studies containing the term used in the mesh: "headache"[Mesh] AND "management"[Mesh] within the title or abstract. To review the diagnosis and management of headaches in the primary health care center. It is important to take a good clinical history of headache episodes to reach a diagnosis. The management of headache is divided into acute treatment of the episode, and prophylactic management in the long term, a combination of both is needed for near-normal living. Management of headaches includes resolving the acute presenting episode, managing future recurrences of acute attacks, and prophylaxis through medical and non-medical management.

Key words: *Headache, Migraine, Tension, Cluster, Management*

INTRODUCTION

In clinical practice, there are common complaints of pain including headaches. There are three major types of headaches, namely migraines, cluster headaches, and tension types. Identifying and treating the headache syndromes is important as it helps to take a load of the associated disability to daily living [1]. Headaches are an interesting diagnosis in clinical medicine, as research focuses on management and pathophysiological causation of the disease [2, 3]. For instance, myofascial trigger points are currently studied for association with headache syndromes, namely migraines, and tension-types, but their role remains unclear [4]. While the commonest syndromes of headache can be differentiated based on clinical presentation, the general practitioner should be alerted to exclude serious secondary causes of headache. Attention to emergency signs masquerading as headaches

is vital. These red flags include worst headache, the onset of headache at an older age or after the head injury, acute onset, exertional related headache, headache in immunocompromised patients or known malignancy, and the neurological manifestation of symptoms.

MATERIALS AND METHODS

Electronic database PubMed was used in this review and data was collected from relevant journal articles, randomized controlled trials, and observational studies containing the term used in the mesh: "headache"[Mesh] AND "management"[Mesh] within the title or abstract. English and translated English articles, documents, controlled and randomized clinical trials that are published and met with the needed criteria were included only.

Review

There are many syndromes relating to the manifestation of headache, these include tension, migraine, exertional, cluster, and idiopathic headaches. There are other common causes of headache and may signify more insidious diagnoses including systemic infection, head injury, vascular disorders, subarachnoid hemorrhage, or brain tumors.

When assessing patients presenting with headaches, the physician should ask about duration, onset, characteristics of pain, and if the pain is unilateral or bilateral, or periorbital. In addition to being alert of the signs and symptoms, the general practitioner could consider certain investigations as appropriate. These include blood samples for inflammatory markers, human immunodeficiency virus, tumor markers, and electrolyte disturbances.

As discussed further, the approach to history could differentiate the different syndromes of headaches **(Table 1)**. This includes assessing the frequency of episodes, duration, and nature of pain. For instance in headaches of less than four hours duration, the diagnosis tilts towards cluster headache, paroxysmal hemicrania, trigeminal neuralgia, idiopathic stabbing headache, cough headache, benign exertional headache, and episodes associated with sexual intercourse. In a longer duration of headache, the clinical judgment could include chronic forms of migraine and tension headache, hemicrania continua, or persistent headache.

Table 1. Common Clinical Syndromes of Headache

	Tension	Migraine	Cluster
Location	Bilateral	Unilateral or Bilateral	Unilateral, periorbital
Characteristic	Pressing/tightening	Pulsating	Non-specific
Severity	Mild to moderate	Moderate to Severe	Severe to unbearable
Accompanying symptoms	Not usually	Aura (sometimes without), audio or visual trigger, nausea and vomiting	Red and tearing eyes, nasal congestion, rhinorrhea,

Tension headache

Tension-type headache has patients complaining of pressure or tightness around the head. The waxing and waning nature of the pain lead the patient to opt for rest most of the time of the episode [5]. These episodes are usually bilateral and last from a few minutes to a few days. In patients with tension headaches, acute management includes over-the-counter medication such as aspirin, paracetamol, and NSAIDs. In other patients where attacks are more frequent, a prophylactic treatment would be indicated. These are generally antidepressants, such as mirtazapine and venlafaxine, with sufficient clinical evidence for use. Other treatments require further evidence including gabapentin, topiramate, and tizanidine [5].

In young adults and children with tension headaches, the physician should be careful not to miss a diagnosis of Reye's syndrome in people with a recent viral illness. These patients are rare, yet they present with recurrent sickness, fatigue, rapid breathing, and seizures. There is a possible association between aspirin intake and the development of Reye's syndrome, warranting careful history taking before dispensing this medication to patients [6].

Migraine headaches

Migraines can be identified clinically based on the history of the presenting headache, as it usually occurs in adults unilaterally, but it appears bilaterally in adolescents. The pain increases gradually, pulsating in nature, and as activity increases so does the pain. The pain could last anywhere from a few hours to days, with associated symptoms of nausea and vomiting, aura, and photophobia. Many patients cope with migraine by isolating

themselves in quiet rooms with low or no lighting. NSAIDs are first-line treatments for acute migraine and are suitable for control. While triptans are the first-line treatment in severe migraines, physicians should take a holistic approach to their patient's management [7]. This is because triptans are better avoided in patients with hypertensive problems or vascular disease. Some medications are preferably avoided in migraine, including opiates and barbiturates [8].

Cluster headache

Cluster headache is almost always unilaterally based pain, it begins periorbitally or at the temple. The pain progresses rapidly within minutes, with the pain being described as explosive or excruciating at times. During the episode, which lasts anywhere from a few minutes to a few hours, the patient remains alert and cannot rest due to the pain's characteristics. Accompanying symptoms include eye redness and tearing, some patients may even develop Horner's syndrome [9]. Triptans have shown effectiveness in resolving acute episodes of cluster headache attacks [10]. In addition to medication, this is combined with high flow oxygen supplementation via a non-rebreather mask [11-13]. As with other forms of headache syndromes, the long-term management of cluster headache is a combination of pharmacological therapy with neuromodulation and behavioral modification [14]. Moreover, steroidal injection at the suboccipital level has shown some evidence for prophylaxis therapy, but further studies are needed for prophylactic options [12].

Not all patients would leave the clinic with a diagnosis, in these scenarios it would be advisable to give the patient a headache diary where they can take detailed notes of the episodes, duration, triggering or exacerbating factors, and alleviation methods. In females with headaches, it is important to discern whether these episodes are related to menstruation. Furthermore, good clinical practice dictates a look into the medication history of the patient as certain drugs are known to cause headaches. These mainly include opioids, triptans, and ergots [15]. Other over-the-counter medications include paracetamol, aspirin, and non-steroidal anti-inflammatory drugs [16].

CONCLUSION

While patients presenting for headaches can on occasion leave the clinic undiagnosed, the expectation is always set to offer treatment for the pain. Patients who are undiagnosed need to be reviewed later and a headache diary should be put in place to assist with future assessments. The management of headache is divided into acute treatment of the episode, and prophylactic management in the long term, a combination of both is needed for near-normal living.

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