

Gaze-Evoking Monocular Scintillation in Orbital Tumor

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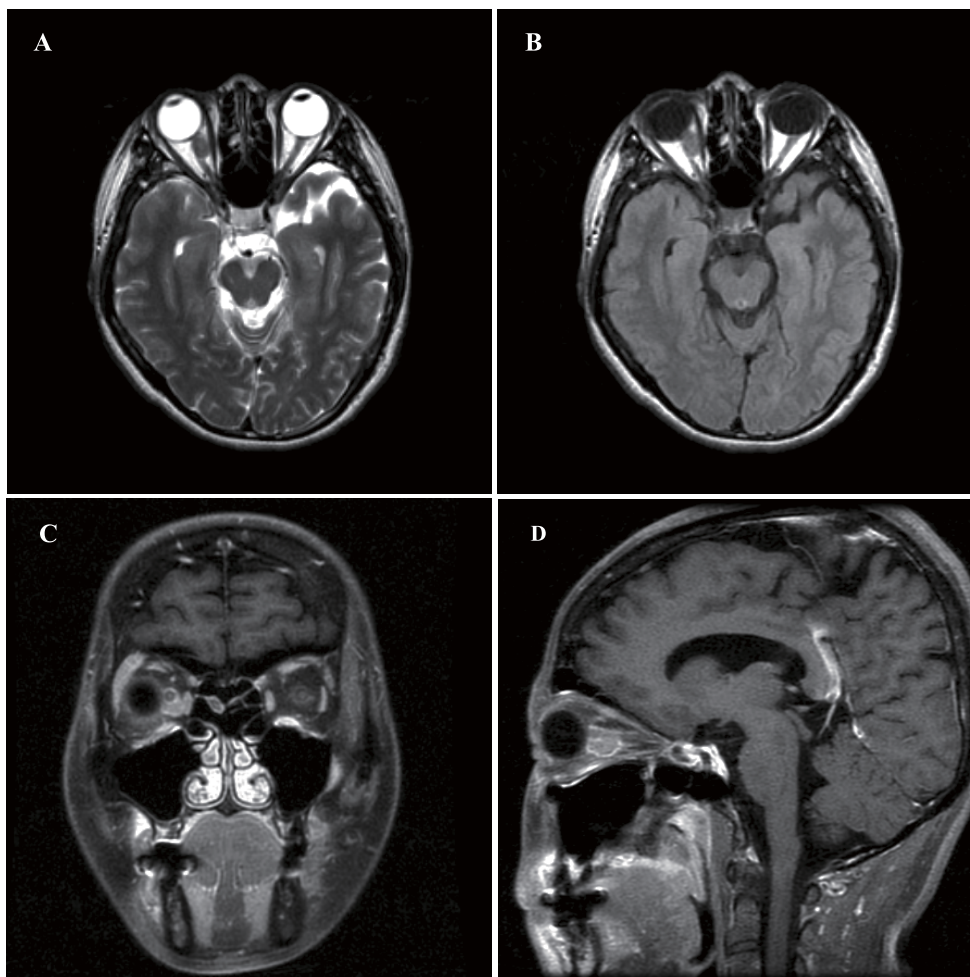


Figure 1. MR image revealed a oval mass with intermediate T2-weighted image (Figure A), low T1-weighted image (Figure B) and homogeneous enhancement inferomedial aspect of optic nerve and lateral aspect of medial rectus muscle(Figure C and D).

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A 30-year-old woman previously in good health presented to our neurological clinic with a chief complaint, during the past four months, of seeing images like stars in a dark sky in the right visual field when gazing toward the right. The patient had no other visual symptoms. She denied headache, diplopia, blurred vision, eye pain, ptosis or edema of the eyes. On neurological examination the patient was alert and fully oriented. Ocular movement was unrestricted and within the normal range. Visual acuity was normal (right:1.0; left:0.7). Pupil size was isocoric (2.5mm/2.5mm) and light reflexes were prompt bilaterally. A perimetry test was normal, revealing no visual field defects. On fundoscopic examination the optic disc had a normal appearance. There was no ptosis or chemosis. Muscle strength and sensory systems were all intact. Brain MRI revealed an oval space-occupying lesion ($1.2 \times 0.9 \times 0.7$ cm) with an intermediate signal in T2-weighted MR images and a low intense signal with homogeneous enhancement in T1-weighted images at the intraconal space of the right orbit, abutting the inferomedial aspect of the optic nerve and the lateral aspect of the medial rectus muscle (Figure 1). The differential diagnosis for the lesion included optic nerve sheath meningioma, lymphoma and inflammatory pseudotumor. The patient wished to receive no further evaluation or treatment. We suggested that she undergo a follow-up orbital MRI.

The differential diagnosis for monocular scintillation includes embolism, increased intracranial pressure, optic neuritis, giant cell arteritis or other vasculitides, retinal migraine, anterior ischemic optic neuropathy, increased blood viscosity, and optic disc drusen⁽¹⁾. This condition

may appear bilaterally, or last for a period of time and be associated with other symptoms such as headache or blurred vision. Our patient with the orbital mass has monocular scintillation during rightward eye movement. Possible explanation is transient ischemia resulting from a mass-effect compression of the retinal artery or nerve in rightward position of right eye. The similar condition of gaze-evoked amaurosis is reported in some patients with optic nerve sheath meningioma, optic nerve glioma, orbital hemangioma, osteoma, metastasis and granular-cell myoblastoma and angiomyoma⁽²⁾. These reported patients are usually associated with other findings such as ophthalmoscopic examination abnormalities, limited eye movements, blurred vision or proptosis⁽³⁾. Our patient demonstrates that gaze-evoked monocular scintillation can be an early, isolated symptom of an orbital mass, which leads us to recommend that an orbital CT or MRI should be performed for patients presenting with this symptom as the sole complaint.

REFERENCES

1. Gan KD, Mouradian MS, Weis E, Lewis JR. Transient monocular visual loss and retinal migraine. *CMAJ* 2005; 173: 1441-1442.
2. Salvi F, Bernardi B, Mascialchi M, Bisulli F, Zonari P, Foschini MP, Dina R, Tassinari CA. Gaze-evoked amaurosis heralding orbital angiomyoma. Case report. *Ital J Neurol Sci* 1997; 18:31-34.
3. B. Parashkevova, Ch. Balabanov, D. Stateva. Orbital tumors-clinical cases presentation. *J IMAB-Annual Proceeding (Scientific Papers)* 2007, book 1:44-47.