

Migraine Headache with Formed Visual Hallucinations: A Rare Case Presentation

Case Report

Sharma M^{1*}, Kushwaha S² and Aravind G²

¹Department of Psychiatry, Lady Hardinge Medical College, New Delhi, India

²Department of Neurology, Institute of Human Behavior and Allied Sciences, Delhi, India

***Corresponding author:** Sharma M, Department of Psychiatry, Lady Hardinge Medical College, New Delhi, India E-mail: mini271191@gmail.com

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Abstract

Migraine headache is not an uncommon presentation in general population. It's one among the leading 10 causes of disability and causes significant impairment in daily functioning as well as socio-occupation functioning. Despite being significantly high in prevalence rates and having a negative impact on quality of life it continues to be underdiagnosed and undertreated. Around a third of population present with aura that may include ill-formed hallucinations or zigzag lines, crescent and non-linear patterns that are rarely fully formed. We report a rare presentation of a patient with formed visual hallucination which was difficult to diagnose due to various neuropsychiatric differentials. After extensive evaluation and neuro-imaging to rule out other medical, neurological and psychiatric causes patient was started with management for migraine on which a good response was seen. Formed visual hallucinations are rare presentation in classic migraine but more complex hallucinations can occur in migraine coma and familial hemiplegic migraine.

Introduction

Headache disorders are the most common disorders of the nervous system. Among these painful and disabling disorders common cause of primary headache are-migraine, tension-type headache, and cluster headache. Chronic headache disorder affects coping of an individual that predisposes the individual to other illnesses like anxiety, depression and insomnias. Headache disorders also causes suffering, impairment of quality of life and adds to the financial burden on society [12].

Migraine is a debilitating neurological condition that presents with moderate to severe unilateral and throbbing, often associated with sound sensitivity, light sensitivity, nausea, and vomiting [13]. Migraine headache is a common presentation in clinical practice having a prevalence of 15% - 29% in the general population [1]. Approximately 90% of people in the US experience headache during their lifetime. Migraine is the second leading cause of years lived with disability worldwide [11]. It is seen that, migraine and severe headache

disproportionately affects women, with the overall prevalence being 20.7% in females while 9.7% in males [2]. Around 31% of migraine has an aura [3], where visual hallucinations can present as classic aura of migraine, although these are less common manifestation while seen in migraine coma and familial hemiplegic migraine [4]. The classic visual aura mostly starts as a flickering, uncolored, unilateral zigzag line in the centre of the visual field that gradually progresses toward the periphery, often leaving a scotoma, that lasts less than 30 minutes (and almost always lasts less than 60 minutes) and may have variations such as colored patterns may also occur [5]. Fully formed visual hallucinations are a very rare presentation with classic migraine and require a detailed neuro-psychiatric evaluation to rule out common causes with visual hallucination like migraine coma and familial hemiplegic migraine and psychosis.

Case Presentation

A 24 years female presented to OPD of a tertiary neuro-

psychiatric institute with complaints of sudden onset severe pulsatile unilateral headache lasting for 4-5 hours for past 3 years which was initially occurring once in a month associated with nausea and phonophobia, partially relieved with oral analgesic medications. There was an increased progression of severity, duration and frequency of episodes noted over past one and a half year leading to dysfunction in day-to-day activity of the patient. Over past one year, onset of severe headache would now be associated with perception of some strange people (usually 3 in number- 2 adults and a child) with scary faces around the patient. They would be described by the patient to be wearing white kurta-pyjamas like Muslim attire or shirt and pants which would be seen vividly in her clear conscious state not under her control and would last along with headache for around 10-12 hours and would never occur in absence of headache (Figure 1 & 2). She would report about presence of strange people around her which was considered to be part of witchcraft and patient visited multiple faith healers for around 6-8 months but all these efforts were futile. Considering further deterioration in her condition and daily occurrence of these visual phenomena and severe headache over past 2 months help was sought from health facility.

Patient had no abnormality on detailed neurological examination and normal fundus examination. Along with this, detailed psychiatric evaluation was done on which she was found to have normal mental status. She had normal blood parameters on investigation. EEG and brain imaging done (MRI brain) showed normal study.

