

Headache

## MIGRAINE WITH AURA ATYPICAL PERFUSION MANIFESTATION

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**Background.** Migraine with aura may be confused with a stroke. Magnetic resonance imaging is an important tool for the differential diagnosis. Cerebral hypoperfusion has been described in classic migraine, mainly during the aura.

**Case Report.** A 47-year-old male with an unremarkable past medical history. After sneezing, he developed a left hemi hypoesthesia, bitemporal vision loss, photopsia and some distortion in the position of letters and words. This lasted less than one hour and it was followed by severe headache.

A magnetic resonance angiography was performed during the headache. It showed a left hemispheric hypoperfusion that did not correlate with the symptoms described by the patient.

**Conclusion.** It is believed that during the aura, cerebral blood flow decreases, leading to hypoxia and decreased cellular energy generation, this metabolic alterations define the symptoms of the patient.

In our case, we documented brain hypoperfusion during the headache in the ipsilateral brain hemisphere to the symptoms, which has no clinical correlation. This condition could be due to spasm in the capillary arteries, and it may persist and influence the clinical manifestations during the headache phase in migraine with aura. A state of generalized cerebral hyperperfusion has been suggested, and there may be a coexistence of both phenomena for some period.

This may open a new line of research regarding the pathophysiology and vascular changes of migraine with aura.

