Migrainous Infarction: a rare condition associated to cerebral vasospasm?

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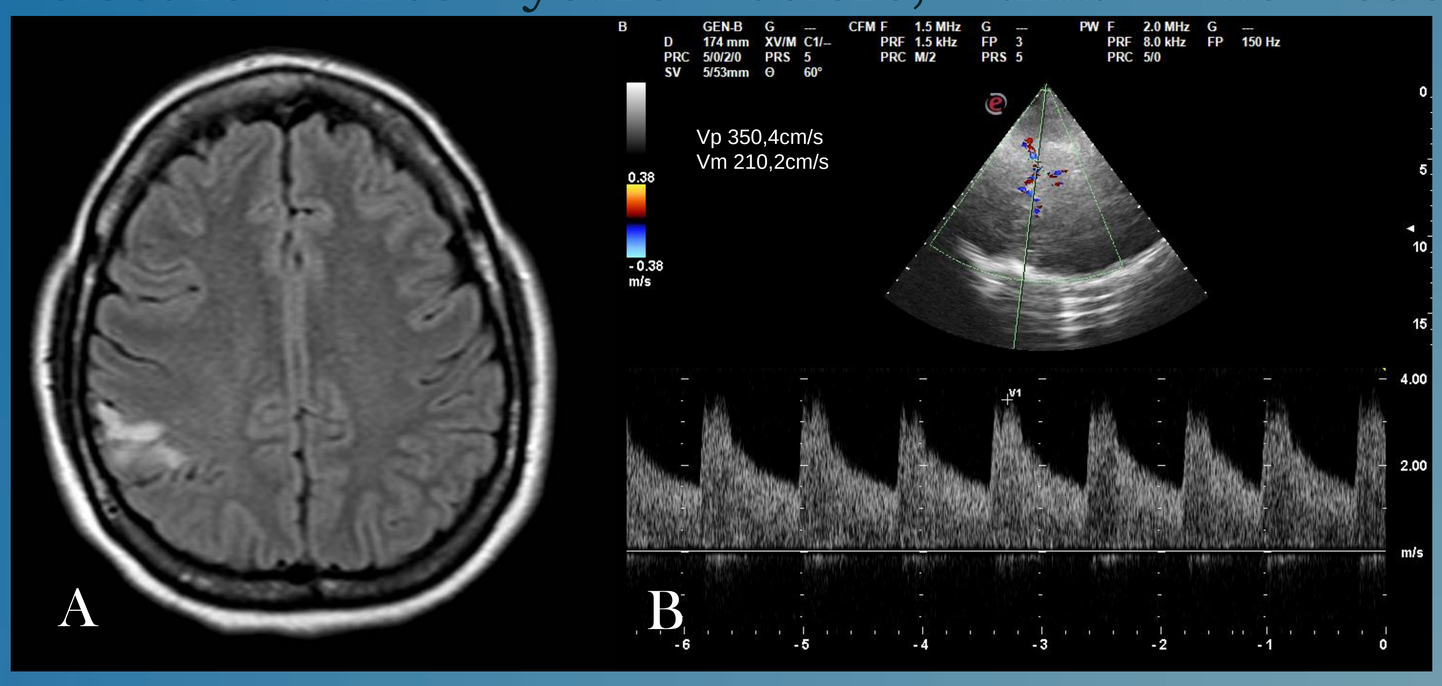
Background

Migrainous cerebral infarction represents a rare complication of migraine. It accounts for about 0.5%–1.5% of all ischemic strokes, being more common in women and young people –untill the 14% of young ischemic strokes. Migrainous stroke is classically defined as a prolonged migrainous aura symptom associated with an ischaemic brain lesion confirmed by neuroimaging.

Case report

A 44-year-old female with medical history of migraine with aura presented at emergency department due to difficult in oral expression, left facial tingling and left arm weakness following a prolonged migrainous attack. The patient had no history of vascular risk factors except for paroxysmal atrial fibrillation after percutaneous PFO closure three years before, that was successfully treated and no longer detected at repeated Holter-ECG recordings.

