

Early Diagnosis of Adverse Effects of PPIs: A Peep into the Eye

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ABSTRACT

We describe here a unique presentation of a young female medical graduate, with untreated gastric issues, self-medicating with a proton pump inhibitor leading to chronic and excessive intake. She presented to our Outpatient department with complaints of sudden onset blurred vision. The diagnosis was established in the early stages as toxic optic neuropathy secondary to drug toxicity after ruling out possible etiologies with appropriate investigations. This report highlights the danger of overusing drugs without physician supervision, and the importance of catching such cases early using Optical Coherence Tomography.

Keywords: Disc pallor, Glaucoma, Optical coherence Tomography.

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Received: 22-10-2023;

Revised: 09-11-2023;

Accepted: 18-11-2023.

CASE REPORT

A 22-years-old female medical student presented with some blurring of vision since a few months. She has been wearing glasses since school days. Parents also had moderate amount of myopia. Her last refraction two years ago revealed -2.75 D sph of myopia in both eyes. Repeat refraction at presentation now showed both eyes having -2.5 D sph/-0.5 D cylx180°. Ocular examination revealed a normal anterior segment. The dilated fundus examination showed an overall normal disc in size and C/D ratio. The neuroretinal rim was normal except for the presence of temporal pallor (Figure 1).

Peripheral retina and fovea were normal. Spectral domain OCT evaluation using the disc cube (200x200) showed abnormal thinning of the RNFL in the temporal quadrant of both eyes. RNFL thickness map showed that the double hump pattern of the disc was maintained in both eyes (Figure 2).

Visual field on static perimetry of both eyes showed VFI was 96% on SITA standard 24-2 at 2 years, and Mean Deviation (MD) of -3.42 dB, interpreted as normal fields (Figures 3 and 4).

The patient denied any history of substance abuse or undergoing treatment with medication. A provisional diagnosis of glaucoma

suspect was entertained. Complete evaluation for glaucoma did not show any abnormalities.

The patient was advised to review annually. On the next annual examination, the status quo was maintained. All parameters were the same, including RNFL thinning. The possibility of toxic optic neuropathy was considered as systemic examination ruled out the possibility of trauma, old anterior ischemic optic neuropathy, presence of brain tumor, or dietary deficiencies. Detailed history revealed that she has had severe gastritis for the last five years. She had been prescribed 40 mg of Pantoprazole once daily initially for two weeks. The patient did not follow-up with the physician and started self-medicating for symptomatic relief. She had stepped it up to 80 mg daily for the last three years. She was advised to report to her physician who advised immediate discontinuation of the drug. Also, multivitamin therapy has been started.

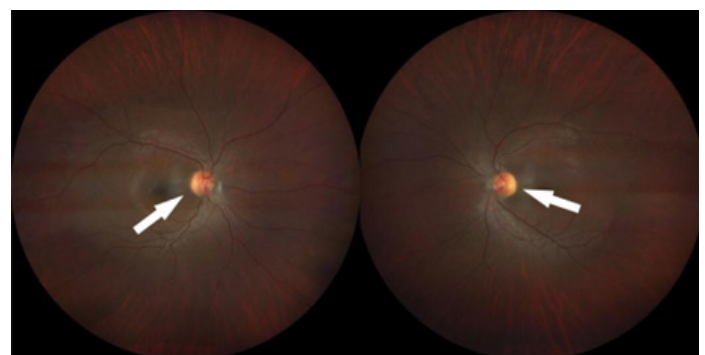


Figure 1: Dilated fundus examination of both eyes showing temporal pallor (white arrow). Reproduce at column width.



DOI: 10.5530/ijmedph.2023.3.21

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especially in the papillomacular bundle. The progression occurs very slowly over months. No relative afferent pupillary defect is seen due to symmetrical nature.⁶

Proton-Pump Inhibitors (PPI) are reported to cause adverse drug reactions. Amongst others, visual impairment presenting as blurred vision, visual disturbance has been reported. The risk is higher with PPI as compared to H₂ receptor antagonists when administered as monotherapy.⁷

CONCLUSION

The case report highlights the overuse of a seemingly safe drug causing harmful effects. OCT is an important tool to diagnose it in the early stages.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

ABBREVIATIONS

OCT: Optical coherence tomography; **VFI:** Visual field index; **SITA:** Swedish interactive thresholding algorithm; **RNFL:** Retinal nerve fiber layer; **SD-OCT:** Spectral domain OCT.

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Cite this article : Sarvanan K, Ahuja S, Ahuja S. Early Diagnosis of Adverse Effects of PPIs: A Peep into the Eye. *Int J Med Public Health*. 2023;13(3):137-9.