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Conventional Extra Capsular Cataract Excision in a Case of Complicated Cataract with Chronic Uveitis and Secondary Glaucoma - A Case Report

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ABSTRACT

Quality of vision and early rehabilitation are critical parameters determining the success of modem cataract surgery. Managing cataracts in patients with chronic uveitis and secondary glaucoma presents unique challenges. This case report aims to describe the successful treatment of a complicated cataract with these comorbidities using conventional extracapsular cataract excision (ECCE). The 62-year-old male patient presented with a history of chronic uveitis and secondary glaucoma in his left eye. The visual acuity was severely compromised due to a dense cataract and uncontrolled intraocular pressure. After a thorough preoperative evaluation, it was decided to perform conventional ECCE due to the case's complexity. Postoperatively, the patient showed a significant improvement in visual acuity, with a reduction in intraocular pressure within the normal range. The chronic uveitis was managed with topical corticosteroids and immunosuppressive therapy. Regular follow-up visits were scheduled to monitor the patient's progress and manage potential complications.

Keywords: corticosteroids, secondary glaucoma, chronic uveitis, cataract, extracapsular cataract extraction

Introduction

A cataract is a prevalent ocular condition characterized by lens opacification, leading to impaired vision. Although cataract surgery is generally considered safe and effective, managing complex cases with concurrent comorbidities can present significant challenges. One such complex scenario involves the coexistence of cataracts with chronic uveitis and secondary glaucoma.

Conventional extracapsular cataract excision (ECCE) is a commonly employed surgical technique for complex cataract cases [1]. This procedure involves removing the cataractous lens while preserving the posterior capsule to support intraocular lens implantation. Retaining the posterior capsule helps minimize postoperative complications like vitreous loss and intraocular lens dislocation. At present, only a few exceptions warrant the use of this procedure, namely cases of complicated cataracts with small pupils or poor visualization of cataract due to corneal opacities [2]. A complicated cataract is any cataract that occurs secondary to any ocular or systemic disease [3]. Local causes result in hampering of lens nutrition or lead to toxins in the aqueous thereby promoting inflammatory changes associated with cataract [4]. Secondary complicated cataract as a sequela of anterior uveitis is a common presentation and is usually associated with an immobile and small pupil as a result of posterior synechiae formation. A common cause for secondary complicated cataract is prolonged steroid use [5].

Chronic uveitis is a recurring inflammation affecting the uveal tract, which includes the iris, ciliary body, and choroid. Left untreated or inadequately managed, it can cause structural and functional damage to the eye, resulting in vision loss. One of the complication is secondary glaucoma which is the elevated intraocular pressure caused by underlying ocular conditions, such as uveitis or previous surgeries. These conditions further complicate cataract surgery, necessitating a careful and individualized approach to achieve successful visual rehabilitation.

Case Presentation

A 62-year-old male presented to our ophthalmology clinic with complaints of decreased vision in the left eye for the past two years. The patient had a history of chronic uveitis, managed with topical corticosteroids and immunosuppressive therapy. He also had secondary glaucoma in the left eye, previously controlled with topical antiglaucoma medications. The patient's best-corrected visual acuity in the left eye was limited to hand motion. Upon examination, the left eye showed of mild conjunctival congestion, keratic precipitates in Arlt's triangle, a shallow anterior chamber and seclusio pupillae with iris bombe (Figure *1*) suggestive of grade 2 active uveitis.

