Atypical Clinical Case of Uveitis Combined With Central Serous Chorioretinopathy and Optic Disc Edema

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Abstract - Uveitis, as a pathological unit is a diagnostic challenge to us clinicians. It can be misdiagnosed very often since the initial event could hardly be recognized. In some patients the uveitis can present itself with decreased visual acuity due to macular changes including central serous retinopathy, macular edema and neovascular choroidal membranes. CSCR is chorioretinal disease with systemic associations, multifactorial etiology and complex pathogenesy. It is characterized by serous detachment of the neurosensory retina as a result of local or diffuse dysfunction of the retinal pigment epithelium (PRE). The main reason for this is still not complete known disturbance of the outer blood-retinal barrier. On the other hand CSCR may be the result of choroidal neovascularization, inflammation or tumors. CSCR may occur in combination or as an initial manifestation of uveitis and therefore often cannot be detected. In this paper, we present a case of atypical form of uveitis which in the initial checkup was manifested with headache, periocular pain, eyepain and extremely low visual acuity following extensive CSCR in the left eye and mild swelling of the optic disk in the right eye while maintaining good visual acuity. During the follow-up period and the absorption of serous retinal edema the patient developed mild iridocyclitis and gradually increasing swelling of the optic disk in both eyes. The therapeutic treatment was periocular and topical corticosteroids. The aim of our study is to present a case of atypical posterior uveitis with transient symptoms and how such an unusual manifested uveitis can complicate diagnosis because of the wide differential diagnostic plan.

Keywords - Posterior uveitis, central serous chorioretinoipathy, papilledema .

I. INTRODUCTION

The term “uveitis” is used for a group of conditions in which inflammation affects various components of the uvea. Uveitis is separated by the place where affect to anterior, posterior, intermediate and panuveitis (1). Posterior uveitis can affect the choroid, the head of the optic nerve and the retina (or any combination of these structures). It includes chorioretinitis, retinitis, retinal vasculitis and neuroretinitis. Posterior uveitis is the least common form of uveitis (2). In pediatrics uveitis anterior uveitis accounts for 30-40% of the cases, posterior uveitis 40-50%, intermediate uveitis 10-20% and panuveitis 5-10% (2).

On the other hand the CSCR is a posterior segment disease characterized by localized and limited serous detachments of the neurosensory retina often associated with focal detachments of an altered retinal pigment epithelium (3). The concurrence of uveitis and central nervous system (CNS) diseases may be derived from the common embryogenic developmental pathway of the posterior segment and the CNS (4) (5). The most frequent occurrence of papilledema is found by volume-occupying intracranial processes and is really rare for uveitis. A number of inflammatory, infectious, neoplastic and idiopathic disorders affect the eye and the central nervous system (CNS) at the same time or at different time. These conditions represent a diagnostic challenge to the clinician since they may be presented with similar ocular and neurological manifestations.

II. CASE REPORT

It is 16-year-old patient complaining of headache and persistent pain located around his left eyebrow which then passed around his right one. The patient reported previous symptoms of mild conjunctival injection of the right eye with accompanying pain in and around the eye, which appeared for the first time about three years ago and a week before the clinical manifestation in the left eye. The symptoms began unilaterally for a short period of time. The patient had a prior consultation with the ophthalmologist and he was diagnosed with bacterial conjunctivitis for which a combination of tobramycin and dexamethazon as used. The symptoms had been influenced before recurring again. When the patient was examined, it was found that the BCVA of the right eye was 20/20 whereas visual acuity of the left eye was severely diminished (BCVA = 20/900) and a moderate conjunctival injection (Fig 1). The optical coherence tomography (Topcon 3D OCT-2000) found a detachment of neurosensory layer of the retina and RPE with a change in the retinal pigment epithelium and choroid thickening (Fig 2).

Late fluorescence of the disk in the right eye and discrete spotted hyperfluorescence (dispersed micro effusion), temporally from the foveola with discrete masking of the underlying choroidal fluorescence in the macular area was found with fluorescein angiography (Fig 3).

Computer perimetry (OCTOPUS 900) found an arcuate nerve fiber bundle defect in the field of vision, combined with relative and absolute reduced photosensitivity. It started from the fixing point at the bottom nasal part in the field of vision with extended optical disc in the right eye. The left eye had an arcuate nerve fiber bundle defect beginning from the blind spot.

