

Commentary: Modified intraocular lens injector assisted rescue technique for failed viscoexpression in a case of intracameral cysticercosis

Ocular and orbital cysticercosis is a common condition. Nearly 50% of the patients suffering from cysticercosis have associated ocular involvement. Ocular cysticercosis may be extraocular (in the subconjunctival space, extraocular muscles, or orbital tissues) or intraocular (in the anterior chamber, vitreous, or subretinal space).^[1-3] However, cysticercosis in the anterior chamber is rare in occurrence.^[4] The treatment of intracameral cysticercosis is surgical. In the current issue, the authors describe a novel innovation, a modified IOL injector-assisted rescue technique for failed visco expression in a case of intracameral cysticercosis.^[5]

In most cases, ocular cysticercosis is associated with neurocysticercosis. Therefore, all patients having ocular cysticercosis should undergo CT scan, MRI brain,

and cysticercosis serology. Cysticercosis serology has low specificity and negative cysticercus serology does not rule out the disease. Direct visualization of the translucent white cyst with dense white spot due to invaginated scolex and demonstration of undulating movement on indirect ophthalmoscopy or slit-lamp biomicroscopy is confirmatory.

Cysticercosis may develop in the anterior chamber. The cyst may enter the anterior chamber through the posterior ciliary arteries^[6] or from the anterior chamber angle.^[7] As the cyst grows, it may cause secondary glaucoma and anterior uveitis. On the disintegration of the cyst, severe inflammatory reaction occurs. Anterior uveitis has been reported in patients with intact cyst in the anterior chamber. Because of the inflammatory membranes, the cyst may get adhered to the corneal endothelium, the iris, or the anterior lens capsule. Chronic uveitis in association with intracameral cysticercosis has been reported to cause cataract and iris atrophy. Complete surgical removal of the intact cyst results in rapid and good visual recovery. Therefore, urgent removal of the cyst in toto is advocated. In case, combined neurocysticercosis and intracameral cyst is present, albendazole should be withheld.

The intracameral cyst should be removed under the cover of systemic steroids to combat the inflammatory reaction in case the cyst ruptures. After removal of the cyst from the anterior chamber, oral albendazole for neurocysticercosis should be started.

The removal of anterior chamber cyst using erysiphake, cryoprobe, and capsule forceps is no longer practiced. Visco expression is the most favored method to remove the cyst. Single incision (3.2 mm) using keratome is made and the anterior chamber is filled with hydroxymethyl cellulose.^[8] The posterior lip of the incision is pressed and cyst is guided toward the incision. It is surprising that even a large cyst easily squeezes through the incision (3.2 mm) without getting ruptured. Some authors have found that the dual incision technique (second opening to inject visco substance) is better than single incision to guide the cyst to the main incision.^[9] In case the cyst is adhered to corneal endothelium, iris, or the anterior capsule of the lens, the adhesions should be lysed before attempting its removal. A surgeon may encounter difficulty in enlarging the incision, in case cyst is engaged in the incision and is not squeezing out. There is imminent risk of rupture of cyst while enlarging it. In aphakic eyes, a plastic glide (2.5 mm width) may be used to cover the pupil and peripheral iridectomy to avoid the cyst falling back into the vitreous cavity.^[7]

Authors have used an innovative technique of aspirating the cyst using a modified intraocular lens implant injector.^[5] In this case, the technique of visco expression was unsuccessful. In the technique, after filling the anterior chamber with visco, aspiration of visco is done and cyst is aspirated into the modified IOL injector. This technique is safer, decreases the risk of rupture of cyst, and avoids the cyst falling into the vitreous through pupil and large iridectomy in aphakic patients.

The most important step is the use of DMEK injector. Commercially available injectors are costly and may not be available in developing countries including India.^[10] However, assembled DMEK injector as described by the authors is inexpensive and can be readily prepared.^[5] Kim *et al.* have described a simple, inexpensive, and effective injector for DMEK and can be easily assembled.^[11] All that one requires is a 5 cc syringe, intravenous drip set, and Alcon IOL B cartridge. To assemble the injector, standard intravenous tubing is cut approximately 2 inches from the Luer lock end, leaving a steep bevel. The cut end of the tubing is firmly wedged with bevel up and advanced into the back of an Alcon IOL B cartridge. The Luer lock end of the tubing is then attached to a 5 or 10-mL syringe filled with BSS Plus. The injector is advanced into the anterior chamber and brought close to the cyst, then visco aspiration is done. Postoperatively, the patient is put on topical antibiotic, steroid, and cycloplegic drops. Visual recovery is fast and complete. Introduction of modified IOL injector technique, based on visco aspiration rather than visco expression is technically easier, safer, and more controlled.

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References

- Rath S, Honavar SG, Naik M, Anand R, Agarwal B, Krishnaiah S, *et al.* Orbital cysticercosis: Clinical manifestations, diagnosis, management, and outcome. *Ophthalmology* 2010;117:600-5.
- Mohan K, Saroha V, Sharma A, Pandav S, Singh U. Extraocular muscle cysticercosis: Clinical presentations and outcome of treatment. *J Pediatr Ophthalmol Strabismus* 2005;42:28-33.
- Joob B, Wiwanitkit V. Clinical profile of ocular cysticercosis. *Ocul Immunol Inflamm* 2018;26:558.
- Kapoor S, Sood GC, Aurora AL, Sood M. Ocular cysticercosis. Report of a free floating cysticercus in the anterior chamber. *Acta Ophthalmol (Copenh)* 1977;55:927-30.
- Sud R, Sharma P, Takkar B, Khanduja S. Modified intraocular lens injector assisted rescue technique for failed viscoexpression in a case of intracameral cysticercosis. *Indian J Ophthalmol* 2019;68:932-4.
- Bartholomew RS. Subretinal cysticercosis. *Am J Ophthalmol* 1975;79:670-3.
- Das JC, Chaudhuri Z, Bansal RL, Bhomaj S, Sharma P, Chauhan D. Viscoexpression of anterior chamber cysticercosis cellulosa. *Indian J Ophthalmol* 2002;50:133-5.
- Beri S, Vajpayee RB, Dhingra N, Ghose S. Managing anterior chamber cysticercosis by viscoexpression: A new surgical technique. *Arch Ophthalmol* 1994;112:1279-80.
- Kai S, Vanathi M, Vengayil S, Panda A. Viscoexpression of large free floating cysticercus cyst from the anterior chamber of the eye by double incision technique. *Indian J Med Microbiol* 2008;26:277-9.
- Droutsas K, Lazaridis A, Kymionis GD, Chatzistefanou K, Moschos MM, Koutsandrea C, *et al.* Comparison of endothelial cell loss and complications following DMEK with the use of three different graft injectors. *Eye (Lond)* 2018;32:19-25.
- Kim EC, Bonfadini G, Todd L, Zhu A, Jun AS. Simple, inexpensive, and effective injector for descemet membrane endothelial keratoplasty. *Cornea* 2014;33:649-52.

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