



## Short communication

**Severe ocular side effects with acetazolamide:  
Case report<sup>☆</sup>****A. Llovet-Rausell\*, F. Ruiz Tolosa, B. Kudsieh**

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**ABSTRACT**

**Clinical case:** A 44-year-old woman arrived in the emergency department complaining of decreased visual acuity (VA) in oculus uterque (OU) of 4 h onset. Signs of myopia, increased intraocular pressure (IOP) in OU, and a narrow grade II anterior chamber (AC) were observed. In the posterior segment ultrasound scan, a choroidal peripheral detachment is evident, and a lenticular thickness of 4.05 mm is measured in the anterior segment of the right eye (OD) and 4.00 mm in the left eye (OS). On treatment with oral with naproxen (non-steroidal anti-inflammatory drug), and acetazolamide for migraine. The acetazolamide is suspended and topical treatment is started with timolol and brimonidine every 12 h, with prednisolone and ayclopentolate every 8 h. In the follow-up, a gradual reduction of myopia and lens thickness is observed, as well as anterior chamber expansion. In the last control, the patient had a sphere of -0.75 diopters (D) in OD and -0.25 D in OS. IOP was 15 mmHg in OU and AC was grade III. The ultrasound showed a lens thickness of 3.59 mm in OD and 3.61 mm in OS.

**Conclusion:** This was an iatrogenic case of acute angle closure induced by an anterior displacement of the irido-lenticular complex, secondary to the use of acetazolamide. The treatment of this condition involves suspending the drug responsible and applying topical corticosteroids, hypotensive and cycloplegic eye drops, with the aim of lowering the eye pressure and the degree of myopia due to the re-positioning of the irido-lenticular complex.

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**Reacción ocular adversa a la acetazolamida: a propósito de un caso****RESUMEN**

**Caso clínico:** Mujer de 44 años que acude a urgencias por disminución de la agudeza visual (AV) en ambos ojos (AO) de 4 h de evolución. Se observa miopización, aumento de la presión intraocular (PIO) en AO y cámara anterior (CA) de grado II. En la ecografía de segmento posterior se evidencia un desprendimiento coroideo en rodete periférico y en la de segmento

**Palabras clave:**

Acetazolamida

Efusión cilio-coroidea

Cierre angular

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Miopización  
Iatrogenia

anterior se mide un grosor cristaliniano de 4,05 mm en el ojo derecho (OD) y 4,00 mm en el ojo izquierdo (OI). La paciente está en tratamiento (vía oral) con naproxeno y acetazolamida, por migraña. Se suspende el tratamiento con acetazolamida y se pauta tratamiento tópico con timolol y brimonidina cada 12 h, y prednisolona y ciclopentolato cada 8 h. En los controles sucesivos se observa una disminución progresiva de la miopía, del grosor del cristalino y una ampliación de la cámara anterior. En el último control, el paciente acepta una esfera de -0,75 dioptrías (D) en el OD y de -0,25 D en el OI, la PIO es de 15 mmHg en AO y la CA es de grado III. En la ecografía, el grosor del cristalino es de 3,59 mm en el OD y de 3,61 mm en el OI.

**Conclusión:** Se trata de un caso de cierre angular agudo por desplazamiento del complejo irido-cristaliniano de causa iatrogénica, secundario al uso de acetazolamida. El tratamiento de esta entidad consiste en retirar el fármaco responsable del cuadro y administrar corticoides, hipotensores y ciclopéjicos tópicos. Con esto se consigue disminuir la presión ocular y el grado de miopía gracias al reposicionamiento del diafragma irido-cristaliniano.

