

CASE REPORT

An Unusual Case of Unilateral Multifocal Choroiditis in a Young Male

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ABSTRACT

Multifocal choroiditis is a vision-threatening disease causing inflammation at the level of retinal pigment epithelium and outer retina. We present a unique case of unilateral multifocal choroiditis in a young nonmyopic male and its subsequent course. The patient developed visual loss due to the sub-retinal neovascular membrane (SRNVM) in macula due to multifocal choroiditis. The SRNVM regressed with repeated intra-vitreous injection of bevacizumab and the visual acuity improved from 6/24 at presentation to 6/12 after repeated intra-vitreous injections of bevacizumab.

Keywords: Bevacizumab, multifocal choroiditis, sub-retinal neovascular membrane

INTRODUCTION

Multifocal choroiditis is a vision-threatening disease causing inflammation at the level of retinal pigment epithelium and outer retina. It is not true choroiditis. It occurs most commonly in young myopic females. Most cases are bilateral or become bilateral over the period of time. It is commonly associated with pan-uveitis. We present a unique case of unilateral, multifocal choroiditis in a young nonmyopic male and its subsequent course.

CASE REPORT

A 25-year-old male, clerk by occupation, came with the complaints of diminution and distortion of vision in the right eye for 2 days. Diminution was painless and progressive in nature. It was not associated with floaters or flashes of light. The left eye showed outward deviation of eyeball associated with the diminution of vision since birth. There was no history of ocular

trauma or surgery in past. There was no history of any systemic illness or of any drug intake.

Clinical findings

On examination of the right eye, best corrected visual acuity was 6/24 on Snellen's chart. The anterior segment was within normal limits without any signs of anterior uveitis. The vitreous was clear. Fundus examination revealed multiple, well-defined sub-retinal scars in posterior pole with macular edema and sub-retinal hemorrhage [Figure 1].

On examination of the left eye, vision was counting fingers at 1 m on Snellen's chart. There was gross exotropia in the left eye with deviation more than 45°. Anterior segment and fundus examination of the left eye were within normal limits. The left eye was not taking fixation during alternate cover tests. Strabismic amblyopia due to extreme exotropia was the reason of low visual acuity in the left eye.

A clinical diagnosis of unilateral multifocal choroiditis with macular edema and without pan-uveitis was made.

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Access this article online

Quick Response Code



Website:

www.nigerianjournalofophthalmology.com

DOI:

10.4103/0189-9171.171002

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How to cite this article: Deshpande S, Deshpande M, Paritekar P. An unusual case of unilateral multifocal choroiditis in a young male. *Niger J Ophthalmol* 2015;23:71-4.

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Fundus fluorescein angiography of this patient showed active leak, just infero-temporal to the fovea suggestive of active sub-retinal neovascular membrane (SRNVM) [Figures 2-5].

Optical coherence tomography (OCT) of the right eye confirmed the presence of SRNVM and macular edema [Figure 6].

Blood and radiological investigations were done. Complete blood count and chest X-ray were normal. Mantoux test showed no induration. ESR was 25 mm at the end of 1 h.

The patient was started on oral steroid prednisolone 50 mg/day weekly taper. 1 week later, an intra-vitreous 0.1 ml injection bevacizumab was given in the right eye. After first intra-vitreous injection, the patient developed cataract. Small incision cataract surgery with posterior chamber intra-ocular lens implantation was done 3 weeks after intra-vitreous injection. The surgery was uneventful and the visual acuity recovered to 6/12.

However, the patient again presented with a reduction in the visual acuity and distortion of vision, 1 month after cataract surgery. The fundus examination and OCT revealed growth and fluid in the same SRNVM. Immediate intra-vitreous injection of bevacizumab was administered which resulted in the regression of SRNVM and improvement of visual acuity. The SRNVM did not, however, regress fully and the patient required two more intra-vitreous bevacizumab injections at monthly interval for the complete regression of SRNVM. The patient is following up with us regularly. His current vision in the right eye is 6/12.

