Internuclear ophthalmoplegia: a subtle neurological sign of a stroke

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Introduction: First described by Jean Lhermitte, internuclear ophthalmoplegia is a disorder characterized by the inability of horizontal gaze conjugation with weakness in the adduction of the affected eye and horizontal nystagmus in abduction of the contralateral eye. This entity is commonly associated with a lacunar brainstem stroke, but also with multiple sclerosis, infection, trauma or tumour involving the medial longitudinal fasciculus.

Case Report: A 71-year-old man went to the emergency department with binocular diplopia with 12 hours of evolution. He had personal antecedents of chronic hepatic disease, Child Pugh B, probably with alcoholic etiology. Upon physical examination, he was afebrile, normotensive, with limitation in adduction of the left eye and right eye nystagmus in conjugate gaze to the right, with no other changes. Analytically, he had thrombocytopenia of 57000/µL, the electrocardiogram showed no dysrhythmia and the CT was normal. The diagnosis of an ischaemic stroke of the posterior circulation was assumed, involving the medial longitudinal fasciculus. The patient was admitted for surveillance and stratification of cardiovascular risk. He experienced full recovery in 24 hours. Doppler ultrasound of the cervical and intracranial vessels showed severe focal stenosis of the left posterior cerebral artery and right and left carotid stenosis, estimated at 30 and 50%, respectively.

Conclusion: Internuclear ophthalmoplegia is a discreet and informative sign whose clinical recognition is essential for an accurate topographical diagnosis.