

Case Report

A Rare Subtype of Migraine, Migraine with Brainstem Aura: A Case Report

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Abstract

Migraine is considered the prototype of primary headaches, but migraine isn't just about headaches. Migraine is a set of symptoms in which many visual, autonomic, sensory, and motor complaints are seen. While the classical type of migraine presents with headache attacks, many migraine subtypes with different symptomatology have been described. In this article, we presented a 37-year-old female patient who presented with complaints of vertigo, dysarthria, numbness in the face, and who was diagnosed with migraine with brainstem aura at the end of the evaluations. After getting the diagnosis, our patient was given migraine prophylaxis treatment and her attacks ended. In our article, our aim was to remind that migraine patients can present with different neurological symptoms without headache.

Keywords: Migraine, migraine with brainstem aura, headache.

1. Introduction

Migraine is one of the common primary headache syndromes. Although it was recognized centuries ago, its pathophysiology is still not fully understood today. Even if migraine is defined within the headache diseases, it is actually a set of symptoms that include visual, autonomic, sensory, motor, etc. complaints. Sometimes migraine patients can apply to polyclinics with different symptoms without complaining of headache and this situation is discussed in the new migraine classification. In this case report, we will consider the patient who applied to more than one polyclinic with different complaints without headache and who was diagnosed with migraine with brainstem aura by going from treatment to diagnosis. With this presentation, we aimed to emphasize that migraine patients can present with different symptoms. For this case report, the patient was informed, and authorization was obtained.

2. Case Report

A 37-year-old, married, mother of two children, the female patient presented a week ago with the complaint of sudden onset of dizziness. Our patient, whose profession is medicine, has not been working for a year due to family reasons. Dizziness started suddenly after dinner one evening and the patient's complaints of vertigo for the first few hours diminished, but the

dizziness continued for a week despite. She had occasionally complained of nausea, no vomiting. On physical examination, blood pressure:100/70 mmHg, pulse: 88/min, fever: 36.7 °C. Neurological examination and other system examinations were usual. Hemoglobin: 13.1 g/dL, white blood cell: 8800 / μ L, platelet: 294000 / μ L, Glucose: 86 mg/dL, Beta-HCG were negative on the patient's examinations. The patient was consulted to the Ear Nose Throat outpatient clinic for the differential diagnosis of vertigo, no otologic pathology was detected. A month later, the patient was readmitted because the same complaints persisted, and other neurological symptoms were added. In this application, dizziness periodically occurs at intervals of 10 days, dizziness was initially accompanied by numbness in the right cheek, numbness in the right half of the tongue, slurry in speech, lagophthalmia in the right eye, loss of the right lateral visual field. These symptoms lasted for about 2-3 hours, then gave way to dizziness, nausea, and pain around the right eye and nose. Another attack started 2-3 days after the first attack had passed, and the number of days without symptoms per month was almost non-existent. When the anamnesis was deepened, it was learned that our patient had problems falling asleep and that 3-4 hours a day was spent asleep. She said that until 5-6 years ago, she had occasional headaches, but there was no doctor's consultation, and she did not get any diagnosis about these headaches. Headaches in the past appeared to be a migraine attack. The patient was consulted to the neurologist due to neurological symptoms and to the ophthalmologist due to the complaint of loss in the visual field. Visual field test

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and optical disc cube test were performed by ophthalmologist, no pathological findings were detected. Brain Magnetic Resonance Imaging (MRI), carotid artery doppler ultrasonography and facial electromyography were performed with neurologist recommendation, and no pathological findings were detected. Considering the patient's past classical migraine attacks, propranolol prophylaxis was started with the preliminary diagnosis of migraine with brain stem aura. The patient developed bradycardia due to propranolol with some reduction in attack severity, so the treatment was replaced with flunarizine. But the patient could not tolerate the side effects of flunarizine as nausea, weakness, and drowsiness. On top of that, duloxetine 30 mg treatment was started, and the patient with a decrease in the frequency and severity of the attack was treated with in the 2nd month the dose of duloxetine was increased to 60 mg. In the 3rd month with 60 mg duloxetine treatment the patient's attacks decreased to once a month, and from the 6th month it was completely gone. Treatment, after the 9th month, duloxetine was discontinued with a reduced dose. It was observed that the patient did not develop attacks during follow-up.

3. Discussion

Migraine is a fairly common disease that affects about 15% of the world's population [1]. Although it was recognized as the prototype of primary headache syndromes many years ago, its etiology and pathophysiology are still not fully understood today. Migraine is not only a headache, but also a set of symptoms that include visual, autonomic, sensory, motor, etc. complaints. In our case, the patient's complaints were vertigo and hemifacial neurological symptoms. Similarly, in the case published by Duman et al. in 2021, a 29-year-old female patient presented with speech impairment [2]. In another case report in the literature, two cases with attacks starting with double vision and loss of visual field and presenting with dizziness [3], and another case with episodic dizziness and hemiplegia were shared [4]. It is possible to reproduce the examples related to these types of migraine, which are rare compared to the classical type of migraine.