DISCUSSION

This was an unusual case of multifocal choroiditis as the patient was not myope. He never had any episode of acute anterior uveitis. He did not have vitritis and anterior uveitis. He required four intra-vitreous injections of anti-vascular endothelial growth factor (VEGF) drugs to resolve the SRNVM. Furthermore, he did not



Figure 1: Fundus photograph

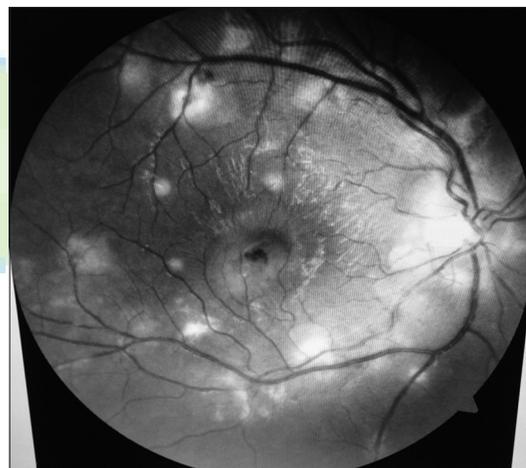


Figure 2: Fundus fluorescein angiography picture (red-free)

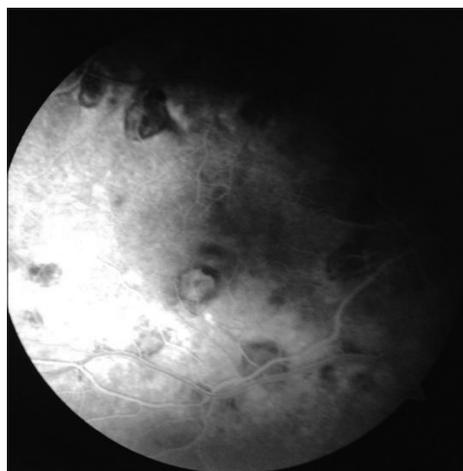


Figure 3: Fundus fluorescein angiography picture (38 s)

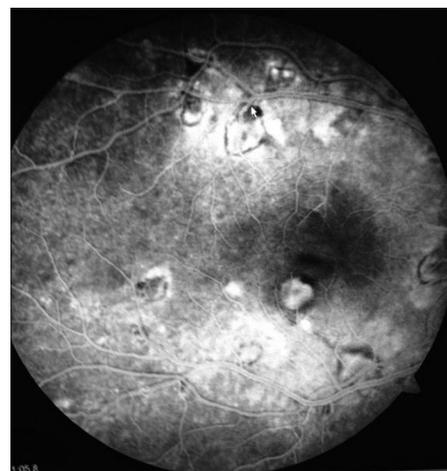


Figure 4: Fundus fluorescein angiography picture (1 min)

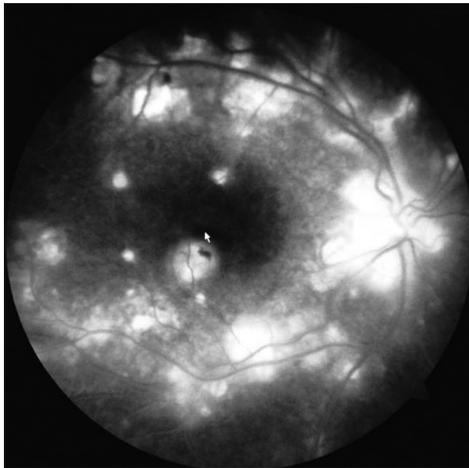


Figure 5: Fundus fluorescein angiography picture (6 min)

have systemic involvement. All these factors make it an unusual presentation.

