Fluvoxamine-induced intracranial hypertension in a 10-year-old boy

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Drug-induced intracranial hypertension is a well-established entity. We report a rare case of intracranial hypertension with papilledema in a 10-year-old boy following use of fluvoxamine, a selective serotonin reuptake inhibitor. On discontinuing the drug, the papilledema resolved over 4 months without any residual visual anomalies. To the best of our knowledge, this is the first report of fluvoxamine-induced intracranial hypertension with papilledema.

Key words: Benign intracranial hypertension, fluvoxamine, papilledema

Intracranial hypertension in prepubertal children differs significantly from adult and postpubertal intracranial hypertension. Some of the differences are an equal sex distribution, less frequent obesity, more frequent ocular motility defects, and greater incidence of medical conditions compared with adult patients.[1] Drug-induced intracranial hypertension has been known to occur with isotretinoin, lithium, and tetracycline derivatives.[2] Selective serotonin reuptake inhibitors (SSRIs) which have become the first-line drugs for treating depression in the young due to their favorable side effect profile[3] have been rarely implicated in the development of intracranial hypertension.[4,5]

Fluvoxamine is an SSRI approved for the use of obsessive-compulsive disorders (OCD) in children.[6] We report a rare case of fluvoxamine-induced intracranial hypertension in a young boy with OCD.

Case Report

A 10-year-old boy, averagely built and nourished, complained of seeing black spots in front of his right eye for a few days without headache. His vision with spectacles was 20/40 in the right eye and 20/32 in the left eye. Anterior segment was normal, and dilated fundus evaluation revealed bilateral moderate optic disc edema [Fig. 1a and b]. The disc and peripapillary edema was confirmed and quantified using optical coherence tomography [Fig. 2a], and visual fields showed an enlarged physiological blind spot [Fig. 3]. Subsequently, the patient underwent a magnetic resonance imaging and magnetic resonance venography which were both normal. A lumbar puncture was done which revealed raised intracranial pressure (300 mmH_2O) with normal cellularity and chemistry results. Based on these findings, a diagnosis of intracranial hypertension with papilledema was made.

Figure 1: (a and b) Papilledema at presentation, (c and d) resolving papilledema at 2-week follow-up, and (e and f) resolved edema with temporal disc pallor at 4 months

On further questioning, the mother reported that her son was on oral fluvoxamine (100 mg/day) that was initiated by psychiatrist for OCD 2 years back. In view of the possible drug-induced intracranial hypertension, fluvoxamine was discontinued immediately, and the patient was started on oral acetazolamide. Within 2 weeks, the papilledema had

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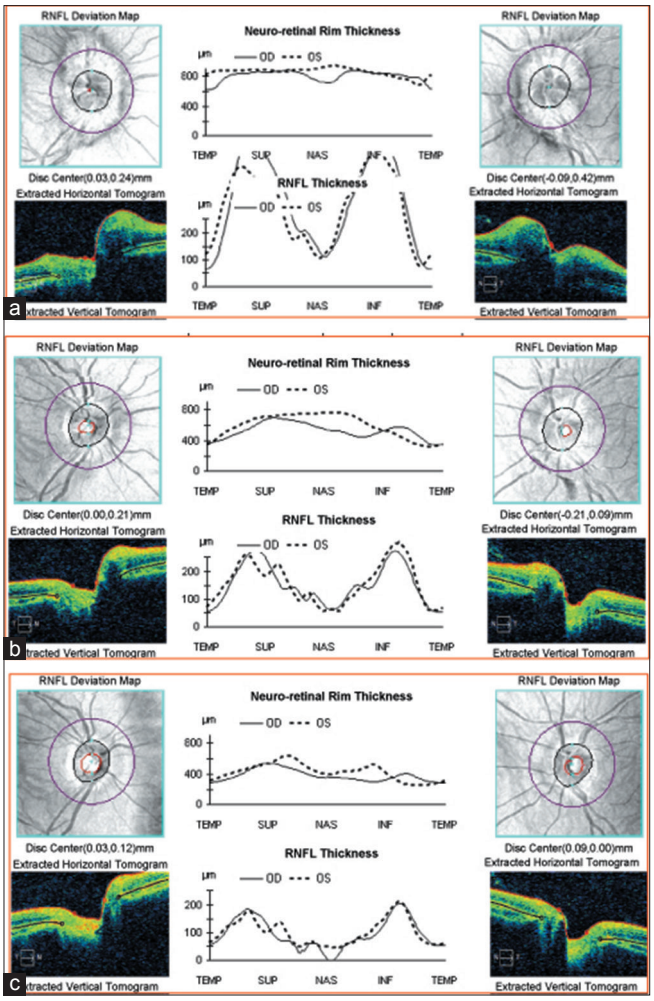

Figure 2: (a) Retinal nerve fiber layer edema at presentation, (b) resolving edema at 2 weeks, and (c) resolved edema at 4 months

started resolving [Fig. 1c and d and 2b] and by 4 months had completely resolved [Figs. 1e and f and 2c]. There was mild temporal disc pallor with normal visual acuity, visual fields, and color vision.

