WHEN PHACOMORPHIC GLAUCOMA BECOMES PHACOLYTIC: A CASE REPORT

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ABSTRACT

Ocular hypertonia of crystalline origin represents a medical and surgical emergency, although it is relatively uncommon in developed nations, its prevalence is notable in our specific setting, contributing to approximately 1% of cataract surgeries. The primary approach to management involves symptomatic treatment with hypotensive agents and the consideration of extracapsular lens extraction, either with or without subsequent implantation. The prognosis of this condition is contingent upon prompt intervention, the extent of hypertonia severity, and the degree of optic nerve impairment. In this report, we present a case study involving a 70-year-old patient with cataract complications characterized by ocular hypertonia, emphasizing the clinical considerations and challenges associated with its diagnosis and management.

Keywords : *Ocular hypertonia; Crystalline origin; Medico-surgical emergency; Extracapsular lens extraction; Prognosis and optic nerve damage; 70-year-old patient, cataract complications.*

1. INTRODUCTION

Ocular hypertonia of crystalline origin is a medico-surgical emergency, a rare entity in developed countries but a frequent occurrence in our context, accounting for 1% of cataract operations [1].

Management is based on hypnotic symptomatic treatment and extracapsular lens extraction, with or without implantation [2].

Prognosis depends on early management, severity of hypertonia and degree of optic nerve damage [3]. We report the case of a 70-year-old patient with cataract complicated by hypertonia.

2. CLINICAL CASE

A 70-year-old patient with a history of pseudophakia of the right eye presented to the ophthalmic emergency department with redness, pain and decreased visual acuity in the left eye dating back one week.

Ophthalmic examination of the left eye revealed visual acuity reduced to positive light perception, diffuse conjunctival hyperemia, corneal edema with descemetic folds, a narrow anterior chamber with areflextic semi-mydriasis and a total white cataract, the FO was inaccessible, and the globe was hard to bi-digital palpation. Examination of the Adelphe eye was unremarkable. Ultrasound of both eyes is normal.

The patient received an intravenous infusion of mannitol in combination with an oral carbonic anhydrase inhibitor and hypotonizing eye drops (beta-blocker combined with carbonic anhydrase inhibitors and alpha2 adrenergic receptor agonist) to prepare him for lens extraction surgery.

The evolution was marked by the appearance of crystalline masses in the anterior chamber, necessitating the initiation of steroidal anti-inflammatory drugs.

A UBM was performed, showing an elevated anteroposterior lens diameter blocking the pupil, a positive lens sag, an effaced posterior chamber and an effraction of the anterior capsule with passage of masses into the anterior chamber.

The patient then underwent extracapsular lens extraction with anterior vitrectomy without implantation. Post-operative follow-up was favorable, with visual acuity up to 1/10 and normal ocular tone at 16mmhg. Examination of the posterior segment showed papillary excavation at 8/10.

