JMS 2020;3(2):18-21
UDC:617.721.6-002:616.831/.832-004.2

INTERMEDIATE UVEITIS AS THE FIRST PRESENTATION OF MULTIPLE SCLEROSIS

Trpeska Ana [1], Antovic S[3], Joksimovic M[2], Joksimovic V[3], Skeparovska K[4]
[1]University Clinic for Ophtalmology, [2]University Clinic for Gynaecology and obstetrics,
[3]University Clinic for Digestive surgery, Faculty of Medicine,Ss. Cyril and Methodius University,
Skopje, R. North Macedonia [4]Special Hospital for Gynecology and obstetrics, Mother Theresa,
Skopje, R. North Macedonia

Abstarct

Intermediate uveitis is a chronic, relapsing disease of insidious onset in which according to the SUN Working Group, the vitreous is the primary site of inflammation as determined clinically. Intermediate uveitis associated with systemic disease has variable course. Multiple sclerosis is associated with intermediate uveitis.

We report a case of multiple sclerosis were intermediate uveitis was the first presentation of the disease. A 33-year-old man with a 5 months history of decreased vision in his right eye. Best-corrected visual acuity was 0.6 on his right eye and 1.0 on his left eye. Intraocular pressure was 17 mmHg and 15 mmHg on the right and left respectively. He had no signs of ocular surface inflammation, cornea clear, AC without signs of inflammation, lens clear. Right eye 3+ vitreous cells and vitreous condensations left eye 1+vitreous cells. Right eye fundus showed hyperemia of optic nerve head, irregular reflexes in the macula, peripheral retina without signs of retinitis or vasculitis. Left eye fundus showed only optic nerve head slightly hyperaemic. OCT, Indocyanine Green Angiography and fluorescein angiography were performed. We performed the investigations for diagnosing uveitis (angiotensin converting enzyme, serology for Treponema pallidum, Borrelia burgdorferi, Mantoux, neurological investigation) and all turned out to be negative except of MRI Brain and Spine that revealed multiple T2 hyperintense lesions consistent with multiple sclerosis.

Multiple sclerosis may present initially with an intermediate uveitis. Multiple sclerosis should be suspected in patients aged 20-50 even without any neurological symptoms, noting that intermediate uveitis may precede other symptoms of demyelination.

Key words: intermediate uveitis, multiple sclerosis, vitritis

Introduction

Intermediate uveitis is a chronic, relapsing disease of insidious onset in which according to the SUN Working Group, the vitreous is the primary site of inflammation as determined clinically [1]. Intermediate uveitis may be idiopathic (at least half) or associated with a systemic disease. Systemic investigations a routinely performed, especially in the presence of suggestive findings. A minority of patient has a benign course, with spontaneous resolution within several years. In other patients the disease is severe and prolonged, with episodic exacerbations. Intermediate uveitis associated with systemic disease has variable course. Enquiry and investigations targeted at the exclusion of an underlying cause is an imperative. Inestigations shoud include ESR and/or CRP, complete blood count, tests for multiple sclerosis, sarcoidosis, Lyme disease, Syphilis, and Tuberculosis.

Intermediate uveitis can be the first manifestation of multiple sclerosis, noting that intermediate uveitis may precede other symptoms of demyelinisation [1].

Case report

A 33 year old man was referred to an ophthalmologist by his family doctor. He complained of 5 months history of blurred an decreased vision in his right eye, difficulty during reading on his smartphone in dim light, and glared car headlights during driving at night. Hi did not report any ocular, nor systemic condition, he did not take any medication and had no history of allergies. Hi did not have any other symptom except ocular.

His best-corrected visual acuity was 0.6 on his right eye and 1.0 on his left eye. Intraocular pressure was 17 mmHg and 15 mmHg on the right and left eye respectively. He had no signs of ocular surface inflammation, cornea clear, AC without signs of inflammation, lens clear. Right eye had 3+ vitreous cells and vitreous condensations and his left eye had 1+vitreous cells. Right eye fundus

showed hyperemia of optic nerve head, irregular reflexes in the macula and peripheral retina was without signs of retinitis or vasculitis. His left eye fundus showed optic nerve head slightly hyperemic, irregular reflexes in the macula, peripheral retina without signs of retinitis or vasculitis.

We performed OCT on his posterior segment. It showed on his right eye cistoid macular oedema and average RNFL 166 mm and his left eye showed relatively normal macula with average RNFL 128 mm.

The Indocyanine Green Angiography and fluorescein angiography showed: normal transit time with late staining of the optic nerve head in late phases (more pronounced in right eye) and staining of cystoid macular oedema in right eye. No signs of vasculitis on Indocyanine Green Angiography and fluorescein angiography.

