



## Topiramate Induced Glaucoma In Alcohol Dependent Case

### KEYWORDS

Adverse effect, topiramate, alcohol de-addiction, anticraving medications, glaucoma, dependence

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### ABSTRACT

Topiramate is one of the medicines used for anticraving effects in most European countries. Even though Topiramate is a safe drug the case presently being reported developed features of acute bilateral close angle glaucoma. A 42-year-old man being followed up in psychiatric OPD for Alcohol dependence and was prescribed Tab Topiramate 100mg OD, presented with watering, redness, pain, and diminution of vision of both eyes, one week after initiation of therapy. On examination, both eyes showed corneal edema, shallow anterior chamber, conjunctival chemosis and intraocular pressure 48 and 46 mm Hg. The symptoms and clinical findings resolved completely upon discontinuation of topiramate and administration of antiglaucoma drugs. Topiramate-induced angle-closure glaucoma and other ocular side effects are reversible if the diagnosis is made early and the drug is discontinued in time. Hence, clinician awareness is an important aspect of preventability of this adverse event.

### Introduction

Topiramate is a common anticraving medications used for prevention of relapse in alcohol dependant patients. It has also been introduced as an anti-epileptic drug. Acute myopia and acute angle-closure glaucoma are serious but rare side-effects of the drug.<sup>[1]</sup> In some Cases of migraine and epilepsy , use of Topiramate has resulted in side effects occurring within two weeks or more of starting it<sup>[2][3][4][5][6]</sup>. If undetected , cases of blurred or permanent vision can occur.

I present a case of glaucoma occurring within one week of starting therapy with Topiramate for alcohol de-addiction, in inpatient care initially and later discharged on anticraving medicines.

Topiramate-induced glaucoma and other ocular side effects are reversible if the diagnosis is made early and the drug is discontinued in time. Hence, clinician awareness is an important aspect of preventability of this adverse event.

### Case report:

A 42-year-old man was brought by his spouse for de-addiction to psychiatric centre. He has been diagnosed with having alcohol dependence syndrome and put into the protocol for forced abstinence and detoxification. He was managed with Oral Chlordiazepoxide 60 mg per day which was slowly titrated downwards as his withdrawal features started subsiding after initial 2 weeks. He had no family history of substance use and no medical or psychiatric comorbidity. He worked as a worker in a brick kiln factory. Patient was given multivitamin supplements, individual and group therapy and was finally discharged after 6 weeks inpatient care. He was prescribed Tab Topiramate 100mg / day on OPD basis and advised weekly follow up.

Patient was better at discharge but presented to Psychiatric Outpatient department one week later, reportedly compliant on treatment and abstaining from alcohol, with complaints of watering, redness, and foreign body sensation in both eyes since one week with diminution of vision and increased eye pain since 2-3 days. On examination, he was conscious, oriented, and in distress.

Vitals stable with no abnormality on systemic examination. Ophthalmological examination was done and it revealed in both eyes the following: Conjunctival chemosis, corneal edema, anterior chamber shallow, pupil 5 mm dilated, not reacting to light, lens clear, visual acuity 6/24 and 6/18, intraocular pressure (IOP) 48 and 46 mm Hg with hazy disc on funduscopy and gonioscopy showing closed angles. He was diagnosed with drug (Topiramate) induced secondary angle closure glaucoma. Topiramate was stopped and the following drugs were added:

e.g. Tab. Acetazolamide 250 mg 1-1-1-1, Tab. Chlordiazepoxide 25 mg 0-0-1-1, T. Benalgin 75 mg 1-0-1-1, Timolol eye drops 2.5% 1-0-1-1, Prednisolone eye drops 1-1-1-1. On stopping Topiramate and taking antiglaucoma measures, patient's symptoms decreased and repeat examination showed the following findings on day 4: lid edema decreased, conjunctival chemosis decreased, cornea became clear, visual acuity was 6/12 and 6/12 with best corrected visual acuity 6/6 in both eyes, and IOP 17 and 20 mm Hg. Patient was discharged on request and follow-up after 1 week confirmed the patient's recovery.

Patient was abstinent and he was provided individual psychotherapy. Psychoeducation of spouse was done and individual was placed on Tab Acamprosate 333mg 2-2-2. Subsequent follow up till next 06 months revealed patient to be abstinent and asymptomatic.

### Discussion

Topiramate is commonly used medication as anticraving for alcohol dependant patients worldwide. Oral topiramate reduces the consequences of drinking and has been shown to improve the quality of life in alcohol-dependent individuals.<sup>[8]</sup> Serious side effects with Topiramate are rare, but distressing ocular adverse events such as bilateral angle-closure glaucoma, myopia, and suprachoroidal effusions have been recorded.<sup>[9][10][11][12]</sup> The mechanism of action of Topiramate causing close angle glaucoma has been attributed to ciliochoroidal effusion which causes forward rotation of the lens-iris diaphragm leading to secondary angle-closure.<sup>[13][14][15]</sup>

Studies done have revealed that adverse

event is likely within first two weeks of initiation of Topiramate therapy. Our patient improved dramatically by the fourth day following withdrawal of Topiramate and addition of antiglaucoma medication.

On follow-up, the patient had no fresh complaints and was maintaining well. Topiramate-induced angle-closure glaucoma is an idiosyncratic reaction and can occur in otherwise normal eyes with normal anterior chamber angles. <sup>[14],[15]</sup>

Patients started on topiramate should therefore be advised to immediately report any symptoms of eye pain or blurred vision, especially in the first few weeks of treatment. <sup>[14],[15]</sup> This case report records the serious side effect of oral Topiramate therapy for the indication of alcohol de-addiction. This report brings to light the responsibility of the clinician to be aware of such a side effect and to make the patient and family aware of the possible side effects and immediate hospitalization in case of warning signs and symptoms.

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