

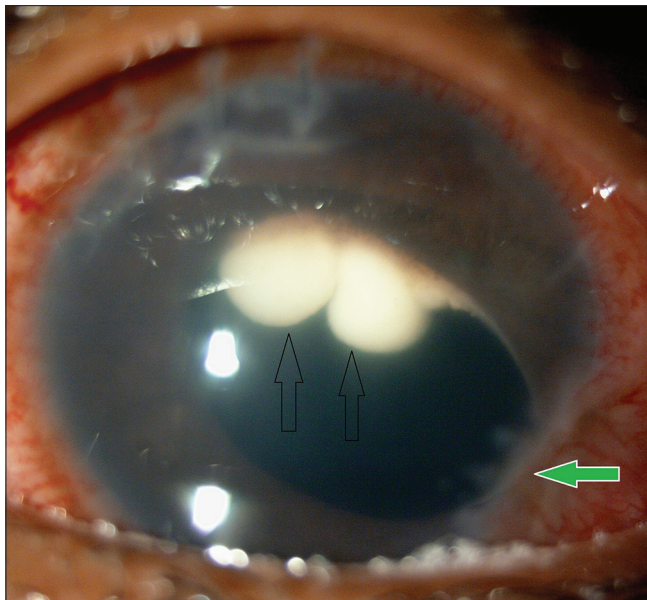
## Kill with cold

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**Key words:** Fungal granuloma , Endophthalmitis, triple freeze thaw

We describe 2 cases of fungal ciliary body granuloma, and its effective management.

Case 1: A 13-year-old boy, post corneal tear repair presented with endophthalmitis with superior ciliary body granuloma [Fig. 1]. Though pars plana vitrectomy (PPV) with amphotericin-B cleared the vitreous, the granuloma persisted. Systemic fluconazole 50 mg BD (3 weeks) had no effect. Microbiologically it was dematiaceous fungi.<sup>[1]</sup> Triple



**Figure 1:** Black arrows show yellowish granulomas hanging from the ciliary body superiorly behind the iris with vitreous exudates and green arrow shows site of corneal tear repair

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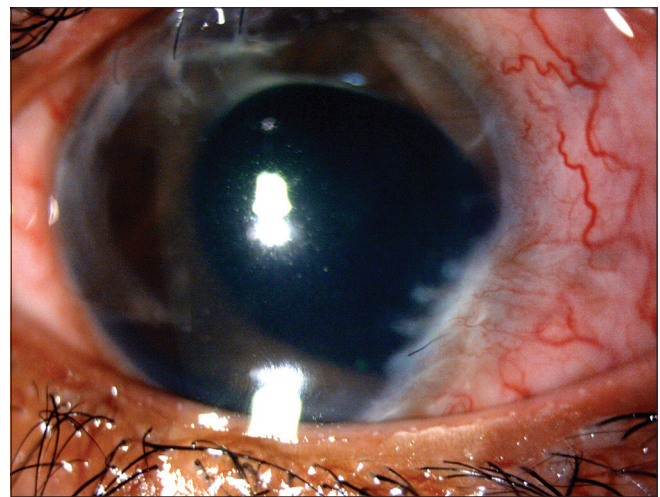
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freeze thaw cryotherapy was applied under direct visualization excluding iris or the retinal surface. Patient showed a good response with complete regression in 3 days [Fig. 2]. He underwent secondary intraocular lens (IOL) implantation with best-corrected visual acuity (BCVA) of 20/80 after 8 weeks.

Case 2: A 36-year-old lady of 6 weeks postpartum, presented with the features suggestive of endogenous endophthalmitis. She underwent PPV and was found to have retinal detachments (RD) with subretinal exudates and a large granuloma arising from the ciliary body with posterior extension [Fig. 3]. Laser around necrotic areas with silicon oil infusion was done to reattach the retina. Though the vitreous aspirate had a negative yield, we continued systemic antifungal (voriconazole 200 mg BD × 2 weeks) in view of clinical profile.<sup>[2,3]</sup> Since her ocular condition deteriorated with enlarging granuloma, triple freeze thaw cryotherapy was applied directly over the granuloma. The lesion regressed completely. Visual rehabilitation with scleral fixated intraocular lens (SFIOL) was done 3 months later with a BCVA of 20/200.

## Discussion

The fungal infection of the eye, particularly of the posterior segment is difficult to treat. They usually follow a relapsing course with recurring infiltration and exudates, ultimately leading to phthisis bulbi. Cryotherapy has been previously mentioned in literature as salvage therapy for resistant fungal infiltrates of anterior segment and transplanted cornea.<sup>[4-8]</sup> We similarly applied cryo probe for 8 to 10 s [Figs. 4 and 5] and allowed it to thaw for 1 whole min before refreezing.



**Figure 2:** Postop 3 months, granuloma regressed completely

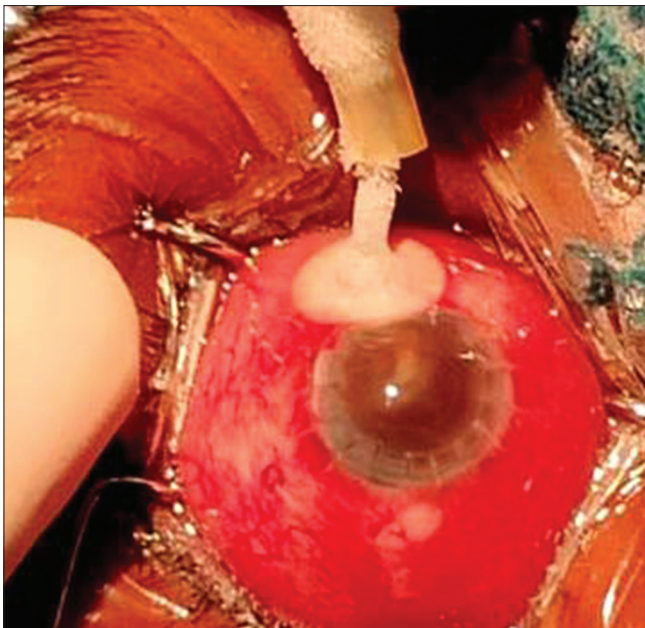
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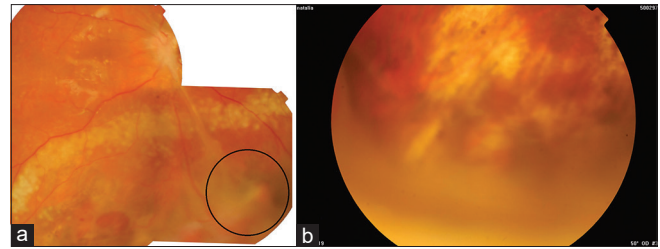


**Figure 3:** Fundus image after clearing of vitreous exudates at the first surgery shows an oil filled eye and outlined area depicts location of suspected granuloma to which cryotherapy was applied later



**Figure 5:** Demonstrates technique of triple freeze thaw cryotherapy for intraocular fungal granuloma. Cryoprobe is applied over the area of ciliary body granuloma to freeze for 8–10 s and is allowed to thaw for 1 whole min before refreezing, cycle is done totally for three times

In conclusion, fungal granuloma of the ciliary body can be safely and effectively treated with triple freeze thawing.



**Figure 4:** (a) Fundus image of the oil filled right eye after cryotherapy was applied to suspected granuloma area shown in Figure 3. (b) Area of scarring after triple freeze thaw cryotherapy and complete resolution of the granuloma

#### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

#### Conflicts of interest

There are no conflicts of interest.

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