Multiple intracranial stenoses: can we find the guilty one?

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Abstract

Patient was a 65-year-old men without relevant medical history or known vascular risk factors.

He presented to the ER 2 days after a transitory episode of dysarthria and right-sided hemiparesis that lasted for less than 30 minutes. Neurological examination was normal. Brain CT showed only diffuse leucoariosis and a right lenticulo-radiate lacunar sequel.

Multiple arterial stenoses were found on cervical/transcranial doppler ultrasound (C/TCD), including criteria for a 50% stenosis of the right cervical ICA, 70% stenosis of the right terminal ICA, 50% stenosis of the left terminal ICA, 70% stenosis of the basilar artery and 50% stenosis of the left PCA. Extensive workup was taken, including 24h-Holter, transthoracic echocardiography, ABPM, glycemic/lipid profile, thrombophilia, immunological and CSF screen; everything was normal. The patient was started on Atorvastatin 40mg and Clopidogrel.

He was again admitted in the ER, about 4 months later, with an acute isolated left VI nerve paresis, and was discharged on dual antiplatelet treatment (AAS 150mg and Clopidogrel 75mg), with spontaneous improvement over the following weeks.

The patient returned to the ER about a year later with an acute left-sided ataxic-hemiparesis syndrome persisting for the previous 24 hours. A brain MRI was performed, disclosing extensive microangiopathic brainstem and subcortical sequelae, plus an acute paramedian right pontine lacunar infarct.

C/TCD reevaluation suggested a progression of the stenoses previously documented in the left PCA and basilar artery, while remaining stable in the carotid axes. He remained treated with Atorvastatin 80mg, AAS and Clopidogrel, and was started on Enalapril + Amlodipine. Marked improvement was seen in the subsequent weeks, with no further events reported in a 6-month follow-up.

Conclusion: Can the patient be further studied regarding etiology? Could all 3 symptomatic episodes be related to the basilar artery stenosis? Should the patient be (or have been) submitted to intracranial stenting of the basilar artery? Could the treatment plan be optimized with any other antiplatelet/statin combination?