Patient was diagnosed to be a case of Classic migraine with visual hallucinations with a score of 78 on HIT-6 (Headache Impact Test-6) and severe disability with a score of 78 on MIDAS (Migraine Disability Assessment) (Figure 3) (Table 1). The patient was put on Tablet Propranolol 40mg, Tablet Flunarizine 5mg and Tablet Naproxen 500mg SOS over 3-4 weeks. On follow up she showed complete resolution of visual hallucinations and a subjective reduction of 40% in severe headache intensity and frequency. Subsequently the dose of Tablet Propranolol was increased to 80 mg and Tablet Flunarizine to 10mg per day on which good response (HIT-6 score = 36) was seen over next 6 weeks.

Table 1: HIT - 6 scores over 10 weeks.

Week	1	2	3	6	8	10
HIT-6 Score	78	73	65	54	44	36



Figure 1: The patient described pictorially the formed visual hallucinations comprising of humans as seen in real world wearing kurta-pyjama and shirt-pants resembling an adult male of average built.

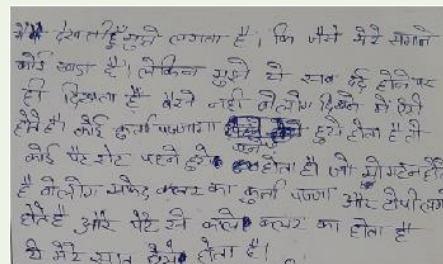


Figure 2: The patient's written account describing the visual perception experienced during episodes of severe headache: - "...when I see I feel someone standing in front of me. But I see these only during headache not otherwise. Those people appear like...some are in kurta-pyjama and some are in pants-shirt. Like Muslim people they are dressed up in white kurta-pyjama and topi (cap) and are of black colour over the belly area... this happens with me..."

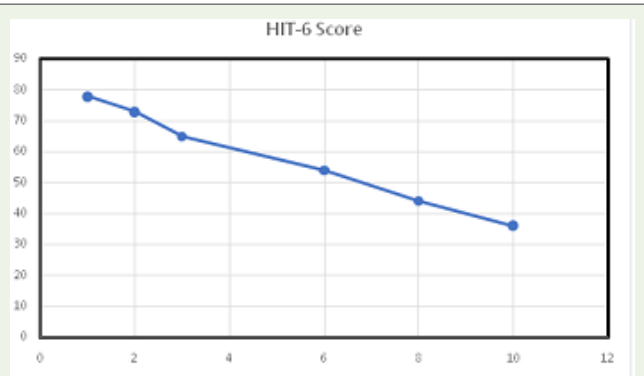


Figure 3: HIT - 6 scores over 10 weeks.

Discussion

Migraine with aura in which aura consists of visual and/or sensory and/or speech/language symptoms, but no motor weakness, and is characterized by gradual development, duration of each symptom no longer than one hour, a mix of positive and negative features and complete reversibility. Migraine with typical aura in which aura is accompanied or followed within 60 minutes by headache with or without migraine characteristics [6].

Diagnostic Criteria

- Attacks fulfilling criteria for Migraine with typical aura
- Headache, with or without migraine characteristics, accompanies or follows the aura within 60 minutes.

Classic migraine is known to have ill formed visual phenomena as a part of aura and presence of formed visual hallucinations is a rare entity. Occurrence of visual hallucination is suggestive of occipital pathology or occipital epilepsy which can present without any motor symptoms. However, visual symptoms in epilepsy generally last less than 5 minutes which start usually in the periphery of one temporal visual field while, the auras in migraine generally start more to the centre and expand to the periphery [7]. It was ruled out in index case by neuroimaging and neurophysiological studies. They may also

indicate peri-ictal psychosis when associated with seizure and hence, psychiatric evaluation was done in the present case.

Another differential of young stroke was also kept which was differentiated from migraine by lack of presence of classic aura features (colours and zig-zag lines) in stroke [8]. Similarly, prolonged and persistent aura which could be seen in cerebral infarction was assessed and ruled out in light of neuroimaging.

Normal fundus examination and absence of monocular visual symptoms differentiated the case from retinal migraine [9]. Moreover, lack of any other psychotic symptoms in form of delusions, disorganized behavior/ speech and socio-occupation decline and non-appearance of visual hallucination in headache free state clearly ruled out psychosis in the index case [10].

The index case after careful assessment and extensive evaluation was diagnosed to be a rare case of Classic migraine with aura (formed visual hallucinations) and had shown good response to Propranolol and Flunarizine.

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