Magnetic resonance imaging (MRI) was within the normal range. Consultation with a rheumatologist and other diagnostic tests (laboratory tests including a complete blood count, blood chemistry, syphilis serology, antinuclear antibodies, inhibitors of angiotensin converting enzyme, and purified protein derivative) were negative. The patient refused lumbar puncture. Serological tests for specific antibodies showed positive results for IgG virus cytomegalovirus, and herpes simplex virus (HSV).

Due to the lack of diagnostic criteria and evidence of a significant loss of visual acuity and atypical appearance of central serous chorioretinopathy it was decided to apply the corticosteroids injection treatment (Diprophos - P. B.). Topical corticosteroid therapy in the form of collation was also prescribed. Oral therapy involved Endotelon and Retavitrol which increase the resistance of small blood vessels and food supplements containing lutein, resveratrol, collagen, hyaluronic acid, vitamins and microelements.

A complete resorption of the edema of the retina was found a month after the treatment (Fig 5). There was an improvement in the visual acuity and the values of the computer perimetry (Fig 6).

A conjunctival injection in the right eye appeared in the process of treatment. Bilateral mild anterior uveitis fine keratin precipitates (endothelial dusing) and aqueous cells and flare in the anterior chamber was found with biomicroscopy. Bilateral peripapillary edema, mainly in the right eye, was diagnosed with fundus biomicroscopy.

bilaterally enlarged blind spots were detected with computer perimetry (Fig 9).

differential diagnosis was prepared for this patient:

1. Rheumatoid arthritis

2. Collagen vascular diseases

3. possible Vogt Koyahagi Harada disease (VKH)

4. Paraneoplastic syndrome

An agreement to wait before a systemic corticosteroid therapy to be applied was reached. After a two-week observation gradual deterioration of peripapillary edema in BCVA in his right eye 20/20 and in his left eye 20/30 was diagnosed.

The results from the MRI, the consultation with a rheumatologist and the diagnostic tests showed no pathological changes (Fig 10, Fig 11).

III. DISCUSSION

The European study showed only 2.6% (52/1,973 patients) had a neurological/uveitis related disease, the most prevalent of which were demyelinating, VKH, bacterial, Behçet's and lymphomatous disease (6). Such pathogenetic associations may underlie variability in prevalence related to ethnicity. For instance posterior uveitis, which is rare in the Balkans, is very frequent in the Turkish population (more than 30%) (7). Pediatric uveitis differs in various aspects from uveitis in adults.

Uveitis in children is often asymptomatic despite the severity of the inflammation and diminution of vision. Thus, most of the time pediatric uveitis presents late in uveitis clinic and often discovered incidentally during comprehensive eye checkup. The additional signs of swelling of the papilla and central serous chorioretinopathy diagnosis becomes extremely difficult. Decision of corticosteroids application should be taken in short period of time. The prevention, early identification and treatment of any vision threatening complications plays most important role in the management of pediatric uveitis (8).

In one study Dusheng and al. found that acute CSC disease and acute VKH share some common clinical manifestation such as the presence of subretinal fluid and that CSC may often be misdiagnosed as VKH (9). Both of them are caused by disorder of choroid and RPE.

Yang ant al. reported in there study that 14.3% of patients with VKH disease were misdiagnosed at presentation as having CSC and that is similar to the rate of misdiagnosis of 16.7% in their previous reports (10).

Figure 1. Left eye: a mild conjunctival injection.

It is very important to differentiate these two pathologies, since corticosteroids (the initial and main treatment of VKHD) could increase the risk of developing CSC (11). Based on the study Yang and al. notified in that without prompt and adequate corticosteroid treatment for patients with VKH, inflammation of the posterior segment may progress into anterior uveitis, and in turn, the anterior uveitis may proceed to recurrent or chronic granulomatous

uveitis in VKH patients (10). On other side the use of corticosteroid in patients with CSC, potentially leads to exacerbation of the disease, and may result in permanent visual loss due to subretinal fibrosis and macular scar formation (12),(13). Based on our study, we decided to group this patient in group with probable VKHD. Because of good vision instead of bilateral swelling of the optic disk we decided to wait before to start the systemic corticosteroid therapy. While the treatment of choice for VKH disease is a 6–12 month course of oral prednisone, such extended treatment with systemic corticosteroids is often avoided in other chronic forms of uveitis.

