Case Report

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A case of late-onset sporadic hemiplegic migraine

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Abstract

Sporadic hemiplegic migraine is a rare form of migraine headache with aura. We herein report a case of visual impairment, dizziness, and motor weakness in a patient who had experienced recurrent headache attacks with aura including flickering spots and blurred vision for 20 years, Electroencephalography, cerebrospinal fluid analysis, and brain imaging findings were normal. The patient gradually recovered after treatment with nonsteroidal anti-inflammatory drugs and flunarizine.

Keywords

Headache, sporadic hemiplegic migraine, flunarizine, aura, motor paralysis, case report

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Introduction

Hemiplegic migraine (HM) is a subtype of migraine with aura that presents with motor paralysis during the aura phase. Whitty[1] first described this syndrome in 1953. Sporadic HM (SHM) is defined by the usual symptoms of HM but with no history in first-degree relatives. According to a study by Lykke et al.[2] in 2002, the prevalence rate of SHM was 0.01% in Denmark. Diagnosis of HM relies on a description of the aura and the exclusion of symptomatic causes according to the guidelines established by the International Classification of Headache Disorders, 2nd Edition.[3] The present case highlights the difficulty of establishing a clinical diagnosis of SHM, especially in patients of advanced age, because its symptoms can mimic those of stroke.

Case report

A 46-year-old woman presented to our hospital with weakness on the right side of her

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body. Before presentation, she had experienced flashing light in her bilateral visual fields and blurred vision for about 30 minutes. She had then developed a left frontal throbbing headache accompanied by phonophobia, nausea, and vomiting. The motor weakness lasted 3 hours. The headache was partly relieved with rest, and the patient completely recovered after 7 days. She claimed to have had one similar experience 6 months previously in which the motor weakness had lasted 30 minutes.

The patient had a history of headaches preceded by a flashing light sensation starting at the age of 23 years. These symptoms presented about six times every year with occasional abnormal sensations in her limbs. She had no history of fever, seizure, trauma, or dehydration before the headache. She also had no hypertension, diabetes mellitus, cardiac disease, coagulation disorder, or proximal muscle weakness. The patient maintained good living habits. No first- or second-degree relative had been affected by such headaches. The findings of a general physical examination were normal. A specialized nervous system examination revealed hemiparesis on the right side of her body. Her muscle strength was grade 4 on manual muscle testing. Routine laboratory examination findings were normal. Her cerebrospinal fluid pressure was 150 mmH_2O. The findings of an electroencephalogram and imaging examination were also normal.

While hospitalized, the patient was treated with celecoxib at a dosage of 400 mg/day and flunarizine at a dosage of 10 mg/day. Her condition improved, and she was discharged and treated with flunarizine for 2 months. About 6 months later, the patient reported no further migraine attacks.

This study was approved by the Ethics Committee of Suzhou Ninth People's Hospital. The patient provided written informed consent for publication.

Discussion

The patient described in this report had experienced migraine attacks with aura every 2 months for more than 20 years. About 6 months before presentation, she had experienced headache accompanied by hemiplegia. Before the headache, she had experienced nausea and vomiting. According to the established diagnostic criteria, we diagnosed her with SHM. The clinical diagnosis of SHM is difficult to establish, which was especially true in the present case, because its symptoms can mimic stroke. Therefore, the clinician should first exclude stroke in older patients who present with weakness of one side of the body or other symptoms such as facial paralysis.

Most patients' brain imaging scans are normal. Cortical diffuse edema may be found during the attacks. Eom et al.[4] observed mildly decreased uptake in the left frontoparietal vertex with Diamox 99mTc-HMPAO SPECT in a patient with right hemiplegia. Our patient showed no abnormalities on magnetic resonance imaging (MRI), including magnetic resonance angiography and magnetic resonance venography, on hospital day 5. Pelzer et al.[5] described reversible computed tomography or MRI abnormalities during and shortly after HM attacks, but permanent computed tomography or MRI abnormalities are rare.

The principle of headache treatment is to relieve pain and reduce attacks. Flunarizine, verapamil, and sodium valproate are reportedly effective as prophylactic treatment.[5] The patient in the present case was treated with celecoxib and flunarizine in the acute phase. After the patient was discharged, she continued to take flunarizine at 10 mg/day for 2 months as prevention. After about 6 months had passed, no attacks were reported. Flunarizine is a calcium antagonist that has been speculated to

prevent migraine attacks by blocking intracellular calcium influx.[6]

Conclusion

SHM is a rare subtype of migraine headache. The diagnosis requires patience and careful examination in older patients. Flunarizine effectively reduced the frequency of migraine headache in our patient.

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