

Chandelier-assisted scleral buckling in an eye with longstanding inert foreign body with fresh rhegmatogenous retinal detachment

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Intraocular foreign bodies (IOFBs) present in varied manners which in turn necessitate their removal in majority of the cases. A stone foreign body can remain inert inside the eye for years. Retinal detachment in eyes following penetrating trauma with an IOFB is common, but a combination of fresh rhegmatogenous retinal detachment in an eye with a longstanding inert stone foreign body is extremely rare. We report a case of a 50-year-old male with rhegmatogenous retinal detachment with a longstanding stone foreign body, where we managed such a scenario with a chandelier-assisted, sutureless, scleral buckle without removing the stone foreign body.

Key words: Buckling, chandelier, detachment, foreign body, stone

An intraocular foreign body (IOFB) has a varied presentation and warrants its removal in majority of the cases.^[1] Stone foreign bodies can remain inert inside the eyes for years.^[2] Retinal detachment in eyes following penetrating trauma with IOFB is common, but a combination of fresh rhegmatogenous retinal detachment in an eye with longstanding inert stone foreign body is extremely rare.^[3] Various strategies can be adopted to manage such a scenario, which may include vitrectomy, lensectomy with removal of foreign body via limbal incision or by extending the sclerotomy wound. We present an alternative technique of management of such a scenario with a chandelier-assisted sutureless scleral buckle.

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Case Report

A 55-year-old male presented to our outpatient department with complaints of sudden diminution of vision in the left eye since 1 week. He had a history of trauma to left eye with stone 3 years back and had consulted an eye physician elsewhere. Review of his medical records revealed that he was treated for conjunctival tear in left eye with topical antibiotics. No IOFB was documented. Patient had a documented best-corrected visual acuity (BCVA) of 6/12 in left eye and of 6/6 in right eye 6 months before presenting to us. On examination he had a BCVA of 6/6 in right eye and hand movements in left eye. Right eye examination was normal. Left eye anterior segment examination revealed pseudo-pterygium nasally with an underlying scleral scar, nuclear sclerosis grade 2 [Fig. 1a and b]. Fundus examination revealed total retinal detachment with a horse shoe tear superiorly. On scleral indentation nasally, a stone foreign body measuring 4–5 disc diameter was noted, which was encapsulated by a fibrous capsule [Fig. 2a]. The foreign body could not be detected on ultrasonography owing to its anterior location. Considering that the foreign body remained inert inside the eye for 3 years, we decided not to remove the IOFB. As there was a single horseshoe tear superiorly, we chose to reattach the retina by performing a chandelier-assisted, sutureless scleral buckle (276), drainage of subretinal fluid with cryotherapy of the break. Intraoperatively, on examination under high magnification, a small break was noted on the posterior slope of the retina over the foreign body. Hence, we decided to support the stone foreign body with an additional segmental buckle (276) [Fig. 2b and c]. When cryotherapy was done over the foreign body the break could be well appreciated over the IOFB. At 1 month postsurgery BCVA in left eye was 6/12 and the retina was attached with adequate buckle indent [Fig. 2d].

Discussion

The decision of removal of an IOFB is governed by its composition, location, and associated clinical findings. IOFBs have varied presentations. Not all foreign bodies need removal.^[2] Foreign bodies such as glass, quartz, plastic, sand, porcelain, coal can be left in the eye without causing long-term damage if it does not interfere with vision at presentation.^[1] The literature regarding management of an eye with simultaneous rhegmatogenous retinal detachment secondary to IOFB is plentiful.^[3–5] But so far, there are no reports on the management of fresh retinal detachment in an eyes with inert unnoticed foreign body. Large IOFBs can be removed either by performing pars plana vitrectomy, lensectomy, and removal through sclerocornea incision or by performing