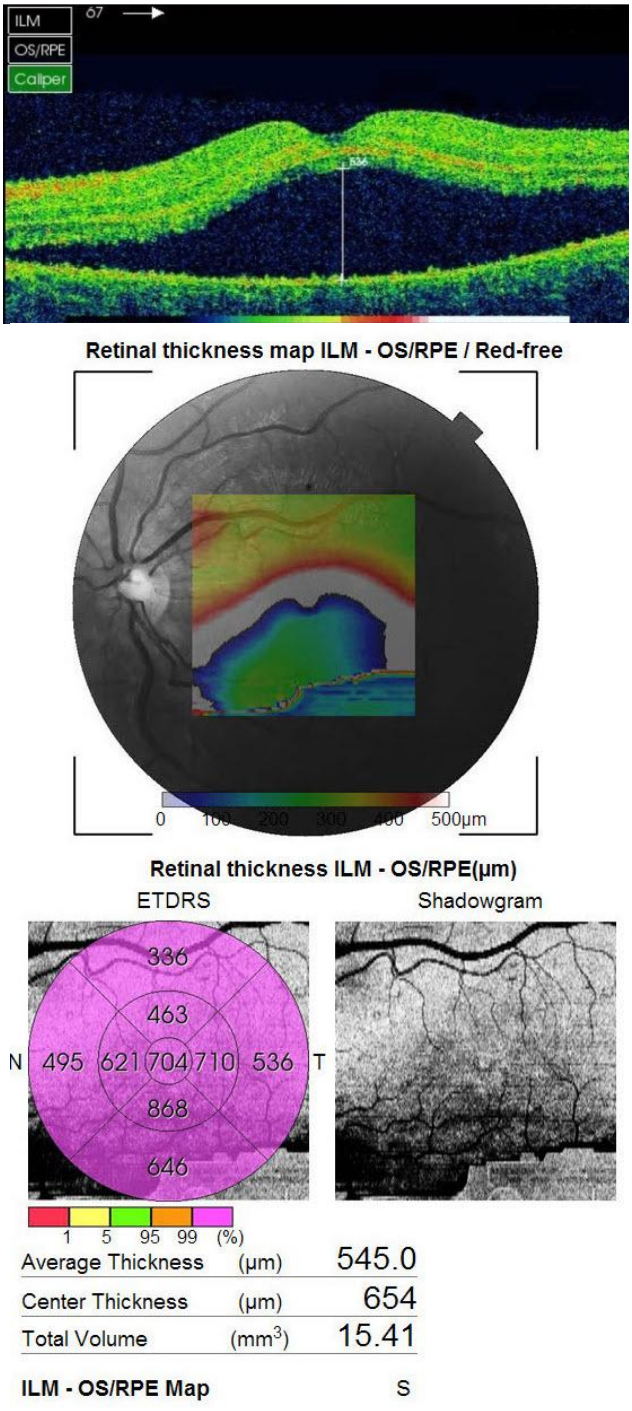

Figure 2. Localized and limited serous detachment of the neurosensory retina in left eye with transverse size 536µm.

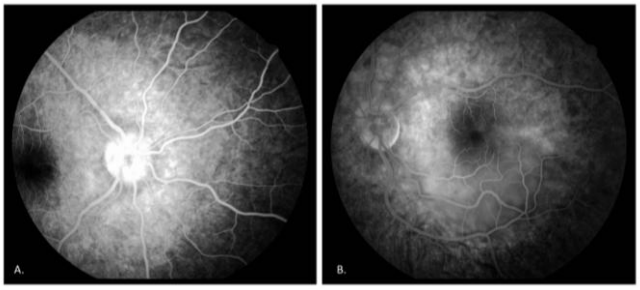

Figure 3. Fluorescein angiography: A. (OD) – late dsik hyperfluorescence in the final phases of angiography. B.(OS) Foveola angiography- discreet area of spotted hyperfluorescence tempopral from the foveola appearing in the final stages of angiography with discr

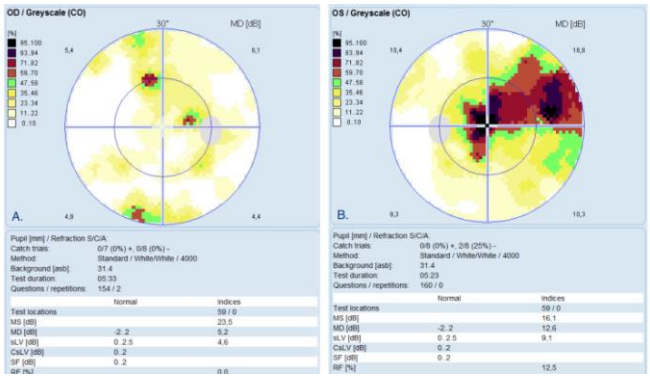

Figure 4. A. The defect is localized primarily in the upper half of the nasal visual field covering the fixation point corresponding to the location of serous detachment of the retina. B. Reduced overall photosensitivity and enlarged blind spot.

