Headache Medicine

Migraine aura mimics: when to suspect? Cases presentation

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Categoria: Cefaleias Secundárias

Introdução

Migraine aura (MA) refers to a transient neurological symptom that accompanies a headache in 30% of patients with migraine. The onset is gradual, disappearing within 5 to 60 minutes and visual aura occurs in over 90% of MA patients. Spreading cortical depression forms the electrophysiological basis of migraine aura phenomena: vascular changes associated with initial hyperemia followed by decreasing blood flow in the corresponding cortex. Differential diagnosis of migraine aura is wide, encompassing transient ischemic attack (TIA), strokes, seizure, ocular pathology, psychiatric disorder and others secondary structural pathology, including arteriovenous malformation (AVM). The medical literature reccurently reports association between migraine aura and AVM which describes in more than 58% of women. Furthermore, the overwhelming correlation between the side of the headache, aura and AVM is essential in diagnostic suspicion.

Objective

To describe potential differential diagnoses for migraine-like presentations related to AVM.

Case 1: a 41-year-old woman had been experiencing migraine aura since 12. The cephalalgia was pulsatile, always in the right frontotemporal region, severe intensity, two hours of duration and three times per week. Crisis episodes were associated with nausea, vomiting, photophobia, and phonophobia, often preceded by visual aura with a fortification spectrum and perioral paresthesia during 20 minutes always on the left side.

Neurological examination outside the crisis period was normal and migrainous symptoms presented a limited response to prophylactic medications and worsening to acute therapy with ergotamines and triptans while frequent episodic migraine was hypothesized. At 32, afterward sharpening headache with lipothymia, a cranial computed tomography angiography revealed an extensive right parietoccipital AVM which involved the branches of the middle and anterior cerebral artery with superficial drainage. Targeted embolization was indicated to control symptoms with reduction in frequency and intensity of pain as well as visual aura after four embolization sessions.

Case 2: a 66-year-old woman, smoker, systemic hypertension, previous family history of hemorrhagic stroke, developed migrainous headache since thirties. The pain was always on the left temporoccipital region, throbbing, during 24 to 48 hours, severe intensity, accompanied by nausea and vomiting, once a week, occasionally preceded by visual aura with shimmering scotomas and right homonymous hemianopsia.

Analgesic infiltration for cervicogenic pain and oral non steroidal anti inflammatory to infrequent episodic migraine controlled the symptoms. Around 58, she developed exacerbated migraine-like symptoms with worsening when taking serotonergic agonists. Then, cranial arteriography identified a left temporoccipital AVM involving the left middle and temporal cerebral arteries with sigmoid sinus drainage. The patient gained relief upon control of cerebrovascular risk factors, multidisciplinary monitoring and periodic neuroradiological accompaniment opted for conservative approach and neurological surveillance.

Conclusion

Both cases fulfilled diagnostic criteria for migraine aura, but only the case one performs the International Classification of Headache Disorders (ICHD-3) criteria for secondary cephalalgia attributed to AVM. Although, the second case arrived with a clinical characteristics of vascular disorder etiology.

Therefore, they highlight the importance of considering differential diagnoses of migraine aura according to presentation patterns, such as affect the same side, age of onset, drug response and evolution of AVM associated with migraine. Thus, AVM's intervention alternatives must be carefully chosen according to individual risks, benefits and severity of symptoms, which studies are inconclusive in relation to reducing risks for outcomes such as strokes.

Palavras-chave: Migraine; Migraine-like; Aura; Aura mimics; Arteriovenous Malformations.