Bilateral Acute Iris Transillumination

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ABSTRACT

Bilateral Acute Iris Transillumination is a rare entity characterized by pigment dispersion, raised intraocular pressure and sluggish pupils. It usually follows systemic infections. A mid aged female presented with photophobia, visual blurring and ocular pain. Bilateral ocular examination revealed patchy loss of iris pigment epithelium, pupillary atrophy, and persistent mydriasis and raised intra ocular pressure. She had history of acute respiratory infection treated with oral moxifloxacin one month before onset of her ocular discomfort. Her ocular symptoms were managed with topical pressure lowering drugs and steroids which improved over a period of 6 to 9 weeks, however, pupils remained slightly dilated.

Keywords: Atonic pupils, Bilateral acute iris transillumination, Iris atrophy.

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INTRODUCTION

Bilateral acute iris transillumination (BAIT) is a clinical condition often misdiagnosed as iridocyclitis or uveitis. It presents with acute redness of eyes with photophobia.[1] Severe transillumination and dispersion of iris pigment in the anterior chamber (AC) is usually present. Pupil shows variable sphincter paralysis. Intraocular pressures are also high.[2,3,4]

Usually, BAIT is coexistent with recent use of antibiotics for respiratory tract infection. Specifically associated with moxifloxacin and clarithomycin.[5]

We present a case of BAIT with symptoms of photophobia, pain and visual blurring of bilateral eyes. (Figure-1).

CASE REPORT

A 40-year-old woman reported to a clinical set up with complains of bilateral photophobia, pain and blurring, symptoms were acute in onset. She had history of acute respiratory infection for which she used oral moxifloxacin one month before onset of above-mentioned ocular discomfort. Her ocular pain worsened progressively thus considered an ophthalmic consultation. She was referred to our uveitis clinic four days after onset of her symptoms.

On examination, her VA was 6/9 in right eye, not improving with pin hole and 6/6 in left eye, un-aided. Her anterior segment examination showed bilateral hyperemic conjunctiva, corneal endothelial pigment deposition, +3 pigment dispersion and +2 flare in anterior chamber bilaterally. Iris showed symmetrical bilateral diffuse transillumination. Poorly responsive pupils with sphincter paralysis bilaterally. IOP was significantly raised to 35 and 40 mm of Hg in the right and left eye, respectively. Gonioscopy revealed dark pigmented trabecular meshwork with open angles bilaterally.

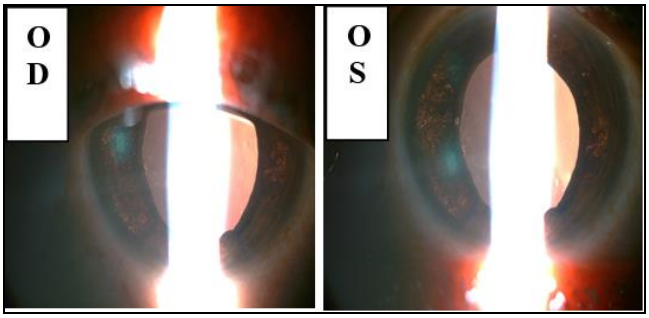

Figure-1: Transillumination defect.

Investigations

Visual field using VF 30-2 was unremarkable. Anterior segment OCT showed no iris concavity (Figure-2).

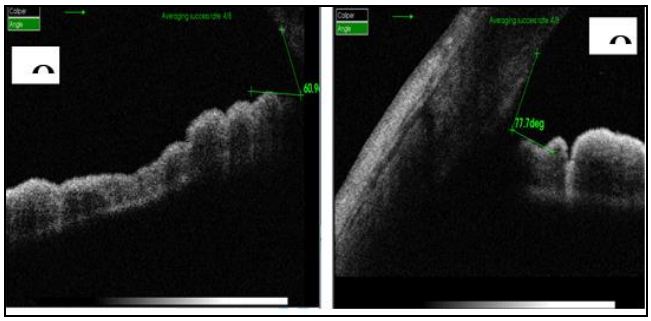

Figure-2: **Anterior segment OCT.**

Posterior segment OCT shows normal study (Figure–3). Multiple systemic investigations including

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Blood CP, hepatitis B/C serology, thyroid profile, LFTs and RFTs were normal. Serum IgG and IgM antibodies against cytomegalovirus (CMV), herpes simplex virus (HSV) and varicella-zoster virus (VZV) were also evaluated. Serological tests showed that IgM antibodies were negative for all these microorganisms. IgG antibodies to CMV and HSV were positive showing serological evidence for having been exposed to these microorganisms in the past like normal adults of our population.

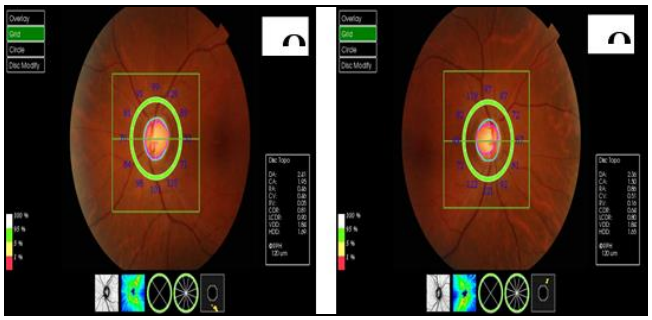

Figure-3: **Fundus photographs.**

Treatment

Her IOP was significantly raised to values of 35 and 40 mm of Hg in right and left eye respectively at time of presentation. Intravenous mannitol infusion (300 ml at 60 drops/minute once daily for two days consecutively) rendered her IOP to 18 and 16 mm of Hg. She was then advised oral acetazolamide 250 mg orally TDS, Prednisolone eye drops two hourly and pressure lowering topical eye drops twice a day. Her systemic acetazolamide was halted on 5th day of initiation of treatment, topical prednisolone was tapered off weekly to three times a day, while topical pressure lowering drugs continued.

After a month, her IOP reduced 13 and 14 mm of Hg in right and left eye respectively. Her vision improved to 6/6 in right eye. Photophobia lessened substantially. However, her pupillary reactions improved from poorly responsive to sluggish. Pigment dispersion reduced gradually over a month.

DISCUSSION

A large case series has recently been reported with unusual bilateral iris transillumination. It follows flu like illness or oral antibiotic use like our case.[6] Middle aged female patients are more affected. Symptoms of our patient masqueraded as anterior uveitis, pigment dispersion syndrome (PDS), and Bilateral acute depigmentation of Iris (BADI). However, in PDS onset is usually silent and disease progress slowly and is short lived, in contrast to abrupt and symptomatic initiation in BAIT. Transillumination defects are spoke-like in PDS.[7] BADI presents with is iris depigmentation not transillumination.[8]

BAIT is also confused with acute iridocyclitis and pseudoexfoliation syndrome (PXF).[9] Iridocyclitis is characterized by severe protein and cellular extravasation. There is posterior synechiae as typical of inflammation. PXF is characterized by whitish dand-ruff like deposition at pupillary margins. There is normal pupillary reaction. It is common in older individuals.

Iris atrophy with and without transillumination can be seen in inflammatory conditions like viral iridocyclitis and Vogt-Koyonagi-Harada disease. Acute angleclosure glaucoma, Fuchs uveitis and ocular trauma can also present as pigment dispersion.[10]

Conflict of Interest: None.

Authors' Contribution

AR: Direct-conception and analysis, NN: Direct-contribution to conception/supervision, QZ: Direct-analysis.

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