Multifocal choroiditis affects otherwise healthy young patients in their third decade (average age, 34 years; range, 6–74 years), with an incidence of bilateral involvement of 80%. A moderate racial and gender predisposition exists, with approximately 66% of patients being white and 80% of patients being young myopic females.^[1]

Hundreds of patients have been reported in the literature with multifocal choroiditis associated with pan-uveitis, but the literature showing the incidence of multifocal choroiditis in India per say is sparse.^[2]

Patients with multifocal choroiditis lesions, but with minimal or no anterior uveitis or vitritis, tended to be young women. Approximately, half of the patients presented with bilateral involvement, which is less than has been reported in most case series of multifocal choroiditis with pan-uveitis.^[3]

Patients usually present subacutely with decreased central vision or metamorphopsia. Other less common presenting complaints include paracentral scotomata, floaters, photopsias, mild ocular discomfort, and photophobia.

The key finding in multifocal choroiditis is the chorioretinal lesions scattered in the fundus. Acutely, several to several 100 yellow (sometimes gray) lesions are seen at the level of the retinal pigment epithelium and choriocapillaris. Most lesions are 50–350 mm in diameter but occasionally may be larger.

The lesions are usually round or oval and may be seen in the posterior, mid-peripheral, or peripheral retina.

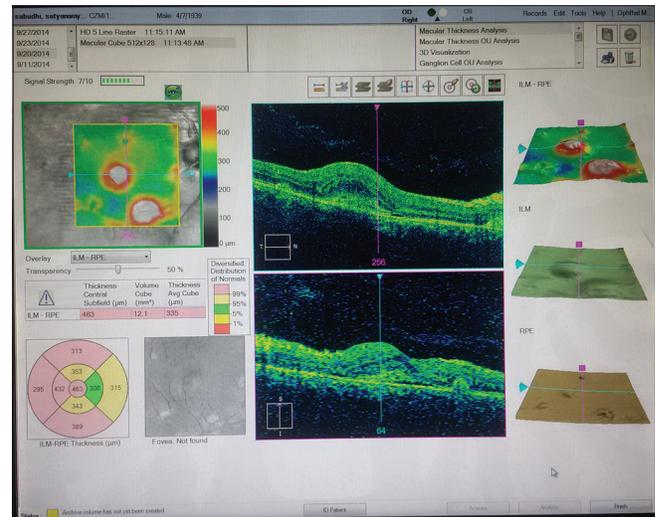


Figure 6: Optical coherence tomography showing macular edema

They may be seen singly, in clusters, or arranged in a linear configuration (linear streaks) in the equatorial region. These lesions eventually become deep, round, and atrophic, with variable degrees of pigmentation and scarring. New chorioretinal lesions may be seen in conjunction with old scars in recurrences.

About 25–39% of patients with multifocal choroiditis and pan-uveitis (MCP) develop macular and peripapillary choroidal neovascular membranes (CNVM's) which may be the presenting cause for decreased vision. Macular CNVM with extensive scarring is the major cause of visual loss in MCP.^[4]

Intra-vitreous bevacizumab may be tried in the cases of CNVM due to multifocal choroiditis. Timing of the injection may vary with the clinical scenario.^[5] Photo-dynamic therapy can be tried for the regression of CNVM. However, high cost hinders its use in the developing countries. The presenting complaints in our patient were not due to macular edema caused by CNVM rather than multifocal choroiditis. We started the patient on oral steroids to reduce the inflammation and then gave intra-vitreous bevacizumab for the regression of CNVM. The patient required four injections of bevacizumab for the complete regression of CNVM.

CONCLUSION

Multifocal choroiditis is a rare condition. In most cases, the causes of diminution of vision are inflammation, CNVM, and scarring. Treatment is purely symptomatic. There is no approved protocol as such for some patients. Intra-vitreous anti-VEGF drugs are the mainstay of treatment of CNVM. The number of injections required and the duration of treatment are not certain. Visual

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prognosis is guarded. Regular and close follow-up of patients is required.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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