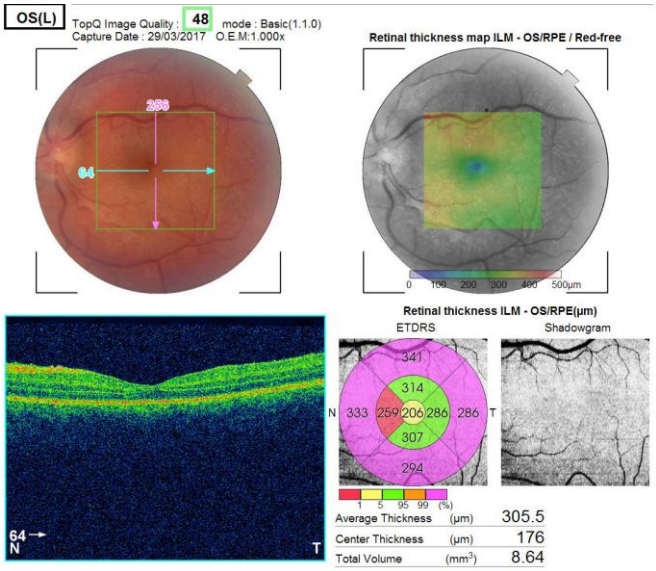

Figure 5. Resorption of edema, restoration of visual functions one month after the treatment.

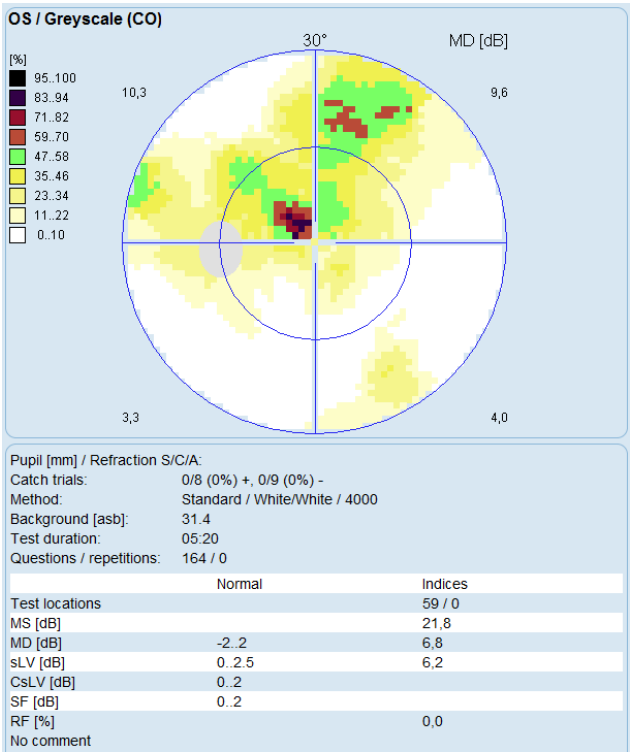

Figure 6. Improved photosensitivity in the area of the defect shown in the figure 3. An enlarged blind spot one month after the treatment.

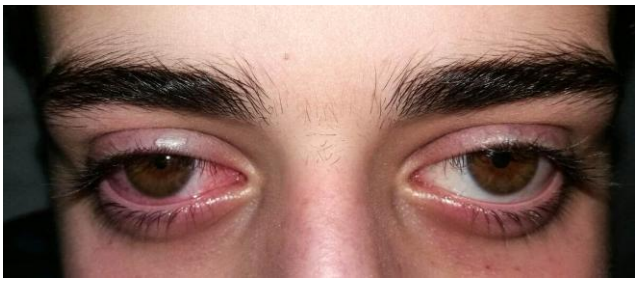

Figure 7. Moderate conjunctival injection of the right eye.

