Multimodal imaging features of a case of aripiprazole-induced retinopathy

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Case of a 52-year-old schizophrenic female with uniocular retinopathy like presentation is described who was on aripiprazole medication for last fifteen years. This case report illustrates the multimodal imaging features of this rare case presentation.

Key words: Aripiprazole, drug induced, retinopathy, schizophrenia, toxicity

Aripiprazole is a drug of choice for schizophrenia and amongst the ocular side effect chorioretinopathy and transient myopia have been described. Herein, we report a case of uniocular retinopathy in a known patient of schizophrenia who was on Aripiprazole medication.

Case Report

A 52-year-old female patient known schizophrenic on treatment came for routine ophthalmic evaluation. Her best corrected visual acuity was 20/20 in right eye and 20/50 in left eye. Both eyes anterior segment examination was essentially normal except for nuclear sclerosis in left eye (LE). Right eyes fundus evaluation was unremarkable. Left eye fundus showed the presence of healthy optic disc, retinal pigment epithelium atrophy (RPE) along the supertemporal and inferotemporal arcades and few specks of pigment migration. [Fig. 1a]

Fundus autofluorescence imaging of the LE showed the presence of hypoautofluorescence along the vascular arcades. [Fig. 1b] Swept source Ocular coherence tomography line scan along the supratemporal arcade showed loss of inner and outer retinal architecture. [Fig. 1c] Fluorescein angiography showed the hyper-fluorescence of optic disc in form of disc staining and mild disc leakage in the later frames and presence of multiple window defects along the arcade [Fig. 2a-c]. Further, full field electroretinogram showed the preserved scotopic and photopic wave forms in the right eye but extinguished scotopic response and minimal photopic responses in the left eye. Oscillatory potential was also noted to be extinguished in the left eye. [Fig. 2d-h] In order to co-relate the association of schizophrenia with such uniocular clinical presentation as seen in our case, we reviewed the literature and could come across only handful of case reports mentioning the side-effects of the aripiprazole. One being the transient myopia with or without diplopia and other being the aripiprazole induced chorioretinopathy by Faure *et al*.[1-3]

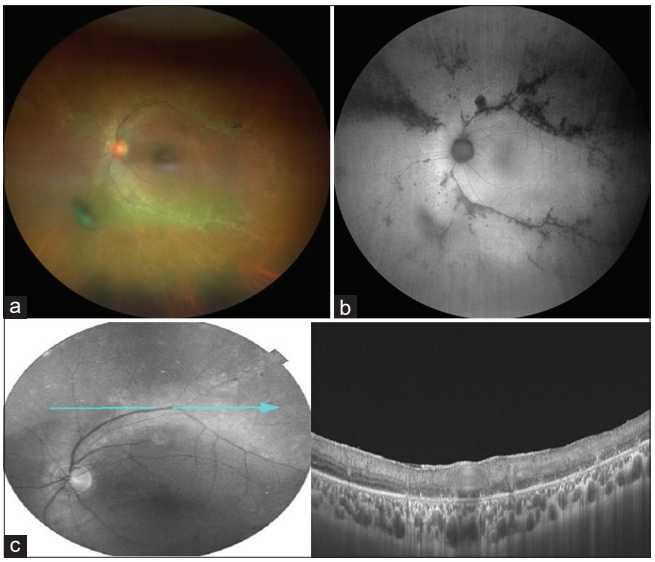

Figure 1: (a) Left colour fundus photograph of retina showing healthy optic disc, attenuation of retinal arterioles and veins, RPE atrophy along the superotemporal and infero temporal arcades and pigment migration at mid periphery. (b) Autofluorescence imaging of the same eye showing hypoautofluorescence along the arcades. (c) Horizontal line scan of SS-OCT at supero temporal arcade showing loss of inner and outer retina with intact RPE

Like in above mentioned reported case, our patient didn't have posterior pole affection and was asymptomatic as well. Based on the clinical features we made a diagnosis of left eye aripiprazole induced retinopathy and requested the treating psychiatrist to consider substituting the drug with alternative. Pt is under close observation and has been stable.

Discussion

Chlorpromazine had been the choice of drug for schizophrenia formerly, however, Aripiprazole is currently the preferred anti-psychotic drug across the globe for schizophrenia. Retinal toxicity of chlorpromazine is well known and reported in literature. Although there are sparse reports on aripiprazole induced retinal toxicity. The first report of chorioretinal toxicity

Access this article online

Quick Response Code:

Website: www.ijoreports.in

DOI: 10.4103/ijo.IJO_2395_21

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Received: 13-Apr-2021 Revision: 05-Oct-2021
Accepted: 16-Oct-2021 Published: 13-Apr-2022

Cite this article as: Patel A, Pathengay A. Multimodal imaging features of a case of aripiprazole-induced retinopathy. Indian J Ophthalmol Case Rep 2022;2:461-2.