Discussion

Drug-induced intracranial hypertension is well established,[2] but SSRIs leading to papilledema has been very rarely reported.[4,5] Lithium used previously for treating various psychiatric disorders was known to lead to this complication more frequently.[7] Hutcheon reported a case of a 7-year-old patient who developed bilateral papilledema while taking sertraline hydrochloride, an SSRI, for an anxiety disorder.[5] Mirtazapine, another antidepressant thought to have similar mechanism of action like SSRIs, has also been reported to cause intracranial hypertension.[4] However, to the best of our knowledge, fluvoxamine use has never been associated with intracranial hypertension in the past.

SSRIs have been shown to be associated with intracranial hemorrhage with papilledema within first 30 days of initiation, especially if administered with oral nonsteroidal anti-inflammatory drugs.[8] In experimental animal models, SSRIs have been shown to cause reduction in cranial blood flow with resultant hypoxia and cerebral edema.[9-11] These mechanisms may be responsible for intracranial hypertension in our patient. However, it was interesting that papilledema developed after 2 years of fluvoxamine use. It is possible that prolonged administration of the drug may have caused a cumulative effect which may have resulted in subsequent papilledema.

Conclusion

In conclusion, we report a very rare case of SSRI-induced intracranial hypertension in a child that resolved promptly on withdrawing fluvoxamine. It may be prudent for psychiatrists to have an ophthalmology consultation for their patients on SSRIs

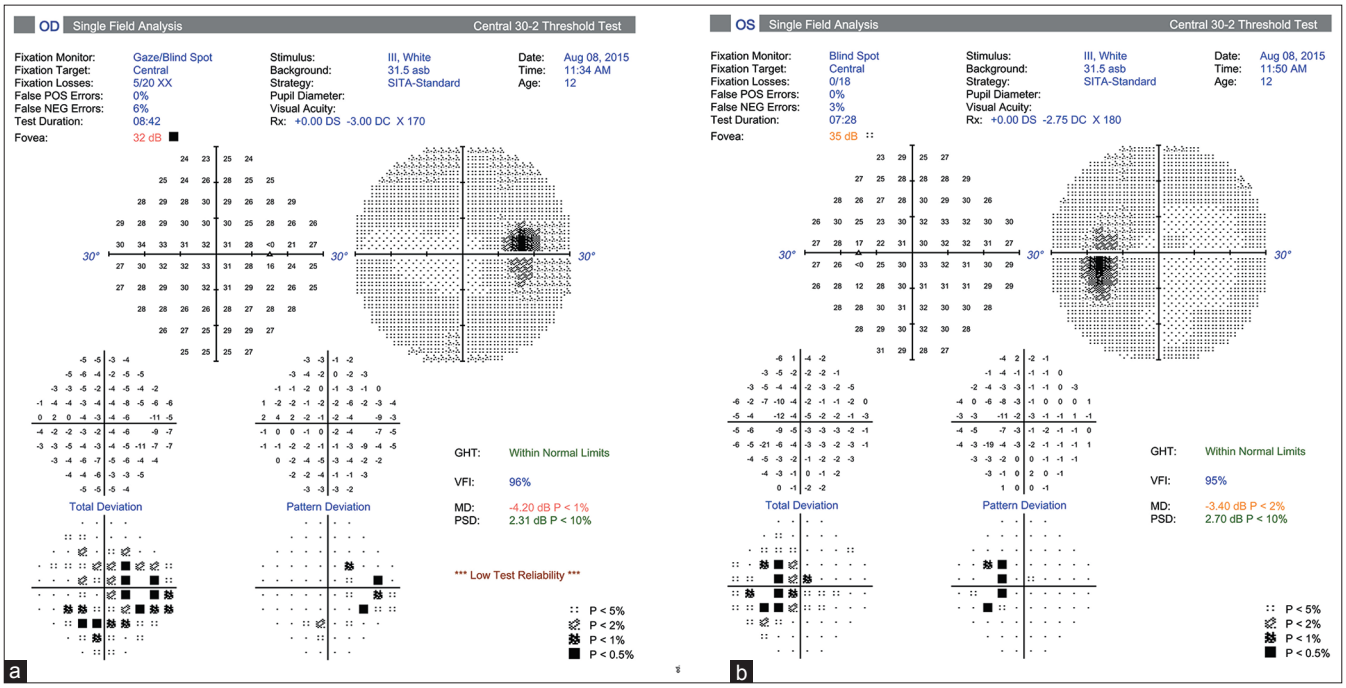

Figure 3: (a and b) Enlarged blind spot on visual field analysis in the right and left eye

to understand whether this is indeed rare or underreported. In addition, patients may also be warned to get ophthalmic consultation if they experience blurred vision or dark spots.

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.

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Conflicts of interest

There are no conflicts of interest.

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