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An unusual optic disc neovascularization in a case of intermediate uveitis associated with multiple sclerosis

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PURPOSE. *To report a case of intermediate uveitis associated with multiple sclerosis (MS) presenting with a complex of an unusual optic disc neovascularization which was treated successfully.*

METHODS. *Interventional case report. Best-corrected visual acuity measurements (BCVA), slit-lamp examination, fundus biomicroscopy, and fluorescein angiography (FFA) were performed at baseline examination and during the follow-up period. The patient underwent one injection of intravitreal bevacizumab combined with systemic steroids and panretinal photocoagulation.*

RESULTS. *A 28-year-old man presented with decreased vision in the right eye (RE) (BCVA 20/40). Compete examination showed a large new vessels complex on the optic disc of the RE protruding into the vitreous, ischemic vasculitis, and snowbanking inferiorly. Similar findings but less severe were found in the left eye (LE) with mild vitritis. The RE had also mild, diffuse vitreous hemorrhage. All tests were normal including blood tests, Mantoux, and chest X-ray except brain magnetic resonance imaging which showed three demyelinating lesions. Neurologic evaluation was unremarkable for the first year. The clinical appearance was consistent with intermediate uveitis associated with MS. The patient underwent one injection of intravitreal bevacizumab combined with systemic steroids and panretinal photocoagulation. After 6 months BCVA increased to 20/20 and the neovascular complex became fibrous in RE. The patient, 2 years after treatment, remains stable.*

CONCLUSIONS. *Intermediate uveitis may precede the diagnosis of MS. Intravitreal bevacizumab combined with systemic steroids and panretinal photocoagulation proved successful in the management of this case. (Eur J Ophthalmol 2008; 18: 1020-2)*

KEY WORDS. *Bevacizumab, Intermediate uveitis, Multiple sclerosis, Neovascularization*

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INTRODUCTION

The prevalence of uveitis in patients with multiple sclerosis (MS) is 0.65%; however, it may precede in up to 56% of cases (1, 2). We report an interesting case of bilateral intermediate uveitis associated with MS presenting with a complex of unusual new vessels on the optic disc which was treated successfully with a combination of bevacizumab and panretinal photocoagulation.

Case report

A 28-year-old man was referred to our department with a suspected persistent hyaloid artery in the right eye (RE). On presentation, best-corrected visual acuity (BCVA) was 20/40 in the RE and 20/20 in the left eye (LE). Ocular evaluation revealed unremarkable anterior segments. Fundus examination showed a large new vessel complex on the optic disc of the RE protruding into the vitreous, ischemic vasculitis, and

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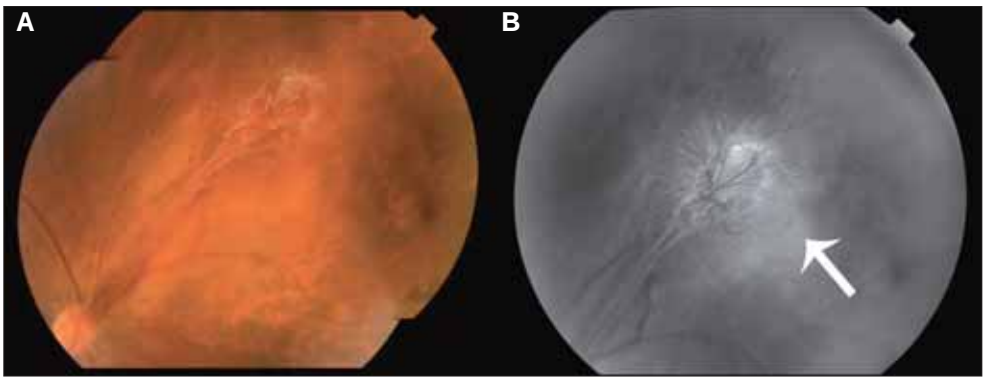

Fig. 1 - (A) *Color mosaic fundus picture of the right eye showing the large neovascular complex beginning from the optic disc and floating into the vitreous superonasally to the disc.* **(B)** *Red free picture of the right eye showing the edge of the neovascular complex.*

