Fluoxetine Maculopathy: A case Report of Bilateral Cystoid Macular Edema Associated with Fluoxetine Treatment

Nada Bugshan [a], Osama Al Amri [b, d], Abdulaziz Al Taisan [c, d]

a Faculty of Medicine, King Abdulaziz University, Jeddah, Saudi Arabia, **b** Department of Ophthalmology, King Abdullah Medical City, Jeddah, Saudi Arabia, **c** Department of Ophthalmology, college of Medicine, King Faisal University, Al-Hasa, Saudi Arabia, **d** Vitreoretinal Division, King Khaled Eye Specialist Hospital, Riyadh, Saudi Arabia

PURPOSE

To report a rare case of a patient with bilateral cystoid macular edema associated with fluoxetine treatment. Moreover, to describe the presentation, clinical course, and management of the case.

INTRODUCTION

Patterns of retinal toxicity are classified into major categories based on their clinical manifestations: disruptions of the retina and retinal pigment epithelium (RPE), crystalline retinopathy, photoreceptor dysfunction, cystoid macular edema, central serous choroidopathy, uveitis, and vascular damage[1]. Several medications may cause retinal toxicity. One of those medications is Selective Serotonin Reuptake Inhibitors (SSRIs); the drugs in this group are primarily used to treat major depression in Saudi Arabia (28.6%)[2]. Fluoxetine, sertraline, citalopram, escitalopram, paroxetine, and fluvoxamine are all types of SSRIs. Fluoxetine specifically is being used by 7.2% among the other antidepressants[2,4].

Nowadays, selective serotonin reuptake inhibitors (SSRIs) are the most frequently prescribed antidepressants. However, they are evident to be associated with side effects, especially at the initiation of treatment, which may lead to premature discontinuation of therapy[5]. There are several studies done with patients being treated with SSRI; the most common reason for patients leaving the study was the progression of visual impairment[6–8]. Ophthalmologic consultation may be considered periodically before starting antidepressant treatment and during usage.

CASE PRESENTATION

A 70-year-old female patient known to have hypertension managed well with medication and depression on Fluoxetine for thirty years. Complained of a gradual bilateral decrease of vision over the past year. A thorough ocular examination was done and revealed best-corrected visual acuity (BCVA) 20/300 in the right eye and 20/60 in the left eye. Confrontation visual field examination was normal with no defects in all quadrants. Pupils were symmetrical and reactive with no afferent pupillary defect. Normal red reflex was detected in both eyes by direct ophthalmoscope. Intraocular pressure (IOP) was 15 mmHg in the right eye and 17 mmHg in the left eye, measured by Goldmann Applanation Tonometer.

She was initially misdiagnosed as diabetic macular edema (DME) and managed accordingly without clinical improvement. However, systemic workup ruled out any other systemic disease, including diabetes.

Imaging with Fundus Fluorescein Angiography (FFA) bilateral macular leakage into the cystoid space with a petaloid leakage pattern and macular optical coherence tomography (OCT) showed bilateral macular involvement and changes **(Figures 1-3)**, which provided the suspicion to the diagnosis of Fluoxetine induced maculopathy. The ministry of managing SSRIs induced maculopathy was discontinuation of the drugs and follow-up, according to the previously reported cases.

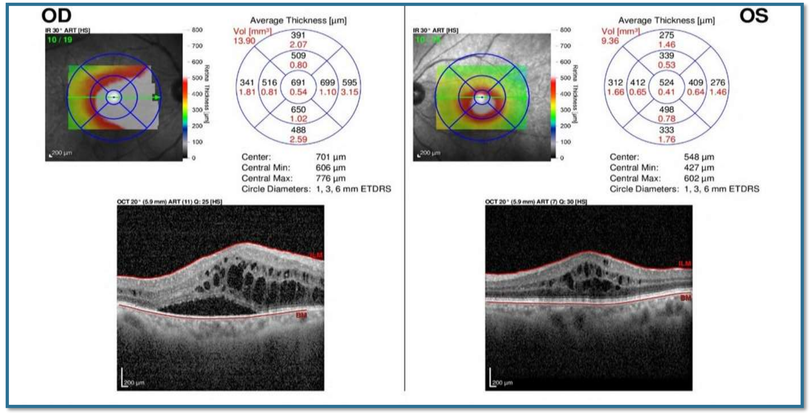
REFERENCES

CONCLUSION

This case report aims to assess the presumed association of Fluoxetine with bilateral macular edema, and to consider SSRI in history notes in macular edema. Further investigation, awareness, and education to prevent SSRI-induced maculopathy is needed, especially in higher prevalence of SSRI use/long-term use. Further researches and investigations are needed to understand the reversibility of SSRIs induced maculopathy, estimate the average time risk to develop SSRI-induced maculopathy, and determine the sufficient time needed for those cases to follow up and document the improvement clinically by ocular imaging.

IMAGING

(Figure 1). Optical coherence tomography (OCT) of the macula revealed cystoid macular edema (CME) in both eyes with subretinal fluids.



(Figure 2-3). Fundus fluorescein angiography (FFA) of the right eye showed macular leakage into the cystoid space with a petaloid leakage pattern.