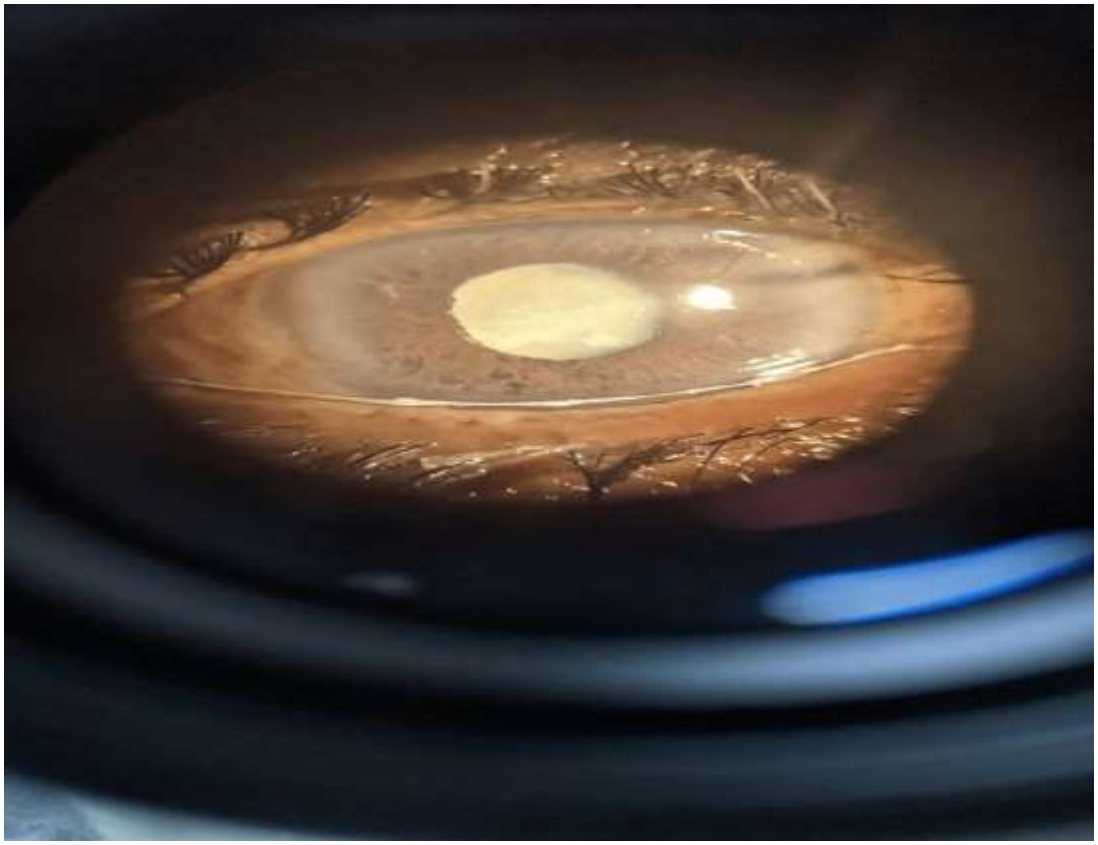

Figure 1: Slit Lamp Bimicroscopy image showing Seclusio pupillae with Iris Bombe

Intraocular pressure was elevated at 41 mmHg despite maximum medical therapy. Slit-lamp examination revealed a dense cataract, making visualization of the posterior segment impossible. The right eye had no remarkable findings. The patient was diagnosed with a complicated cataract in the left eye associated with chronic uveitis and secondary glaucoma. The visual impairment was attributed to the combined effects of the cataract and uncontrolled intraocular pressure. Given the complexity of the case, it was decided to proceed with conventional ECCE. After obtaining informed consent, the patient was taken to the operating room. A large limbal incision was made under sterile conditions and peribulbar anesthesia was administered, where a capsulotomy was performed. The cataractous lens was extracted using a pressure and a counter pressure technique. A rigid intraocular lens was implanted in the capsular bag, ensuring proper alignment and stability. Simultaneously, a trabeculectomy was performed between 11 o'clock to 1 o'clock, to address the elevated intraocular pressure associated with secondary glaucoma. Postoperatively, the patient was prescribed topical antibiotic and corticosteroid eye drops to prevent infection and control inflammation. Additional antiglaucoma medications were initiated to maintain the target intraocular pressure. Close monitoring of the patient's condition was carried out during follow-up visits, including assessment of visual acuity, intraocular pressure, and signs of uveitis. At the one-month follow-up, the patient's best-corrected visual acuity in the left eye improved to 20/80. Intraocular pressure was well controlled at 15 mmHg with the use of antiglaucoma medications. The signs of uveitis had significantly diminished, with minimal anterior chamber cells present. The patient reported subjective improvement in visual function and overall satisfaction with the surgical outcome.

Discussion

Complicated cataract typically presents with a polychromatic luster, breadcrumb or leathery appearance, and chalky white texture. Uveitis is a common cause of complicated cataract and is frequently associated with difficult pupils or raised intraocular pressures which add a challenge to their management. Surgery is often the mainstay of treatment for complicated cataracts, but the management approach must be tailored to address the specific challenges associated with these cases. Phacoemulsification or manual small incision cataract surgery is the most commonly performed cataract surgery in present times. The choice of the intraocular lens is also essential. Toric or multifocal IOLs may be selected to address astigmatism or presbyopia if necessary. However, the surgeon must consider the potential challenges related to the lens capsule, and in some cases, a sulcus-fixated or iris-fixated IOL may be preferred. Success in managing complicated cataracts relies on careful preoperative planning, advanced surgical techniques, and postoperative care. Muhtaseb et al concluded in his study that risk stratification played an important role in deciding the type of surgery a patient should undergo to minimize complications [6]. A carefully performed conventional ECCE provides a larger area for manipulation of a hard cataract and delivery of nucleus through a small pupil thereby decreasing chances of endothelial damage seen with Manual Small Incision Cataract Surgery (MSICS). A major consideration prior to undertaking a conventional ECCE in lieu of MSICS is a post-operative visual outcome which should also be explained to the patient properly. P Mohanty et al and Gogate et al found in their study that hard cataracts with thinned capsule have a better outcome with ECCE [7]. Especially in centers with no retinal surgery setup, attempting a phacoemulsification on a patient with small pupil may result in a dropped nucleus that may become

unmanageable [8,9]. A few studies have found that chances of vitreous loss or posterior capsular rent are higher in complicated cataracts or cataracts with pseudoexfoliation when managed by phacoemulsification. A drawback of uveitic cataracts is that they have a higher incidence of post-operative inflammation which a conventional ECCE may compound, therefore, it should be managed aggressively within the first postoperative week for better visual outcome.

Conclusions

Conventional ECCE, combined with appropriate preoperative evaluation and postoperative management, can be an effective surgical approach for complicated cataracts with concurrent chronic uveitis and secondary glaucoma. This case report highlights the importance of a comprehensive and individualized treatment strategy in managing complex ocular conditions, aiming to improve visual outcomes and enhance the patient's quality of life.

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