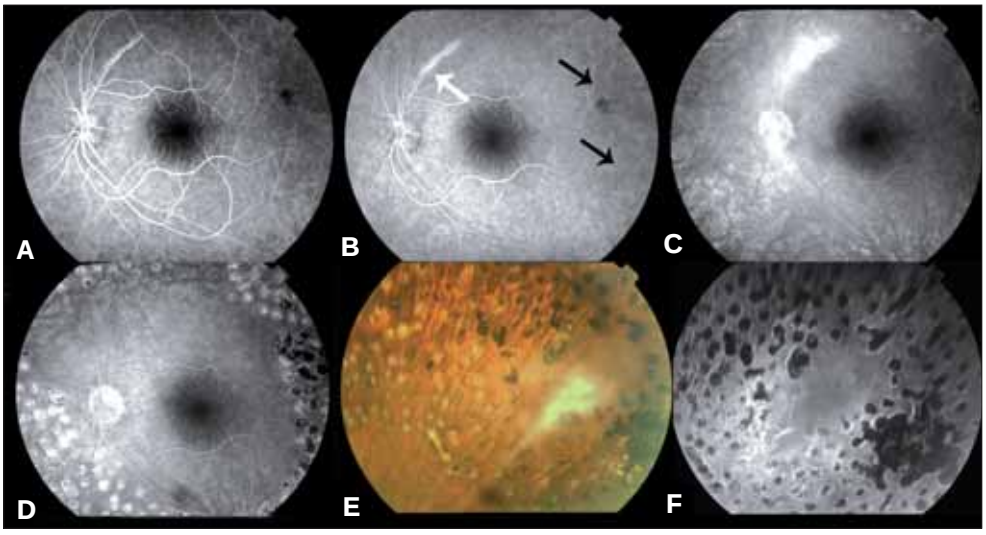

Fig. 2 - (A-C) *Phases of fundus fluorescein angiography of the left eye showing leakage from the disc new vessels (white arrow) and areas of nonperfusion temporal to the macula (black arrows).* **(D)** *Late phases of fluorescein angiography of the left eye showing resolution of the disc new vessels following treatment. There are obvious panretinal photocoagulation scars.* **(E)** *Color fundus picture of the right eye showing that the edge of neovascular complex became fibrous following treatment.* **(F)** *Late phase of fluorescein angiography of right eye showing no activity from the edge of the neovascular complex. The fibrous new vessels are surrounded by panretinal photocoagulation scars.*

snowbanking inferiorly (Fig. 1, A and B). Similar findings but less severe were found in the LE with mild vitritis. The RE had also mild, diffuse vitreous hemorrhage. Fluorescein angiography confirmed these findings (Fig. 2, A–C). Systemically, he was well and was on no medications. All tests were normal including blood tests, Mantoux, and chest X-ray, except brain magnetic resonance imaging which showed three demyelinating lesions. Neurologic evaluation was unremarkable for the first year but within the second year the patient became symptomatic. The clinical appearance was consistent with intermediate uveitis associated with MS. The patient underwent an intravitreal injection of bevacizumab (1.25 mg) in RE to minimize the risk of further vitreous hemorrhage followed by panretinal photocoagulation in both eyes. Prednisolone was also given orally for a period of 6 months starting with a dose of 1 mg/kg and tapering after a 2-week period. Six months later, the neovascular complex became fibrous and BCVA in RE improved to 20/20 (Fig. 2, D–F). The patient, 2 years after treatment, remains stable and is still under ophthalmic and neurologic review.

DISCUSSION

The prevalence of uveitis in patients with MS is 0.65%; however, it may precede in up to 56% of cases (1, 2). Uveitis is usually bilateral, being mostly intermediate in nature (2). However, the type and timing of uveitis are not associated with any significant difference in MS course and prognosis (1). Because diagnosis of MS and demyelinating lesions are more frequent in patients with intermediate uveitis who are older than 25 years, MRI should be considered in these patients (3). In our case, brain MRI showed three demyelinating lesions but the patient became symptomatic more than 1 year later. Vitreous hemorrhage may occur in up to 25% of such patients and rarely may be the initial symptom (4). As in our case, visual prognosis in intermediate uveitis is relatively good, with 75% of patients maintaining a visual acuity of 20/40 or better after 10 years (5).

In our patient, although the neovascular complex was very large, intravitreal injection of bevacizumab (1.25 mg)

prevented further vitreous hemorrhage. According to the literature, using intravitreal bevacizumab for retinal diseases complicated by vitreous hemorrhage or even by neovascular glaucoma is currently common practice (6-8). Furthermore, intravitreal bevacizumab allowed better application of panretinal photocoagulation and in combination with systemic steroids proved successful, resulting in good visual acuity and favorable clinical outcome.

In conclusion, intermediate uveitis may precede the diagnosis of MS. In this case the patient presented with an unusually large new vessels complex; intravitreal bevacizumab combined with systemic steroids and panretinal photocoagulation proved a successful treatment modality.

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