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Migralepsy in pregnancy: clinical overlap between migraine with aura and epileptic seizures

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Introduction

Migralepsy is defined by the International Classification of Headache Disorders, 3rd edition (ICHD-3), as an epileptic seizure occurring during or within one hour after a migraine aura. This rare condition represents a diagnostic challenge, particularly during pregnancy, when hormonal and pharmacokinetic changes may influence both migraine and seizure frequency.

Case presentation

A 28-year-old woman at 35 weeks of gestation was referred for evaluation of poorly controlled epilepsy and migraine. She had a history of migraine with aura since the age of 11 years, initially characterized by pulsatile frontal headaches that later evolved into occipital pain radiating to the frontal region and left eye, associated with phonophobia. Her aura consisted of scintillating scotomas and bright lights in the upper visual field lasting 30–60 minutes, occasionally accompanied by transient left-sided paresthesia and weakness. At 19 years of age, she experienced her first epileptic seizure. During the current pregnancy, she reported worsening headache frequency and two to four seizures per week despite treatment with levetiracetam 1,250 mg/day. Seizures were characterized by impaired awareness, tonic posturing of the upper limbs, and postictal confusion. She consistently reported that aura and headache preceded seizure onset. Previous treatments included carbamazepine, without adequate seizure control, and valproate, which was discontinued. Neurological examination was unremarkable. Brain magnetic resonance imaging showed nonspecific white matter hyperintensities consistent with migraine-related changes, and a previous electroencephalogram was normal. Due to persistent seizures, lamotrigine and adjunctive clobazam were initiated, and repeat EEG and neuroimaging studies were requested. An occipital nerve block was also performed.

Discussion

This case highlights the clinical overlap between migraine with aura and epilepsy. Visual, sensory, and transient motor symptoms were consistent with migraine aura, whereas impaired awareness, tonic activity, and postictal confusion supported an epileptic etiology. The temporal relationship between aura and seizure onset strongly suggests migralepsy. Differential diagnoses include prolonged migraine aura, hemiplegic migraine, and occipital lobe epilepsy.Clinical findings, combined with complementary diagnostic tests, play an important role in establishing the diagnosis

Conclusion

Recognition of the temporal relationship between migraine aura and epileptic seizures, along with careful assessment of their semiological characteristics, is essential for the diagnosis of migralepsy. Early identification may facilitate appropriate management and reduce diagnostic delays, particularly in complex clinical settings such as pregnancy.

Keywords:
Migralepsy
Migraine with aura
Epilepsy
Pregnancy
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