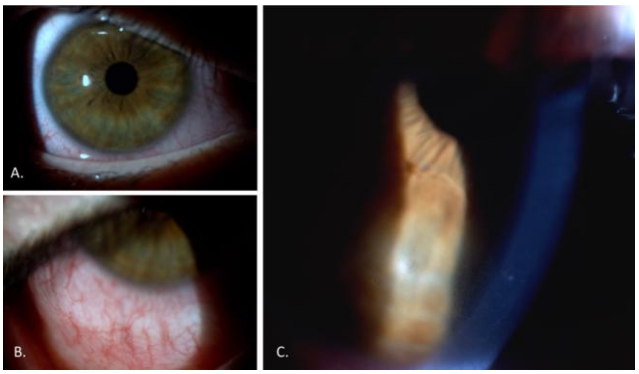

Figure 8. A, B. Moderate conjunctival injection, C. Fine keratic precipitates on the corneal endothelium, aqueous cells (+3), aqeous flare (+1).

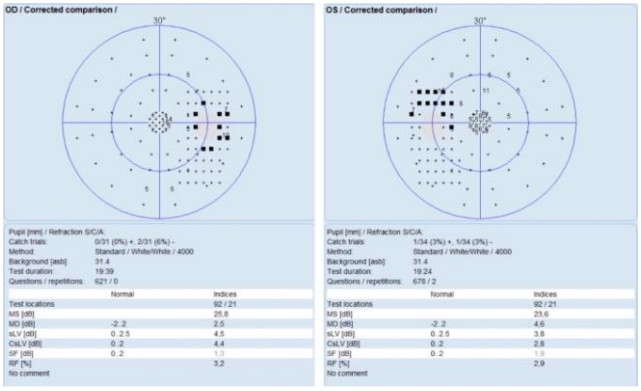

Figure 9. Enlarged blind spot bilaterally.

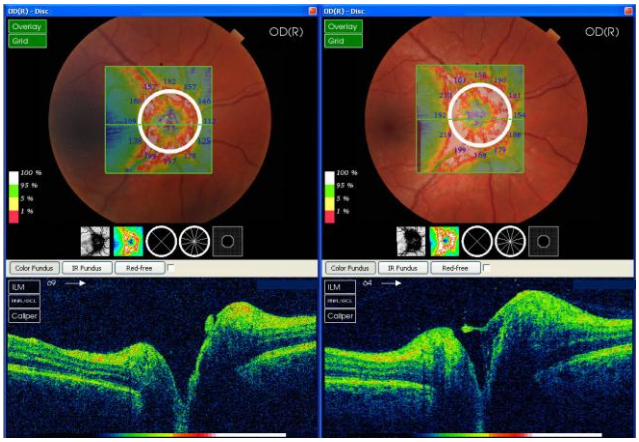

Figure 10. Enlarged peripapillary edema in right eye for 1 month period.

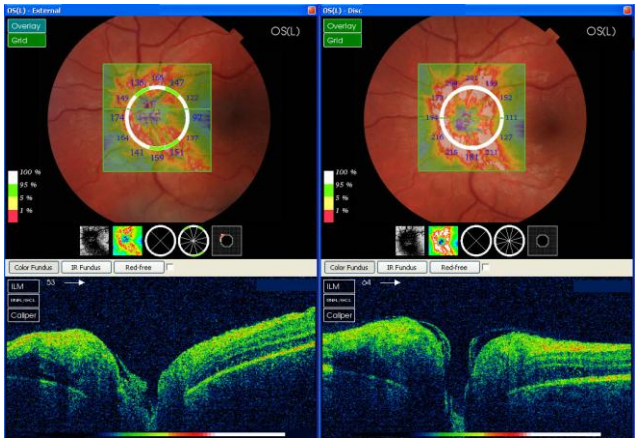

Figure 11Figure 11. Enlarged peripapillary edema in left eye for 1 month period.

IV. CONCLUSION

There is evidence of uveitis with different symptoms from conventional, in which it's found neurological aspects. In this line of thinking papilledema isn't typical for uveitis, especially in childhood and this make this condition very difficult to manage. The uveitis is uncommon in our geographic latitudes and its appearance here with altered symptoms could due to the migration of people and the subsequent globalization. This mixture make clinical picture really various and difficult to recognize. Conjunctival injection, particularly in children and

adolescents is not always associated with local inflammation - conjunctivitis and can be result or, the combination of a process in depth of the eye. Immediate treatment contributes to a more rapid exit of the disease when it is possible.

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AUTHOR'S PROFILE

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