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Case Report

Dealing with Nocturnal Headaches? Don't Forget Hypnic Headache

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Abstract

Hypnic headache (HH) is a rare primary headache disorder typically affecting the elderly population, characterized by recurrent attacks of headache occurring strictly during sleep. A 68 year old hypertensive female presented with repeated attacks of nocturnal headache occurring exclusively during sleep around 2:00 am for the last 5 months. The pain is bilateral diffuse dull aching type lasting for 1-2 hours. Her general physical and detailed systemic examinations were unremarkable. Magnetic Resonance (MR) imaging and MR Angiography of brain were normal. She was started on tablet indomethacin 75mg at bedtime and a cup of coffee at night before going to sleep. She responded favourably over a period of next 1 month.

Keywords: Hypnic Headache; Nocturnal Headache; Sleep

Introduction

Hypnic headache (HH) is a rare primary headache disorder characterized by recurrent attacks of headache occurring strictly during sleep, often between 2 a.m. and 4 a.m. [1]. The other synonyms of HH are "clockwise headache" or "alarm-clock headache." The mean age of onset of it is around 63 years.

Case Report

A 68-year-old hypertensive female presented with repeated attacks of nocturnal headache occurring exclusively during sleep since last 5 months. The headache usually starts in an around 2 a.m. invariably waking the patient up from sleep and generally tend to last for one to two hours. The frequency of headache ranges from 4-5 episodes per week. According to her the headache is dull aching in nature moderate in intensity although few episodes were reported to be of severe intensity leading to analgesic intake. The headache attacks usually starts from the occipital region and generally gets diffuse over both sides of hemicranium over a period of 30 minutes. She didn't have any interruption of sleep prior to the onset of headaches. There was no preceding history of aura or any visual symptoms. She didn't have any history of nausea, vomiting, photophobia, phonophobia or any abnormal body movements or loss of consciousness. There was no complaints of chronic daytime headaches. There was also no history suggestive of autonomic dysfunction such as conjunctival redness or tearing or nasal stuffiness. She didn't have any past history of migraine or other chronic neurologic illness. Her family history is unremarkable. There is no history of obstructive sleep apnoea or any other sleep-related disorders. Apart from tablet Olmesartan 20mg daily she didn't have any history of chronic medication intake. On examination, her blood pressure was recorded to be 130/68 mmHg. Apart from that her general physical and systemic examinations were unremarkable. Her detailed neurological examinations including fundoscopy was normal. Her routine haematological and biochemical investigations

were normal including normal erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP). Gadolinium-enhanced MRI brain with MR Angiography of brain were unremarkable. As her symptoms were unrelieved despite multiple medical consultations and in view of new onset nocturnal headache in an elderly, her clinical symptomatology was reevaluated and the possible secondary causes of headache were excluded. She has been diagnosed primarily with hypnic headache as per the proposed International Classification of Headache Disorders, 3rd edition (ICHD-3) diagnostic criteria. She was started on tablet indomethacin 75mg at bedtime and a cup of coffee at night before going to sleep. She responded favorably over a period of one month and the dosing of indomethacin was tapered to 25mg OD.

Discussion and Conclusion

hypnic headache is a rare primary headache disorder usually begins after the age of 50 years but may occur in younger people. The first description of HH was given by Raskin in 1988 [2]. It was adopted by the International Classification of Headache Disorders, 2nd edition (ICHD-2) in 2004 [3]. This adoption with in the "Other Primary Headaches" group was confirmed in the International Classification of Headache Disorders, 3rd edition beta version (ICHD) in 2013 [1]. As per the systematic review [1] published in the literature only 225 cases of HH was reported earlier till 2013. Among patients attending tertiary headache centers frequency of HH is estimated to be between 0.07% and 0.35% [4]. As per the Indian literature[5] only a total of 11 elderly patients and one adolescent patient were reported to have HH till date.

The criteria of HH as per ICHD 3 beta version[6] is as follows

- Recurrent headache attacks fulfilling criteria B-E
- Developing only during sleep and causing wakening
- Occurring on ≥10 days per month for >3 months
- Lasting from 15 minutes and for up to 4 hours after waking
- No cranial autonomic symptoms or restlessness
- Not better accounted for by another ICHD-3 diagnosis.

The pain in HH is usually mild to moderate, but severe pain is reported by one fifth of patients. Pain is bilateral in about two-thirds of cases. Attacks usually last from 15 to 180 minutes, but longer durations have been described. Onset of HH is not related to sleep stage [7]. The pathophysiology of HH remains poorly understood. One hypothesis suggested a role of obstructive sleep apnea in the underlying pathophysiology of HH [8] while the hypothalamic hypothesis was proposed to explain the circadian periodicity of HH which was further supported by a MRI study showing grey matter volume reduction in the hypothalamus in patients with HH [9]. HH needs to be differentiated from other subtypes of Trigeminal autonomic cephalalgias, especially Cluster headache. Other causes of headache which can develop during sleep and can cause awakening should be ruled out, with particular attention to sleep apnoea, nocturnal hypertension, hypoglycaemia and medication overuse. Intracranial disorders must also be excluded. Lithium, caffeine, melatonin and indomethacin have been effective treatments in several reported cases. Some cases of HH responsive to gabapentin, pregabalin, verapamil, acetazolamide, onabotulinumtoxinA, topiramate, and hypnotics have also been reported [10].

So in elderly patients with recurrent attacks of nocturnal headache leading to sleep awakenings possibility of hypnic headache should always be thought after excluding the other possible secondary headache etiologies. Although it is rare but careful history and clinical suspicion can detect HH earlier and effective treatment can be offered to prevent further recurrences.

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