
SHORT COMMUNICATION

Case report

Scleral fixation of a posterior chamber intraocular lens in a patient with two dislocated lens implants

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PURPOSE. *To report the clinical findings and management of a case of two consecutive intraocular lenses (IOLs) dislocated into the vitreous cavity after complicated cataract surgery.*

METHODS. *Review of clinical findings and treatment.*

RESULTS. *A 69-year-old man sought treatment for posterior chamber IOL dislocation. The patient reported a significant loss of visual acuity in the right eye for 4 months (best-corrected visual acuity (BCVA) 20/200 in the affected eye). In the vitreous cavity two dislocated IOLs were found, complicated by a cystoid macula edema. Surgery was planned and the two IOLs were removed from the vitreous cavity. Aphakia was then corrected by means of a scleral fixated posterior chamber lens. Three months after surgery, BCVA was 20/40.*

CONCLUSIONS. *In the absence of randomized controlled clinical trials evaluating treatment options, preoperative patient work-up should be as accurate as possible in order to reduce the risk of intraoperative and postoperative complications. In this patient, removing the two IOLs and placing a sutured-fixated posterior chamber IOL allowed resolution of the cystoid macular edema. (Eur J Ophthalmol 2004; 14: 149-52)*

KEY WORDS. *Intraocular lens dislocation, Perfluorocarbon liquid, Scleral fixated IOL, Vitrectomy*

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INTRODUCTION

Postoperative posterior chamber intraocular lens (PCIOL) dislocation is not a frequent event, its incidence ranging between 0.2% and 1.8% of patients after cataract surgery (1, 2). The occurrence of two consecutive PCIOL dislocations in the same patient, with both implants simultaneously present in the vitreous cavity, is even more rare and its precise incidence is not known. This uncommon clinical setting conditions both the therapeutic approach to the patient and the postoperative course, influencing the incidence of surgical complications.

In such a situation, the surgeon must determine which procedures are therapeutically feasible. If only one PCIOL is dislocated into the vitreous chamber and patient best-corrected visual acuity (BCVA) is not altered and cystoid macular edema or retinal traction/detachment are not present, then there are three surgical options among which the surgeon could choose: leaving the retained PCIOL in the vitreous cavity and observing the patient; repositioning the dislocated PCIOL, or removing the PCIOL with or without exchange. The implant can be repositioned or exchanged either with placement into the ciliary sulcus (or, in selected cases, into the anterior chamber) or with scler-

ral fixation. If there are two PCIOLs dislocated into the vitreous chamber, the only choice is the vitreal surgery approach, both for the removal of implants and for new IOL placement. We present a patient with two dislocated PCIOLs simultaneously present in the vitreous chamber, whose rarity and clinical features imply a particular surgical therapeutic planning.

PATIENT REPORT

A 69-year-old man came to our ophthalmic clinic with a loss of visual acuity in the right eye, on which he had undergone cataract surgery 2 years previously, in a different clinic. There was no prior history of ophthalmic disorders, which were absent, and no ocular trauma. On presentation, his BCVA was 20/200 with sf +11 D in the right eye and 20/25 in the left eye. Slit-lamp biomicroscope examination of the right eye revealed aphakia and iridodonesis. Fundus examination of the right eye demonstrated cystoid macular edema and the presence of two dislocated IOLs in the vitreous cavity, left eye biomicroscopy resulted within normal ranges, and fundus examination revealed a normal posterior pole. Intraocular pressure was within normal limits in both eyes.

Surgery was planned under narcosis. After limbal peritomy and four recti muscle isolations, an encircling scleral buckle was positioned 12 mm away from the limbus and three sclerotomies were performed. Anterior and central vitrectomy was carried out with removal of vitreous bridles from both dislocated IOL (Fig. 1). Perfluorocarbon liquid was then injected with subsequent floating of the two IOLs just posterior to the iris plane (Fig. 2), where they were grasped and removed through a scleral tunnel (Fig. 3). A scleral fixated polymethylmethacrylate IOL (Alcon CZ70BD, +20.5 D) was implanted, with anchoring sutures placed at the 1 and 7 o'clock positions about 2 mm behind the limbus, without scleral flaps, according to Lewis' technique (3).

The scleral tunnel was continuously sutured with 10-0 nylon thread after 5 ml 0.01% vancomycin injection. Conjunctiva was sutured with 9-0 silk thread single stitches. Four days later, BCVA in the operated eye was 20/200; on biomicroscope examination, the IOL was properly placed; on fundus examination, cystoid macular edema was still present. The patient was dis-



Fig. 1 - The two IOLs into the vitreous cavity before removal of vitreous bridles.