There are two main types of migraine, migraine without aura and migraine with aura [5]. These two subtypes are seen in 90% of migraine cases. However, due to its inability to meet different symptoms and conditions, International Headache Society presented The International Classification of Headache Disorders-3 (ICHD-3) classification in 2018 (Table 1). In migraine without aura, there is a headache that lasts 4-72 hours, is unilateral, moderate or high severe, pulsatile in nature, increases with physical activity, accompanied by nausea, photophobia and/or phonophobia. In classical migraine with aura, the attack ends with a prodrome period lasting 24-48 hours, followed by an aura period lasting between 5-60 minutes, a headache period of 4-72 hours and a

postdrome period of 24-48 hours. During the prodrome period, symptoms such as weakness, desire to eat or loss of appetite, mood changes, frequent urination may occur. Aura may present with visual complaints such as flashes, reflections or loss of visual field, hearing-related symptoms, speech difficulties, pricking/tingling in the face or body, weakness. A period of headache begins, especially in the temporoparietal or orbital area, usually unilateral, throbbing, moderate/severe, causing light and sound sensitivity, increasing with movement, accompanied by nausea and vomiting. When the pain period is not treated, it usually ends on its own within 4-72 hours. The headache is followed by the postdrome period when the person feels tired and exhausted. But attacks may not always occur in this order. Up to 5% of migraine patients may experience aura without headache [6]. In addition, up to 40% of people who have previously been diagnosed with migraine may experience aura without headache in the following years. This type of migraine is classified as "Typical aura without headache" in the ICHD-3 classification published by the International Headache Society. The importance of this class of disease is the difficulty encountered in diagnosis since it is not a headache. Although migraine auras are temporary and reversible, they are troublesome periods for the patient and failure to make a correct diagnosis may lead to excessive examination and unnecessary treatments. In addition to the typical aura without headache, ICHD-3 also includes classes such as migraine with brainstem aura, hemiplegic migraine, retinal migraine, possible migraine, and migraine-related episodic syndromes that show different symptoms other than headache. In migraine with brainstem aura, dysarthria, vertigo, hearing impairment, tinnitus, ataxia, double vision, and consciousness changes can be seen in addition to classical type auras [7,8]. In our case, vertigo, dysarthria, visual field loss was seen. In addition to these, reproducible motor power loss occurs in hemiplegic migraine. Episodic syndromes are divided into such subclasses as cyclic vomiting syndrome, abdominal migraine, paroxysmal vertigo, paroxysmal torticollis.

4. Conclusion

Migraine is encountered with many different clinics. Although the diagnosis is easy when the headache is very typical in migraine attacks with and without classical aura, the diagnosis becomes difficult, and the diagnosis time is prolonged especially in patients who present with different auras and symptoms without headache. Different types of migraine should be kept in mind in visual, autonomic, sensory and motor complaints of unknown cause.

Table 1. ICDH-3 Migraine classification [5].

<p>1. MIGRAINE</p> <p>1.1 Migraine without aura</p> <p>1.2 Migraine with aura</p> <p>1.2.1 Typical migraine with aura</p> <p>1.2.1.1 Typical aura with headache</p> <p>1.2.1.2 Typical aura without headache</p> <p>1.2.2 Migraine with brainstem aura</p> <p>1.2.3 Hemiplegic migraine</p> <p>1.2.3.1 Familial hemiplegic migraine (FHM)</p> <p>1.2.3.1.1 Familial hemiplegic migraine type 1 (FHM1)</p> <p>1.2.3.1.2 Familial hemiplegic migraine type 2 (FHM2)</p> <p>1.2.3.1.3 Familial hemiplegic migraine type 3 (FHM3)</p> <p>1.2.3.1.4 Familial hemiplegic migraine, other loci</p> <p>1.2.3.2 Sporadic hemiplegic migraine (SHM)</p> <p>1.2.4 Retinal migraine</p> <p>1.3 Chronic migraine</p> <p>1.4 Migraine complications</p> <p>1.4.1 Migraine status</p> <p>1.4.2 Persistent aura without infarction</p> <p>1.4.3 Migraine infarction</p> <p>1.4.4 Migraine aura-triggered seizure</p> <p>1.5 Probable migraine</p> <p>1.5.1 Probable migraine without aura</p> <p>1.5.2 Probable migraine with aura</p> <p>1.6 Episodic syndromes that may be associated with migraine</p> <p>1.6.1 Recurrent gastrointestinal disturbance</p> <p>1.6.1.1 Cyclical vomiting syndrome</p> <p>1.6.1.2 Abdominal migraine</p> <p>1.6.2 Benign paroxysmal vertigo</p> <p>1.6.3 Benign paroxysmal torticollis</p>
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Conflict of Interest

The authors declare no conflict of interest.

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