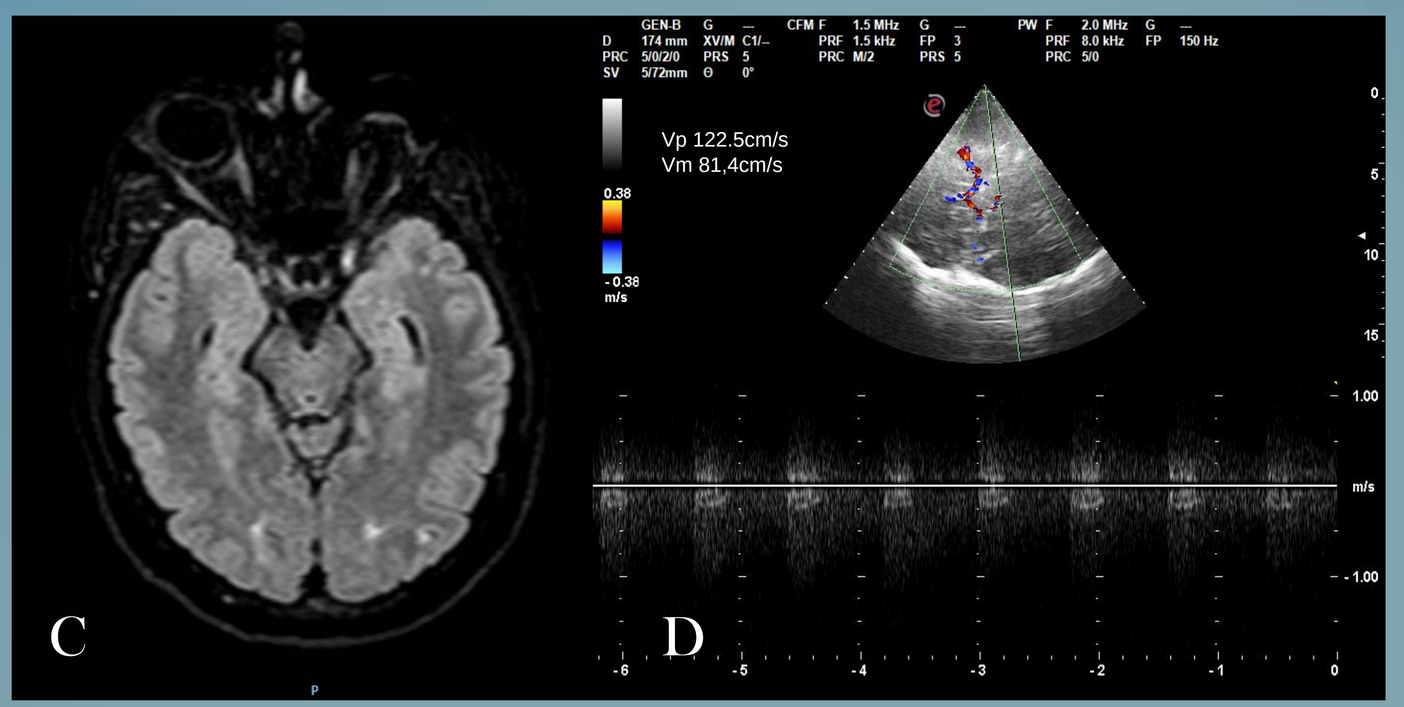


MRI

Right fronto-parietal ischemic lesion on FLAIR images at admission (A). Control MRI performed after prolonged episode of aura with visual disturbances during hospitalization: new bilateral occipital focal hyperintesities (C).

TCCD

Increased flow velocity with turbulence in the right Ml-MCA segment at admission (B). Control TCCD performed after migraine with prolonged visual aura: mild increased flow velocities and musical murmurs in the top of the basilar segment (D).



Treatment and follow-up

Aspirin was started and verapamil
was used for migraine prophylaxis and vasospasm. At discharge the patient recovered from neurological deficits. 2 week follow-up TCCD revealed normal flow velocity.

Discussion

Migrainous cerebral ischemia is a rare entity and the pathogenesis is not well-recognized even if arterial vasospasm, cortical spreading depression, hemodynamic changes, and increased platelet aggregation are supposed to have a role. In our patient, we found a temporary alteration in TCCD suggestive of vasospasm, so we support the changes in cerebral blood flow as the possible mechanism of stroke. In these cases the use of vasoconstrictive drugs –such as ergotamines and triptans- should be avoided and calcium channel blockers or angiotensin receptor blockers might be the migraine prophylaxis choice.