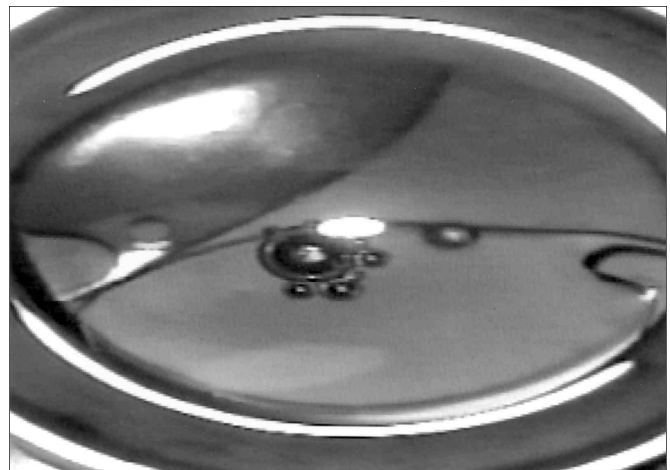


Fig. 2 - The two IOLs float just posterior to the iris plane after perfluorocarbon liquid injection.

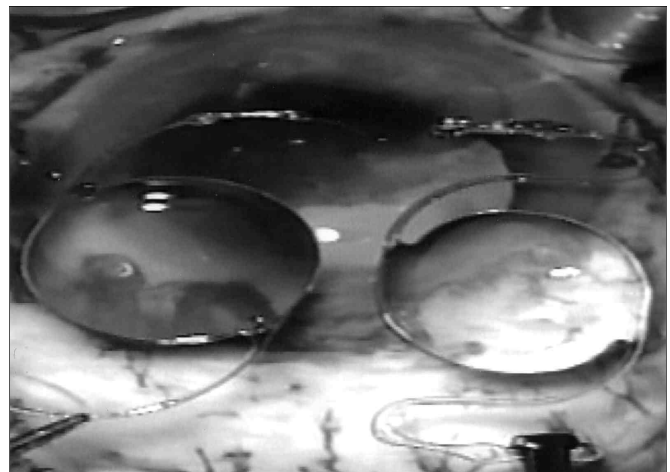
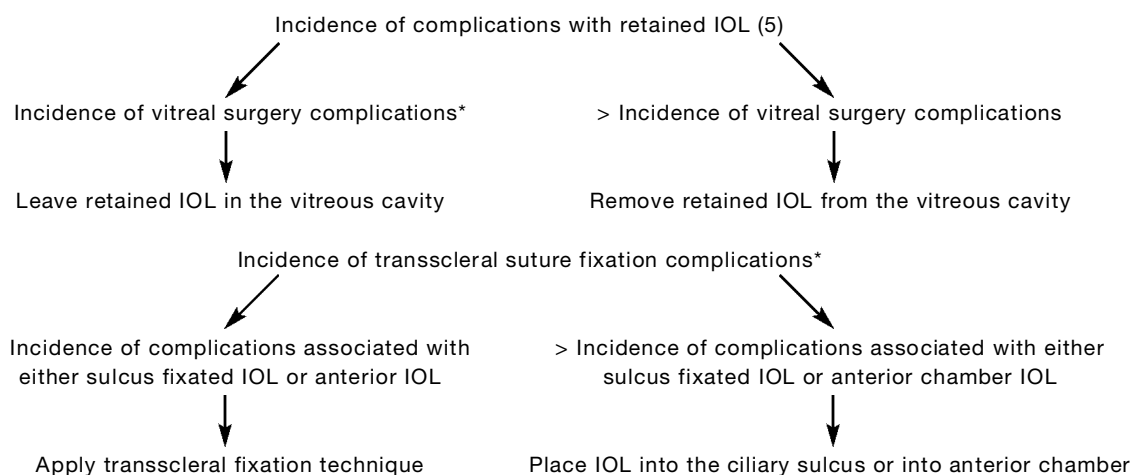


Fig. 3 - The two IOLs after extraction from vitreous cavity.

TABLE I - DECISION-MAKING FLOW CHART

*Individual surgeon actual personal experience; †in a large case series (6), the incidence of recurrent sulcus fixated iol dislocation is about 4%; IOL = Intraocular lenses

charged with systemic steroids and antibiotics and topical dexamethasone, neomycin, and tetryzoline.

Three months later, visual acuity was 20/40 in the right eye; biomicroscopy of the same eye showed a still properly placed scleral fixated IOL; fundus examination of this same eye revealed posterior pole retinal pigment epithelium dystrophy, while cystoid macular edema had disappeared.

DISCUSSION

Detailed analysis of preoperative functional and anatomic features of the patient suggests a possible guideline for surgical planning in different cases of PCIOL dislocation.

The IOL dislocation into the vitreous cavity (lying upon the first dislocated PCIOL, appearing as a pair of pancakes) contributed with the ensuing of cystoid macular edema to reduce BCVA to 20/200. This latter feature limits treatment options to one approach: implant extraction by means of pars plana vitrectomy and perfluorocarbon liquid injection, to allow the IOL to float on its surface. PCIOL placement was managed with Lewis' scleral sutures fixation technique. Anterior chamber IOL (ACIOL) placement was not per-

formed because accurate central and vitreous base vitrectomies were obtained and because there was neither retinal traction nor retinal detachment, hence the absence of indications for ACIOL (4).

In conclusion, in the absence of randomized controlled clinical trials that evaluate treatment options, preoperative patient work-up should be as accurate as possible in order to reduce the risk of intraoperative and postoperative complications (Tab. I). In this patient, removing the two IOLs and placing a sutured-fixated PCIOL allowed resolution of the cystoid macular edema.

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