Granulomatous Panuveitis in Multiple Sclerosis: A Rare Occurrence

Sir,

Optic neuritis is the most common ophthalmologic disease in multiple sclerosis (MS), occurring in about 50% of patients.[1] Uveitis has been reported to occur in 3% of patients with MS.[1] Hereby, we report a lady who presented with progressive diminution of vision in both eyes over 2 months to the perception of hand movements associated with redness in both eyes. The ophthalmological evaluation showed granulomatous panuveitis features in both eyes with complicated cataract, keratin precipitates, posterior synechiae, and disc edema. Brain and cord magnetic resonance imaging (MRI) was suggestive of MS.

A 38-year-old lady had a history of febrile illness 11 months before presentation to us which lasted for 15 days, it was

of moderate grade, and not associated with chills or rigors. One week later, she noted redness in both eyes with mild pain and progressive diminution of vision in both eyes to the perception of hand movements by 2 months. She was treated by an ophthalmologist locally (treatment details were not available) with no significant improvement. She presented to us after 10 months of the onset of illness. There were no other symptoms. The ophthalmological evaluation showed keratin precipitates and pigments on the corneal endothelium, cells in anterior chamber (AC) and shallow AC, and posterior synechiae. Gonioscopy showed superior and inferior peripheral anterior synechiae opening on an indentation in the right eye, and inferior peripheral anterior synechiae opening on an indentation in the left eye. Intraocular pressure was 12 mm Hg in the right eye and 26 mm Hg in the left eye. The fundus showed disc edema and hyperemic disc. Visual acuity in both eyes was counting fingers (CF) 1 m; impaired color vision (Ishihara chart), pupils were sluggishly reactive in the right and nonreactive to light in the left eye. Visual field charting showed an enlarged blind spot in both eyes. Optical coherence tomography showed disc edema, multiple neurosensory detachment areas, intraretinal fluid and hyper-reflective dots, and vitreous cells in both eyes [Figure 1]. Neurological examination was normal. Brain and spine MRI showed multiple periventricular and subcortical ovoid nonenhancing demyelinating lesions, including cervical cord, and the optic nerve showed short segment T2 hyperintensities [Figure 1]. Serum angiotensin-converting enzyme levels were normal. Serum vasculitis profile, aquaporin-4, and myelin oligodendrocyte glycoprotein antibodies were negative. Cerebrospinal fluid (CSF) analysis was normal with positive oligoclonal bands (OCBs). The patient was diagnosed with a clinical attack of MS. MRI and CSF OCB satisfied the 2017 McDonald criteria for the MS diagnosis. Visual evoked potentials showed prolonged P100 latency in both eyes (Left eye: 155.70 ms; Right eye: 140.40 ms). She was treated with 5 g of IV methylprednisolone (IVMP), followed by oral steroids and azathioprine. At 1 month follow-up, her visual acuity improved to 6/9 in both eyes, and optical coherence tomography (OCT) scan of both eyes showed complete resolution.

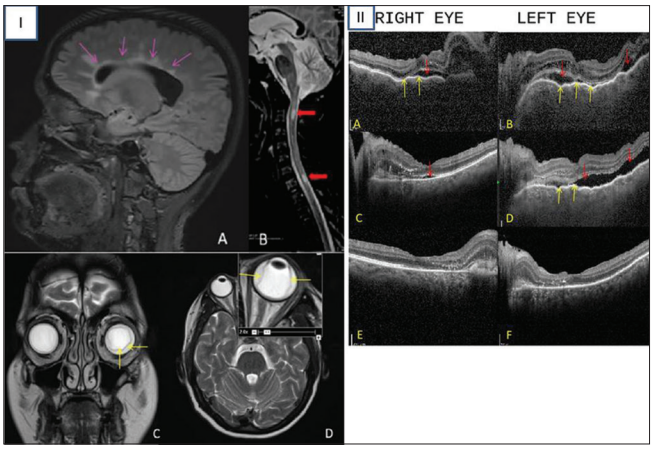

Figure 1: (I) A. Sagittal FLAIR image showing hyperintensities oriented perpendicular to periventricular margins (purple arrow) and calloso-septal interface suggestive of demyelinating lesions; B. Sagittal T2 image showing cervical and thoracic cord, short segment hyperintensities suggestive of demyelination (red arrow); C. Coronal T2 section showing choroidal detachment in the left eye (yellow arrow); D. Axial T2 section of the brain with inset image zoomed to show choroidal detachment (yellow arrow) suggestive of uveitis. (II) (A and B) OCT image at presentation shows multiple areas of neurosensory detachment (red arrow), increased undulation of retinal pigment epithelium (yellow arrow), intra-retinal fluid and hyperreflective dots and vitreous cells with disc oedema; (C and D) After three doses of IV methylprednisolone – reduction in neurosensory detachment and decrease in the retinal pigment epithelium's undulations (E and F). At 1-month follow-up on oral steroids and azathioprine – OCT shows complete resolution of sub-retinal fluid and retinal oedema

The most common and frequent ophthalmic manifestation is optic neuritis. The occurrence of uveitis in MS is uncommon, and its frequency ranges from 0.4% to 26.9%.[2,3] According to the International Uveitis Study Group criteria, the anatomical classification of uveitis includes anterior (iridocyclitis), posterior (primary site of inflammation is in the retina or choroid), intermediate uveitis (pars planitis), and panuveitis.[2] Intermediate uveitis is the most common type of uveitis reported in MS.[4,5] Both granulomatous and nongranulomatous uveitis have also been reported in MS.[6] Granulomatous anterior uveitis has been frequently reported in MS.[7] There are few reports of granulomatous panuveitis in MS. Moriwaka F *et al*.[8] (1994) reported a 45-year-old woman who had attacks of optic neuritis, brainstem/cranial nerve involvement, transverse myelitis and was diagnosed with MS. She subsequently developed granulomatous panuveitis. She had good improvement with topical steroids. Similarly, Saito W *et al*.[9] (2002) reported a 50-year-old man with bilateral granulomatous panuveitis 10 years after initial onset of MS. Kaya D *et al*.[2] (2014) reported nine MS patients with uveitis out of 1702 MS patients. Three patients had pan-uveitis. Le Schanff J *et al*.[10] (2008) reported 28 patients with MS- associated uveitis. Eight patients had pan-uveitis. Our patient presented with bilateral granulomatous panuveitis with complications and magnetic resonance imaging (MRI) brain, spine suggestive of MS.

MS-associated uveitis is bilateral.[6] MS has to be considered in patients with unexplained bilateral granulomatous and nongranulomatous uveitis. This case illustrates the association of uveitis in multiple sclerosis.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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