Case Report

Fluoxetine, a Selective serotonin reuptake inhibitor overdose resulting in a Central retinal vein occlusion

ABSTRACT:

Aim: We present a rare case of Central retinal vein occlusion after prolonged use of Fluoxetine.

Case Presentation: A 28 year old patient presented with clinical picture of Central retinal vein occlusion after prolonged use of Fluoxetine .Discontinuation of the offending drug resulted in resolution of the venous occlusion.

Discussion and Conclusion: Young patient presenting with central retinal vein occlusions require drug history to be elicited to identify the cause.

KEYWORDS:

Fluoxetine, Selective serotonin reuptake inhibitor, Central retinal vein occlusion

INTRODUCTION:

Fluoxetine is a selective serotonin reuptake inhibitor which is widely used for the treatment of major depression, obsessive-compulsive disorder (OCD) and panic disorders[1, 2].Their popular use is due to the acceptable side effect profile as well as low morbidity and mortality[3]. Following is an unusual complication of the use of fluoxetine in a patient suffering from OCD.

CASE PRESENTATION:

A 28 year old gentleman presented to our clinic with a history of decrease in vision in his right eye since 1 month. There was a history of usage of drug fluoxetine (60 mg daily) since 2 months prescribed by his Psychiatrist. There was no other systemic illness or any other relevant medical history. On examination vision was noted to be 6/6; N6 in both eyes. Ocular movements were full, free; there was no presence of relative afferent pupillary defect. Anterior segment examination was unremarkable; intraocular pressures were noted to be 10mmHg bilaterally. Posterior segment examination of the right eye showed retinal hemorrhages in all quadrants, significant vascular tortuosity and optic disc edema with disc collaterals suggestive of long standing central retinal vein occlusion(CRVO) (figure 1) .The left eye fundus was normal.

Fluorescein angiography demonstrated delayed venous filling suggestive of venous stasis. There was no evidence of any vasculitis. In view of the strong suspicion of CRVO post drug usage the patient was asked to stop the drug and asked for follow up. After stopping the drug there was gradual clearing of the retinal hemorrhages and vascular tortuosity. Three months follow up showed normal looking retina with complete clearing of the retinal lesions. At final visit the visual acuity was 6/6 with normal intraocular pressures.

Figure 1: Right Eye fundus photo showing retinal hemorrhages in all quadrants, significant vascular tortuosity and optic disc edema with disc collaterals suggestive of long standing central retinal vein occlusion

DISCUSSION:

Central retinal vein occlusion is the second most common retinal vascular disorder after diabetic retinopathy[4, 5]. Thrombotic occlusions can occur due to a number of pathogenic insults including vessel compression, vessel wall damage, changes in circulatory dynamics and changes in blood composition and clotting[6].

Selective serotonin reuptake inhibitors (SSRIs) such as Fluoxetine reduce neural serotonin reuptake; they are also known to modulate peripheral serotonin, including that in platelets[7]. Serotonin has been implicated as a potent potentiator in platelet aggregation. In repeated doses, SSRIs have been found to deplete platelet serotonin stores and have therefore been proposed to reduce the risk of hypercoagulability[8]. However, the initial effect of SSRI treatment is to increase serotonin levels within the target tissues, although the duration of this effect is not known[9]. An increase in platelet serotonin secondary to the use of the SSRI fluoxetine has previously been postulated as an etiological factor in the development of deep venous thrombosis[10]. Low mood itself has also been found to increase the risk of thromboembolic stroke through increased platelet activity due to sympatho-adrenal axis hyperactivity.

CONCLUSION:

In our patient we interpret that the use of fluoxetine was a potentiating factor in the platelet aggregation contributing to his central retinal vein occlusion. To the best of our knowledge this is a rare case of fluoxetine to be reported in the literature to cause a Central retinal vein occlusion. It is an important observation given the popularity of use of SSRIs. Young patients presenting with central retinal vein occlusions require drug history to be elicited to identify the cause.

CONSENT: As per international standard or university standard, patient's written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL: NOT APPLICABLE

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