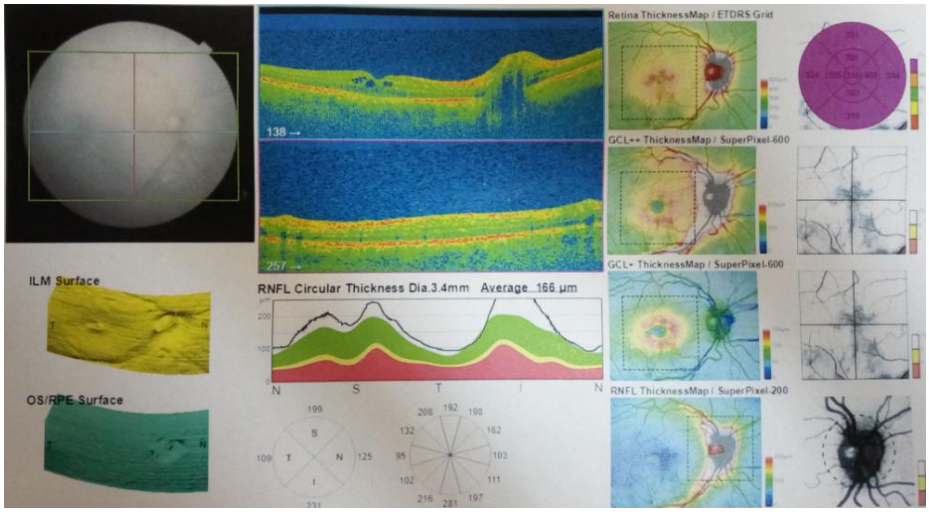

Figure 1. OCT of the right eye

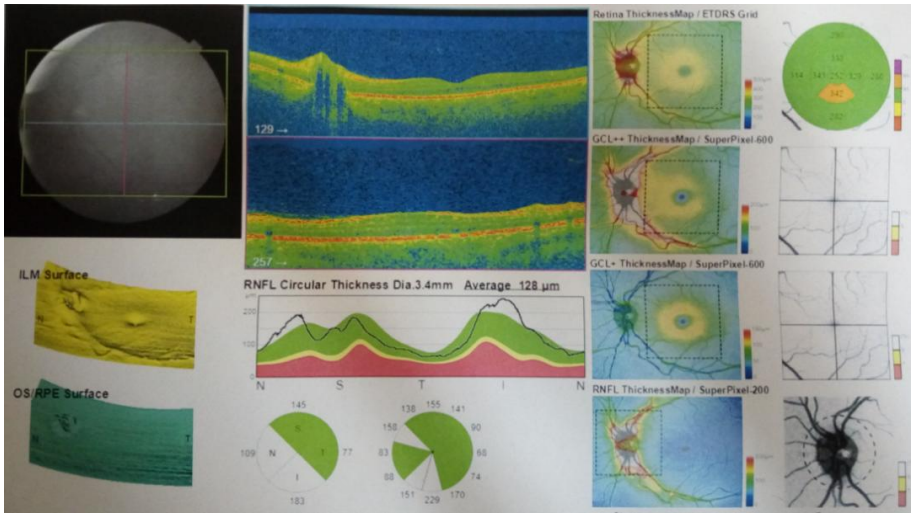

Figure 2. OCT of the left eye

He was diagnosed as intermediate uveitis. The next steps were the investigations for systemic inflammatory process. Erythrocyte sedimentation rate, C reactive protein and complete blood count were in normal ranges. Then we did other investigations, targeted at exclusion of an underlying cause.

We did tests for sarcoidosis (ace -angiotensin converting enzyme), Lyme disease (serology

for Treponema pallidum), Syphylis (serology), Tubetculosis (Mantoux test) and multiple sclerosis (neurological examination and MRI). All turned out to be negative except of MRI Brain and Spine that revealed T2 hyperintense lesion consistent with multiple sclerosis.

The patient was initiated on topical prednisolone acetate. Cycloplegia was achieved with topical atropine. He was referred to neurology for formal diagnosis and ongoing management of MS.

Discussion

Intermediate uveitis can manifest as a blured vision, accompanied by vitreous floaters, there is usually no pain or rednes. Though initial symptoms are often unilateral, objective findings are typically present asymmetrically in both eyes. Sings of the disease include anterior uveitis, vitritis, peripheral periphlebitis, snowbankig, neovascularеisation of peripheral retina, optic disk swelling, cystoid macular oedema, macular epiretinal membrane, cataract, glaucoma, retinal detachment (generally uncommon) [1].