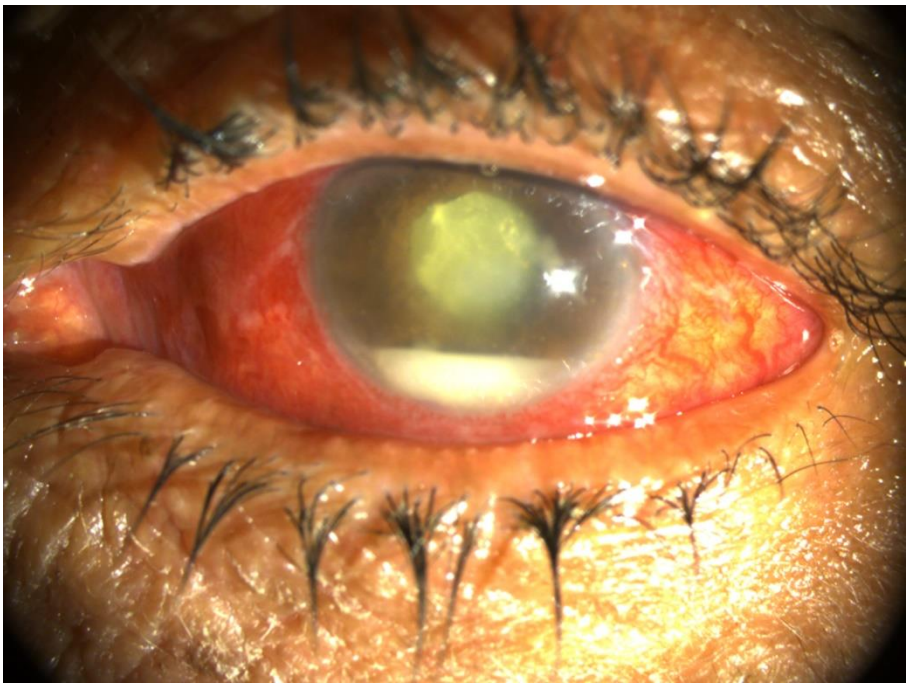

Figure 1: image of the left eye showing meibomitis with diffuse conjunctival hyperemia, corneal edema ,reduced depth anterior chamber with crystalline masses, areflextic semi-mydriasis and total white cataract.

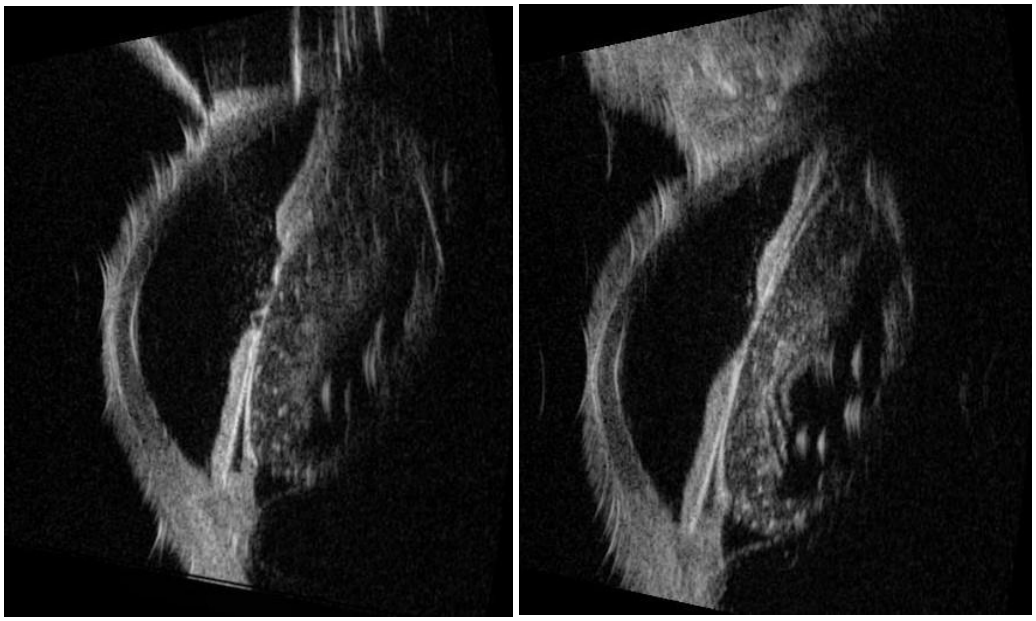

Figure 2: UBM images showing a large anteroposterior lens diameter blocking the pupil, a positive lens sag, an effaced posterior chamber and an effraction of the anterior capsule with passage of masses into the anterior chamber.

3. DISCUSSION

Ocular hypertonia of crystalline origin is a group of glaucoma that share the crystalline lens as a common pathway in their pathogenesis. It is the consequence of a hypermature cataract that

leads to ocular hypertonia, either secondary to intumescence of the crystalline lens or to the release of crystalline proteins blocking the iridocorneal angle [4].

Very often, the two mechanisms interfere, making the etiological diagnosis and management of this type of glaucoma more complex, as in the case of our patient, whose clinical picture is that of an acute attack of angle-closure glaucoma [1].

Spontaneous evolution leads to corneal decompensation with optic nerve atrophy, and specular microscopy is a very important tool in assessing the postoperative prognosis [5].

This is a therapeutic emergency, requiring preparation for surgery with hypotonisers and anti-inflammatories, in order to normalize IOP and improve surgical outcome [2].

The reference technique is extra capsular extraction with or without implantation, depending on the condition of the zonules [1].

4. CONCLUSION

Intumescent cataracts are the most frequent etiology of hypertonia of crystalline origin in our country. Lens extraction must be performed as a matter of urgency, given the risk of optic nerve atrophy and endothelial damage.

CONFLICTS OF INTEREST

All authors declare that they have no conflicts of interest.

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