

Brainstem ischaemic stroke occurring after a migrainous attack: a case report

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INTRODUCTION

Migraine, especially with aura (MA), is considered to be a cerebrovascular risk factor associated with about twofold greater probability of ischemic stroke. Many studies suggest that a prothrombotic condition characterizes migraine attacks, with a predisposition to cerebral ischemia, particularly in MA (1). Even if rare, cases of lacunar infarcts following migraine attack have been described. Headache attributed to ischaemic stroke develops in very close temporal relation to other symptoms of ischaemic stroke and significantly improves in parallel with stabilization or improvement of the clinical condition (2).

We report the case of a male migraineur who developed a brainstem ischaemic stroke after a migrainous attack. A 28-year-old right-handed man was admitted to our outpatient clinic reporting severe headache followed by gait instability, nausea, vomiting and sensory loss of the right limb and the left face. His past medical history was remarkable for migraine both with/without aura with onset at age 26. He presented strictly left-sided attacks of severe, throbbing/pulsating headache that increased by physical activity and usually lasted 24 h. The headache attacks were accompanied by photo and phonophobia. These symptoms were sometimes improved by taking aspirin. The attacks occurred sporadically (1-2 times per month) and in part were preceded by visual aura, described as unformed flashes of light lasting for about 30 min. The patient presented a family history of cluster headache (father). Risk factors included obesity and nicotine abuse.

The neurological examination showed gait instability with moderate ataxia, left Horner syndrome, diplopia in leftward gaze, left facial hypoesthesia. MRI study, performed two days after the symptoms onset, revealed high signal on T2-weighted and diffusion-weighted imaging in the left posterior medulla (fig.1 a,b) The patient performed carotid doppler ultrasound, transthoracic echocardiography, transcranial doppler, trombophilia screening and autoantibody pattern: no significant results were detected. The patient's symptoms improved immediately after treatment with antiplatelet agents.

DESCRIPTION OF THE CASE

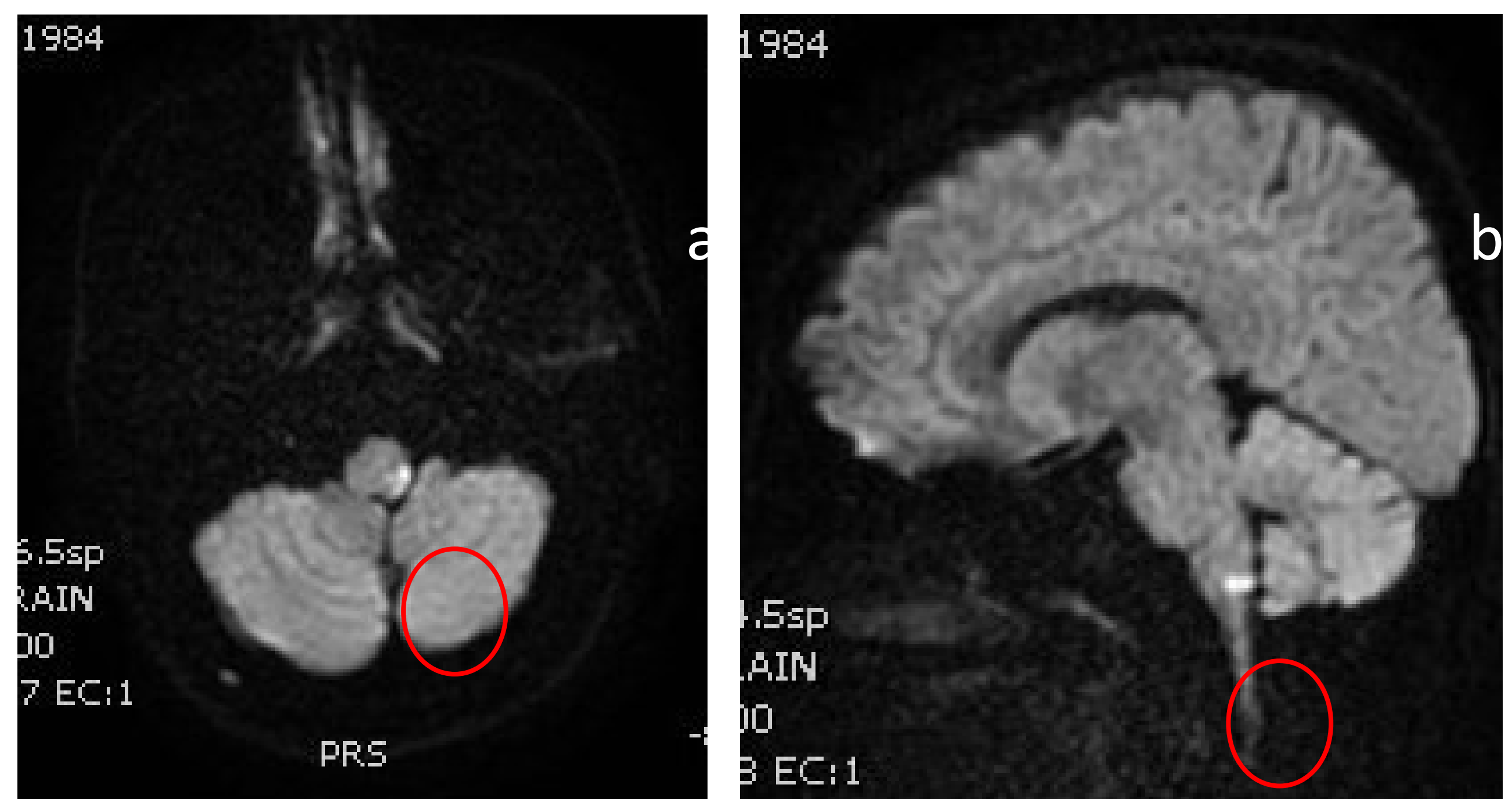


Fig. 1: DWI brain MRI imaging: trasverse (a) and sagittal scans (b)

DISCUSSION AND CONCLUSIONS

The pathophysiological mechanisms linking migraine attacks and stroke in the specific case of migrainous infarction, are not still clear. According to the most influential views (3), a critical role could be assigned to the interplay between cortical spreading depression and ischaemia and their reciprocally influences (headache → ischaemia → headache).

In conclusion, the migraine infarction, even if rare, is to be considered a possible complication of migraine with aura. Therefore, attention should be paid to prolonged or otherwise atypical aura that could mask a brain ischaemia.

References:

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- (3) Edgar Santos, Renan Sanchez-Porrás, Christian Dohmen, Daniel Hertle, Andreas W Unterberg and Oliver W Sakowitz Spreading depolarizations in a case of migraine-related stroke *Cephalalgia* 32(5) 433–436 DOI: 10.1177/0333102412441414