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Case Report

Topiramate induced bilateral anterior uveitis with choroidal detachment and angle closure glaucoma

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cases of topiramate induced ocular adverse effects, one with bilateral anterior uveitis and choroidal detachment and another with angle closure glaucoma (Fig. 1).

Case report

Case-1

38-yrs-old female, a known case of panic disorder with somatoform disorder was referred from psychiatry OPD with history of painful gross diminution of vision and headache. On reaching eye OPD she gave history of gross diminution of vision of 02 days duration associated with redness, pain and watering both eyes, also gave history of headache for 02 days. There was no history of joint pain, fever or similar episode in past. There was history of taking Tab Topiramate 25 mg bid started 15 days back (Fig. 2).

Ocular examination

Day-1

DVR – 6/60 improving to 6/18.

DVL – 6/60 improving to 6/12.

Both eyes

Anterior segment. Cicumciliary congestion was present, Cornea was hazy, descemet's folds were present, anterior

Introduction

Topiramate is a sulfamate-substituted monosaccharide. The main indications for topiramate are monotherapy in epilepsy, as an adjunctive therapy in epilepsy and in migraine patients. The adverse effects of topiramate related to ocular system are mainly sudden onset Myopia with angle closure glaucoma.¹ The anterior chamber becomes shallow as a result of anterior shift of lens iris diaphragm due to anterior rotation of ciliary body, giving rise to increased intraocular pressure with or without pain. It can also be associated with supraciliary effusion. The treatment consists of reducing intraocular pressure and discontinuation of topiramate. We present two

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Fig. 1 – Shallow Anterior chamber with membrane.

chamber was shallow with 4+ cells and membrane in pupillary margin, lens detail was not appreciated.

Posterior segment. No details were seen.

IOP

Right eye – 18 mmHg.

Left eye – 19 mmHg.

Day-2

DVR – 6/36 improving to 6/18.

DVL – 6/36 improving to 6/12.

Both eyes

Anterior segment. Cicumciliary congestion decreased, Cornea was clearing, descemets folds were present, anterior chamber was shallow with 4+ cells and membrane in pupillary margin with posterior synechia, lens detail was not appreciated.

Posterior segment. Optic disc was hyperemic (right more than left), exudates were present with macular edema and striate.

IOP

Fig. 2 – Cells/flare in AC.

Right eye – 12 mmHg.

Left eye – 11 mmHg.

Investigations

Hemogram – WNL.

CT-Scan Head – Normal.

USG B-Scan – Choroidal detachment both eyes (Fig. 3).

Treatment

Day-1. Treated with topical steroids 2 hrly, topical cycloplegics 8 hrly, Nepafenac eye drops 8 hrly; Dorzox 2% eye drops 8 hrly.

Advised to stop Tab Topiramate after consultation with psychiatrist.

Day-3 and onwards. Started on systemic steroids (with tapering doses 10 mg/wk).

Topical steroids continued on tapering doses for 02 months.

Topical cycloplegics continued for 04 weeks (frequency decreased gradually).

Nepafenac eye drops continued for 02 months. Dorzox 2% eye drops were stopped.

Follow-up at 12 weeks

DVR – 6/9 unaided.

DVL – 6/6(-3) unaided.

Fig. 3 – USG B-scan showing choroidal detachment.

Both eyes

Anterior segment. Eyes were quiet, no cells or flare was seen in anterior chamber, lens showed few opacities on anterior lens capsule.

Posterior segment. Optic disc was normal, exudates have resolved.

IOP

Right eye – 12 mmHg.

Left eye – 14 mmHg.

Case-2

28-year-old patient presented with complaint of sudden onset decreased vision of 01 day duration, associated with redness and watering for past 15 days not associated with pain. No history of similar episode in past. There was a history of being treated for headache with Tab Topiramate.

Ocular examination**Day-1**

DVR– 6/36 improving to 6/6.

DVL– 6/36 improving to 6/6.

(With – 4.50 Dsph both eyes).

Both eyes

Anterior segment. Chemosis was present, Cornea was hazy, anterior chamber was shallow, lens was clear.

Posterior segment. No details were seen.

IOP. Right eye – 48 mmHg.

Left eye – 50 mmHg.

Investigation

Anterior segment OCT (Fig. 4).

Treatment

Day-1. Treated with intravenous mannitol 20% 150 ml Stat, Tab Acetazolamide 250 mg 8 hrly, Dorzox 2% eye drops 8 hrly; Timolol 0.5% eye drops 12 hrly.

Advised to stop Tab Topiramate after consultation with psychiatrist.

Day-2. On clearing of cornea, YAG peripheral iridectomy though not indicated in topiramate induced glaucoma was done (both eyes) in view of shallow anterior chamber and very high IOP, it was only done as an additional procedure to bring down IOP.

Fig. 4 – Anterior segment OCT showing angle closure.

Tab Acetazolamide 250 mg 8 hrly, Dorzox 2% eye drops 8 hrly, Timolol 0.5% eye drops 12 hrly were continued.

Day-10 (on discharge)

DVR – 6/6 unaided.

DVL – 6/6 unaided.

Both eyes

Anterior segment. Eyes were quite, cornea clear, anterior chamber was normal in depth. Lens was clear.

Posterior segment. Normal.

IOP

Right eye – 18 mmHg.

Left eye – 20 mmHg.

Advised regular follow-up.

Discussion

Topiramate induced uveitis is a rare adverse effect of the drug, it has been included in the adverse effect list but is very rare. Our first case had bilateral anterior uveitis with choroidal detachment, which has been rarely reported.² Our second case had angle closure glaucoma with myopic shift, which is a known adverse effect of the drug group.^{3–5} The treatment of the condition remains discontinuation of the drug (topiramate), bringing down the raised IOP as soon as possible to save the vision and treating associated uveitis if present by topical steroids/cycloplegics. These cases show the various

forms in which idiosyncratic reaction/adverse effect of the drug can present also this highlights the importance of keeping in mind the not so common adverse effects of some commonly used drugs.

Conflicts of interest

All authors have none to declare.

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