Isolated Internuclear Ophthalmoplegia (INO) caused by a lacunar infarction: a case report and review of the literature

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INTRODUCTION

Midbrain and pontine strokes are well defined in literature as etiologies of internuclear ophthalmoplegia (38%), multiple sclerosis (34%) or unusual cases (28%). Only 30-52% of these ischemic lesions could be identified by MRI. Our objective is taking into consideration that lacunar brainstem infarctions with positive MRI can be also a cause of isolated INO.

CASE REPORT

We present a 72 year-old male with mRS=0 and history of hypertension for which he was taking amlodipine and a previous left ischemic oculomotor palsy totally recovered for which he was on clopidogrel and pantoprazole daily. He was presented at the emergency room with sudden binocular diplopia 3 hours after onset.

On examination, he showed normal gaze in primary position, restriction of the right eye adduction and left eye abduction showed torsional nystagmus. Convergence was impaired. The rest of the neurological examination was unremarkable. CTA showed no hemorrhage, great vessel occlusion nor intracranial stenosis. He was admitted to the stroke unit where no arrhythmias were detected on the monitoring during one day. Hypertensive cardiopathy was seen on the transthoracic echocardiogram but no embolic sources were found. Finally, MRI showed a right midbrain lacunar acute ischemic stroke. He was discharged home 2 days later on clopidogrel. At 90 days, the patient was totally recovered (mRS=0).

Images: MRI in FLAIR (1), GRE (2), DWI (3) sequences showing a right midbrain lacunar acute ischemic stroke

DISCUSSION

Isolated INO can be the sole manifestation of lacunar pontine stroke targeting longitudinal medial fasciculus, but it is occasionally located in midbrain. The underlying stroke subtype is usually small artery occlusion or lacunar disease. Many reports of INO, WEBINO and third nerve deficiencies are found in literature but not many associate positive MRI findings. It generally carries good prognosis and usually resolves over a few to several months.

REFERENCES

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