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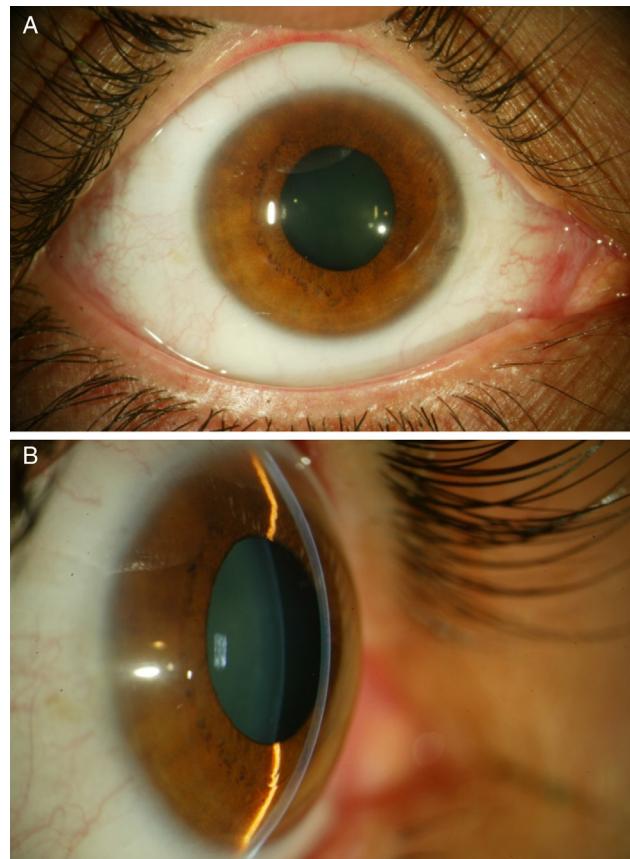
## Introduction

Acute angle closure, secondary to iris-lens diaphragm displacement, is an infrequent entity of unknown etiology.<sup>1</sup> It has been related to hypersensitivity to the sulfonamide component of medicaments such as topiramate, acetazolamide, hydrochlorotiazide, sulfamethoxazole or cotrimoxazol.<sup>2</sup>

A clinic case report is presented of adverse reaction to acetazolamide (Edemox®, CHIESI SPAIN, S.A, Barcelona, Spain), prescribed as antimigraine medication, with ciliochoroidal effusion with edema and anterior ciliary body rotation producing anterior displacement of the iris-lens diaphragm, diminished anterior chamber depth, angle closure and myopization. Symptoms appeared rapidly and receded once the medicament was withdrawn and treatment initiated with topical cycloplegic, corticoids and ocular hypotensors.

## Clinic case report

Female, 44, who visited the Emergency Dept. due to diminished visual acuity (VA) (uncorrected visual acuity: 0.06) in both eyes (BE) with 4 h evolution. The patient referred beginning 24 h earlier oral treatment with naproxene (500 mg/12 h) and acetazolamide (250 mg/8 h) due to migraine. Ocular exploration revealed in both eyes (BE) 4D myopia, corrected VA of 0.96, increased intraocular pressure (IOP) of 26 mmHg and 28 mmHg, respectively, shiny and transparent corneae without edema and anterior chamber (AC) Shaffer grade II (Fig. 1). Suspecting iris-lens complex displacement, of likely iatrogenic cause, acetazolamide was suspended and topical treatment was initiated with timolol and brimonidine every 12 h, and prednisolone and cyclopentolate every 8 h. A checkup after 24 h produce a refraction of -4D in BE, IOP of 20 mmHg in RE and 18 mmHg in LE; AC increased to grade III. Posterior segment echography showed peripheral circular choroidal detachment, while the anterior segment echography measured a lens thickness of 4.05 mm in RE and 4.00 mm in LE (Fig. 2). Successive checkups revealed progressive myopia



**Fig. 1 – (A)** Shiny and transparent cornea without edema. Chamber at grade II. **(B)** Detail of chamber narrowing (in the first examination).

and lens thickness reduction together with increased AC (Figs. 3 and 4). In the last checkup (2 weeks), refraction was -0.75 diopters (D) in RE and -0.25 in LE (corrected vision being 0.96 and one, respectively), IOP of 15 mmHg and AC of grade III, in BE; lens thickness was 3.59 mm in RE and 3.61 mm in LE.

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