CASE REPORT

Assessment of tripartite headache in a case of depression with partial empty sella syndrome

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ABSTRACT

Headache is multifactorial and can be classified as primary and secondary. It is a common notion for a treating clinician to oversee other causes of headache once the diagnosis of one type of headache has been made. Association of multiple types of headache together in a single patient is not uncommon, but often missed due to busy outpatient setting. The repeated visits of such patient for the treatment of headache can increase the burden on health-care utilization, especially in lower-middle-income countries like India. Patience, documentations, openness to dual pathology, and educating patient play an instrumental role in the assessment of headache.

Key words: Etiology, headache, management, tripartite

INTRODUCTION

Headache is an important symptom of physical as well as mental health concern. Etiology of headache is multifactorial, and the treatment of headache is individualized based on the etiology. Headache in psychiatric outpatients may be due to chronic daily headache, migraine, cluster headache, headache associated with somatic symptom disorder, depression, psychosis, or substance use disorder. We describe a unique manifestation of tripartite headache and approach toward its assessment.

CASE REPORT

A 25-year-old boy, who is graduate and single, presented with a 5-year history of consumption of alcohol, cannabis, tobacco, and opioid followed by a period of complete abstinence for 2 months. During the last 2 months, he developed chronic feeling of emptiness, anhedonia, sadness of mood, depressive cognitions, and dull aching headache all over the scalp. This was associated with disturbed sleep and appetite. On mental status examination, he reported significant preoccupation with diffuse headache with dull aching sensations and nonradiating nature. He had no history of trauma, fever, loss of consciousness, blurring of vision, or incontinence in the past. Family history was nil contributory. His depressive symptoms partially responded to venlafaxine 225 mg per day for 4 weeks without much relief in headache.

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He was hospitalized for detailed evaluation and management. The patient was asked to maintain a headache diary specifying start time, end time, triggers, relievers, site of headache, and any other associated symptoms. Over the 1 week of maintaining such record, he was found to have three distinct kinds of headaches as follows: (1) diffuse, constant, and dull aching headache for the past 2 months not associated with any aggravating or relieving factor and associated with depressed mood; (2) an intermittent tingling sensation with bilateral frontotemporal headache not associated with nausea or photophobia and aggravated by stress over the past 5 years; apparently, the patient's substance use was an attempt to relieve this second type of headache with partial success; (3) the third type of headache appeared to be fixed at nasion, constant and pulsatile in nature not radiating to other scalp areas for the past 1 year. His physical examination did not reveal any pathological findings. His routine hemogram, electrolytes, calcium, phosphate, hepatic, renal, and thyroid parameters were found within normal limits. Tablet mirtazapine 15 mg/day was added in view of persistent depressive symptoms. Over the next 2 weeks, his mood symptoms improved and apparently got complete relief in dull aching headache. However, the patient continued to report frontotemporal headache with tingling sensations. A neurology opinion revealed nil contributory organic factors, and he was prescribed empirical trial of valproate 750 mg daily for atypical tension headache. Gradually, over the next 5 days, the patient reported mild relief in tingling sensations as well as headache. Now, the only concern patient expressed during rounds was pulsatile headache at the nasion in the absence of any visual changes. The ophthalmic evaluation revealed normal vision and fundus. In view of unclear nature of multiple types of headache, magnetic resonance imaging brain was planned to rule out any organic pathology. The report revealed partial empty sella syndrome (PESS) without cerebrospinal fluid filling the space. There were no symptoms suggestive of hypopituitarism. None of his symptoms were associated with aura, photophobia, phonophobia, or nausea. Tablet topiramate 50–100 mg was added to above regimen after neurology consultation, resulting dramatic improvement in pulsatile headache within 4 days. The patient was finally diagnosed as depressive episode with substance withdrawal headache, tension-type headache, and headache secondary to PESS. The patient was also referred to yoga therapy for the management of stress which was identified as a major contributory factor for triggering headache. Meanwhile, tablet baclofen 20 mg per day was advised for craving associated with cannabis. He was discharged at the end of 3rd week with a significant improvement.

**DISCUSSION**

Management of headache is multidimensional and does not halt even after detecting a single cause in a patient. Efforts should guide toward identifying disproportionate symptoms, differential approach, and possible dual diagnoses of headache if unclear and nonuniform distribution is suspected. In our case, the patient appeared to have combination of primary (tension type) and secondary headache (substance withdrawal headache and headache due to PESS). Tension-type headache is the most common type of headache in the world and can be associated with sensory symptoms. However, the prevalence of PESS in general population is around 8%–35% and can present with isolated symptom of headache. PESS can be associated with normal pituitary functioning like in our case. The formative assessment is highly important and should be based on the patient's clear differentiation of types of headaches, clinical patience to withstand therapeutic response, and concurrent liaison with other specialists. Headache diary is tremendously helpful in tackling diagnostic dilemma as in our case. The key factor lies with clinical skills and documentation of duration and nature of each type of headache, maintaining headache diaries and calendars. In clinical practice, lesser emphasis has been given on the possibility of dual nature of headache in a single patient, and more often than not, the comorbid headache of different types is missed, leading to ineffective and incomplete management. This is one of the rare presentations of tripartite headache in a single patient posing a great challenge in assessment and management. Although headache is also an adverse effect of serotonin–norepinephrine reuptake inhibitor, in our case, this possibility is lesser considering the preexisting headache before medication use. Headache is also a common feature during substance withdrawal like cannabis. The management of craving associated with cannabis is supported by recent studies on baclofen. No such case has been reported so far in the literature. Incomplete remission of headache poses significant burden on patient's sociooccupational functioning as well as superfluous utilization of health resources. Prompt identification, treatment, and effective use of headache diary and calendars to identify overlapping headache syndromes can lead to good clinical outcome and improve the quality of life of patients.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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**Conflicts of interest**

There are no conflicts of interest.
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