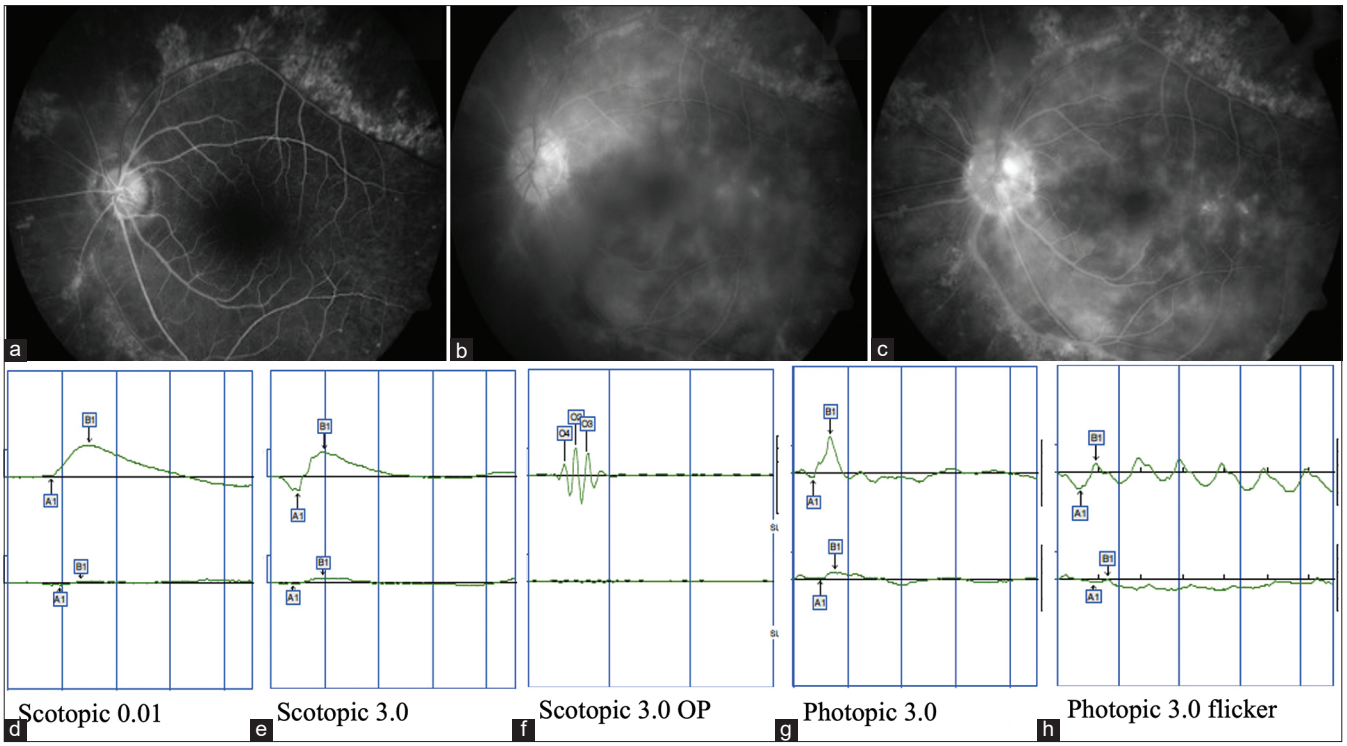

Figure 2: (a-c) FFA image of left eye showing presence of window defects along the arcades and disc staining. (d-h) Full field electroretinogram showing the intact scotopic and photopic response as depicted in the upper wave forms of right eye and extinguished scotopic, oscillatory potential and minimal rise in wave forms with reduced amplitudes for photopic responses as depicted in the lower waveforms of left eye as depicted in the image

was reported by Faure *et al*. in 2015.[1] The other known side effect is transient myopia which could present with or without diplopia.[2,3]

The possible rational of development of the chorioretinal can be attributed to drug absorption by melanin and damage to retinal enzymatic system which further leads to photoreceptor damage.[2,3]

Conclusion

Our patient had been on Aripiprazole for over last fifteen years and retinal changes could be attributed to the possible drug toxicity.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Hyderabad Eye Research Foundation, Hyderabad, India.

Conflicts of interest

There are no conflicts of interest.

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