Siew W Law
MBBS, is resident medical officer, Department of Ophthalmology, Flinders Medical Centre, South Australia.

Andrew W Lee
MBBS, MPH, FRACP, is a consultant neurologist, Department of Neurology, Flinders Comprehensive Stroke Centre, Flinders Medical Centre, South Australia.

Celia S Chen
MBBS, MPHC, FRANZCO, is a consultant ophthalmologist and Senior Lecturer, Department of Ophthalmology, Flinders Medical Centre and Flinders University, South Australia.
celia.chen@health.sa.gov.au

Multiple sclerosis presenting with homonymous hemianopia

Case study

A man, 34 years of age and with no known past medical history, presented with sudden onset of blurred left eye vision on waking in the morning. There were no antecedent events and he denied any associated features such as pain and discharge from his eyes. His family history was unremarkable, although a systems review uncovered a history of right upper limb numbness previously attributed to brachial plexus neuralgia by a neurologist.

Initial review showed visual acuities of 6/6 in the right eye and 6/5 in the left eye and the patient was reassured of normal vision. The patient complained of persistent symptoms and was subsequently referred to an ophthalmologist. Visual field to confrontation suggested a left homonymous hemianopia. This was confirmed on automatic perimetry showing a complete homonymous hemianopia without macular sparing (*Figure 1a*).

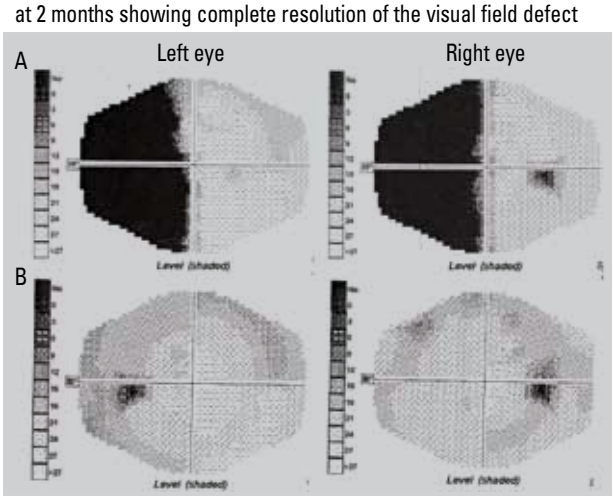
Magnetic resonance imaging of the brain was performed showing multiple increased T2 signals in the periventricular distribution and in the spinal cord, consistent with demyelinating lesions. There was a triangular band of hyperintense lesion on T2 weighted imaging involving the superior margin of the uncus and the right optic radiation accounting for the field defect (*Figure 2*). Cerebrospinal fluid analysis was positive for oligoclonal band supporting the diagnosis of multiple sclerosis. The patient was promptly commenced on an immunomodulator. Two months after the onset of homonymous hemianopia, the visual field defect had fully resolved (*Figure 1b*).

Ophthalmic manifestations are a prominent feature of multiple sclerosis (MS). Optic neuritis accounts for 18% of initial MS symptoms and 40–70% of all patients with MS have at least one episode of optic neuritis during their disease course.[1] Eye movement abnormalities such as internuclear ophthalmoplegia are seen in over 50% of patients with MS.[2] This case study describes a rare initial presentation of MS with 'left eye blurred vision' and examination findings of a complete left homonymous hemianopia. Although homonymous hemianopia is uncommon (0.5–3.5% of MS cases),[3] this case highlights an important reminder that people with a field defect often complain of 'blurred vision' on the side of the defect.

Discussion

A visual field defect from a retrochiasmal lesion in MS is uncommon, occurring in less than 10% of MS cases.[1,3]

Figure 1. Automated visual field using Medmont perimetry. a) Grey scale of the field in the right and left eye at presentation showing a left homonymous heminaopia without macular sparing; b) Visual field at 2 months showing complete resolution of the visual field defect

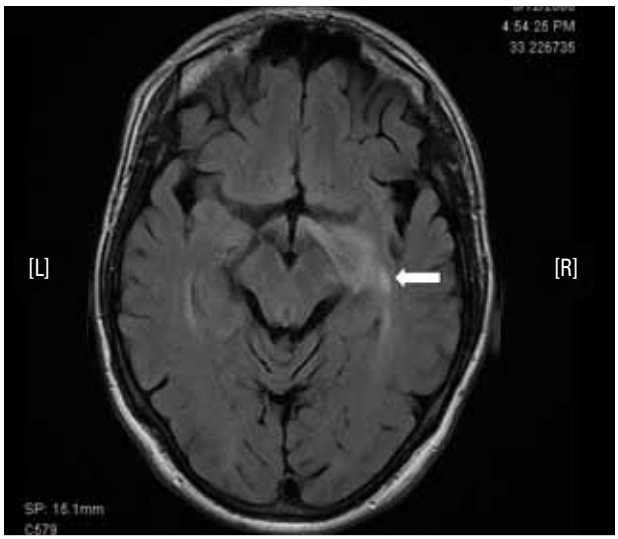


A homonymous hemianopia as the presenting feature in MS is rare.[3] In this case, the responsible lesion was quite small but specifically located at the origin of the optic radiation resulting in a congruous complete homonymous hemianopia without macular sparing.

In general practice, visual acuity, pupil reaction and visual field on confrontation are important examinations that can be performed readily. Confrontation field testing can help uncover a hemianopia or quadrantanopia. Suspicion on confrontation testing can then be referred to an ophthalmologist and confirmed with an automated perimetry to define the problem and locate the lesion retrochiasmally.

Visual field defects due to MS usually have a good prognosis[4] as attested in this case of the complete resolution after 2 months. It is important to consider the diagnosis of MS in any patient who has unexplained sudden onset visual field deficit. Early diagnosis allows prompt counselling and treatment with appropriate immunomodulators to prevent the patient from suffering further MS relapses.[5]

Figure 2. MRI showing showing a lesion at the optic tract (arrow) and surrounding oedema seen as a triangular band involving the uncus of temporal lobe



Conflict of interest: none declared.

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AFP CORRESPONDENCE afp@racgp.org.au