Enquiry and investigations targeted at the exclusion of an underlying cause is an imperative. Inestigations shoud include ESR and/or CRP, complete blood count, tests for multiple sclerosis sarcoidosis, Lyme disease, Syphilis, and Tuberculosis. Intermediate uveitis can be the first manifestation of multiple sclerosis.

MS is a chronic autoimmune demyelinating and degenerative disorder of the central nervous system that frequently affects both ocular motor and visual sensory systems.

Acute demyelinating optic neuritis is the most common ophthalmic manifestation with up to 50% of adult patients experiencing at least one episode over the course of their disease [2]. Ocular motor manifestations include internuclear ophthalmoplegia, saccadic hypermetria, and gaze-evoked and pendular nystagmus [3, 4]. Reduction in contrast sensitivity and color perception is often present in patients despite normal visual acuity. Local anatomical changes including thinning of the retinal nerve fiber layer and macular volume loss may also be present in asymptomatic patients [5].

Ocular inflammatory diseases, particularly pars planitis and retinal periphlebitis, are also associated with MS. The prevalence of uveitis in patients with MS varies widely in the literature from 0.65% to 36.7% [5]. Patients with MS may develop variants of intermediate uveitis. The reported frequency of uveitis in patients with MS is as high, and uveitis is 10 times more common in this group than in the general population. MS usually affects white women 20-50 years of age. The onset of uveitis may precede the diagnosis of MS. Up to 15% of patients with pars planitis may eventually develop MS. Intermediate uveitis and panuveitis are the most common categories of MS-associated uveitis, and up to 95% of cases are bilateral. Periphlebitis in MS is not clearly related to optic neuritis, systemic exacerbations, or disease severity [6, 7].

In the review of the 5 largest studies of MS and uveitis, [8, 9, 10, 11] Olsen and Frederiksen [12] found no clear pattern as to whether uveitis or MS presents first.

While a common etiology or pathologic process remains unknown, shared human leukocyte antigens suggest a genetic predisposition. The treatment for MS-associated uveitis is not distinct from treatment of other types of noninfectious uveitis, but interferons may serve as a common therapeutic avenue for both CNS and eye disease. Further study is needed to better understand MS-associated uveitis and its link to demyelinating CNS disease.

Conclusion

Multiple sclerosis may present initially with an intermediate uveitis. Multiple sclerosis should be suspected in patients aged 20-50 even without any neurological symptoms, noting that intermediate uveitis may precede other symptoms of demyelination.

References

1. Bowling B. Kanski’s clinical ophthalmology: a systematic approach. 8th Edition. London: Elevier; 2016.
2. Rizzo JF, 3rd, Lessell S. Risk of developing multiple sclerosis after uncomplicated optic neuritis: a long-term prospective study. Neurology. 1988;38(2):185–90.
3. Nerrant E, Tilikete C. Ocular motor manifestations of multiple sclerosis. J Neuroophthalmol. 2017;37(3):332–40.

4. Tilikete C, Jasse L, Vukusic S, et al. Persistent ocular motor manifestations and related visual consequences in multiple sclerosis. Ann N Y Acad Sci. 2011;1233:327-34.
5. Winges KM, Werner JS, Harvey DJ, et al. Baseline retinal nerve fiber layer thickness and macular volume quantified by OCT in the North American phase 3 fingolimod trial for relapsing-remitting multiple sclerosis. J Neuroophthalmol. 2013;33(4):322-9.
6. Zein G, Berta A, Foster CS. Multiple sclerosis-associated uveitis. Ocul Immunol Inflamm. 2004;12(2):137-42.
7. Zierhut M, Foster CS. Multiple sclerosis, sarcoidosis and other diseases in patients with pars planitis. Dev Ophthalmol. 1992;23:41-7.
8. Biousse V, Trichet C, Bloch-Michel E, Roullet E. Multiple sclerosis associated with uveitis in two large clinic-based series. Neurology. 1999;52(1):179-81.
9. Le Scanff J, Seve P, Renoux C, Broussolle C, Confavreux C, Vukusic S. Uveitis associated with multiple sclerosis. Mult Scler. 2008;14(3):415-7.
10. Messenger W, Hildebrandt L, Mackensen F, Suhler E, Becker M, Rosenbaum JT. Characterisation of uveitis in association with multiple sclerosis. Br J Ophthalmol. 2015;99(2):205-9.
11. Shugaiv E, Tuzun E, Kurtuncu M, et al. Uveitis as a prognostic factor in multiple sclerosis. Mult Scler. 2015;21(1):105-7.
12. Olsen TG, Frederiksen J. The association between multiple sclerosis and uveitis. Surv Ophthalmol. 2017;62(1):89-95.