

# Atypical migraine aura in left insular telangiectasic malformation

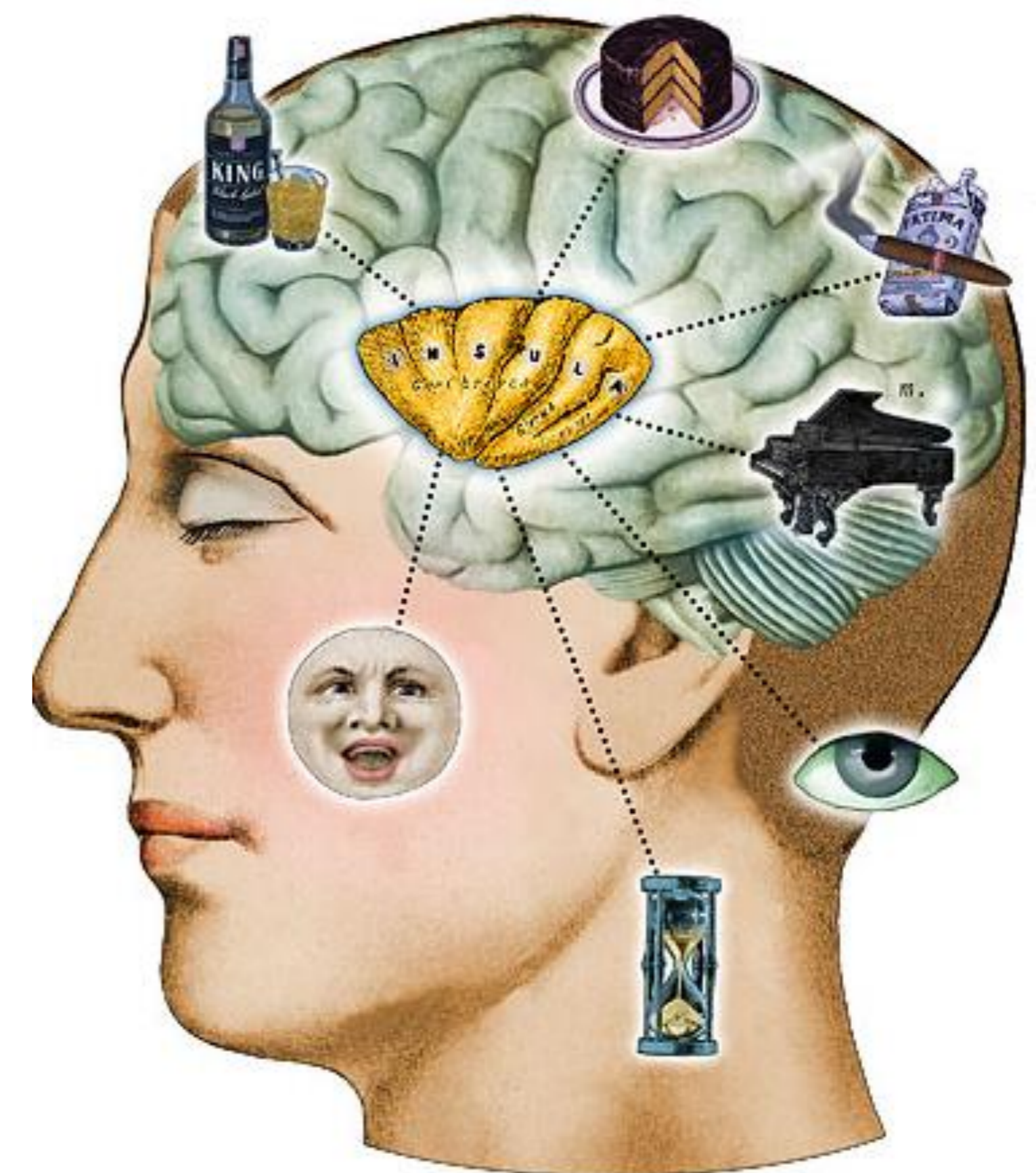
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**Abstract:** We report the case of an atypical migraine aura characterized by the progression of visual, sensitive and emotional manifestations, in a female adolescent with left insular telangiectasic malformation. Psychological features are unusual in adult migraineurs, but they're more frequent during adolescence. These particular clinical characteristics seem to be related to the typical psychological profile and hormonal balance of this age<sup>1</sup>, but the real underlying pathway is still not completely understood.

**Material, methods and results:** A sixteen years old woman suffered from migraine with episodes of pulsating severe headache on one side of the head, usually the left side, lasting 4-5 hours, with nausea or vomiting, phonophobia and photophobia. During the last months every migraine attack was preceded by aura with visual disturbances (zig-zag lights moving in the right visual hemifield lasting 15 minutes) followed by paresthesias in the right upper limb lasting 10 minutes, associated in the last 5 minutes with unmotivated crying and anguish. The aura symptoms always followed the same progression. Migraine attacks were responsive to triptans. The brain MRI study revealed a single millimetric insular lesion on the left side, suggestive of a telangiectasic malformation, while electroencephalography was normal.

**Discussion and conclusions:** We hypothesize that in our young patient the cortical spreading depression wave underlying migraine aura reaches, when on the left hemisphere, the insular vascular malformation that in turn may act as a trigger for the psychological manifestations. The insula is a brain region that is crucial in our understanding of what it feels like to be human: it is involved in positive and negative emotions and appears to modulate feelings (see fig. 1). It is well known that vascular malformations trigger aura in migraineurs, particularly when localized in the occipital lobe<sup>2,3</sup>. This could be the first evidence of a malformation which influences not the beginning but the diffusion pathway of the cortical spreading depression.



**Fig. 1:** Insular functions (modified from 'The New York times' Feb 2007)

## References

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