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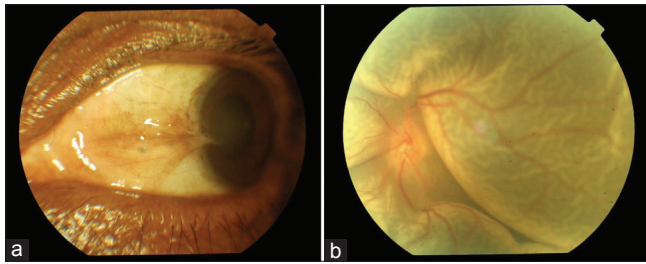


Figure 1: (a) Anterior segment photograph showing pseudo-ptyerygium and underlying scleral scar. (b) Fundus photo of left eye showing total retinal detachment

pars plana vitrectomy and IOFB removal by extending the sclerotomy. In a foreign body lodged inside the eye with overlying fibrosis, relaxing retinectomy needs to be done to free the foreign body. Vitrectomy and intraocular tamponade are associated with complications.^[6,7] An additional surgery needs to be done for silicone oil removal. Scleral buckling for management of rhegmatogenous retinal detachment is a time-tested procedure.^[8,9] Surgical outcomes of scleral buckling surgery are well-established and comparable with that of pars plana vitrectomy. In our case we could achieve reattachment of the retina without removing the foreign body. By doing so, the patient was rehabilitated by a minimally invasive technique and it also decreased the chances of complication related to vitrectomy, such as cataract formation. So far there are no reports of rhegmatogenous retinal detachment in an eye with longstanding foreign body. Our technique obviates the need for vitrectomy and foreign body removal. Using a chandelier during scleral buckling helps us to visualize the retina better with better magnification and illumination.^[10] These advantages of chandelier-assisted scleral buckle helped us to locate the break over the foreign body.

In our case due to the longstanding nature of the foreign body, it was encapsulated in a fibrous capsule. Though scleral buckling could achieve reattachment, these cases need close follow-up.

Conclusion

To the best of our knowledge, this is the first case report on management of fresh rhegmatogenous retinal detachment in eye with longstanding inert stone foreign body. Chandelier-assisted scleral buckle can be a safe and effective management strategy in such a scenario.

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.

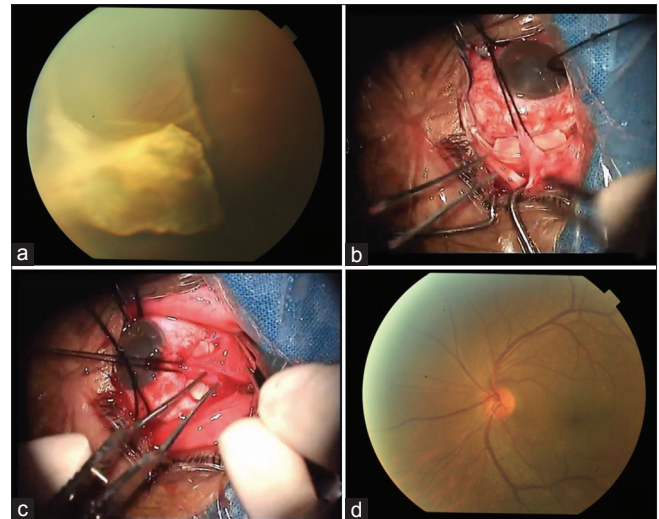


Figure 2: (a) Intraoperative photograph of left eye showing a large stone foreign body lodged at the ora nasally which is encapsulated by a fibrous capsule. (b) Intraoperative photo showing a 276 segmental buckle being placed superiorly to support the horseshoe tear. (c) Intraoperative photo showing a 276 segmental buckle being placed nasally to support the foreign body. (d) Fundus photo of left eye at 1 month postsurgery showing attached retina

References

1. Yeh S, Colyer MH, Weichel ED. Current trends in the management of intraocular foreign bodies. *Curr Opin Ophthalmol* 2008;19:225-33.
2. Gokmen O, Yesilirmak N, Kal A, Eroglu FC. Unusual presentation of an intraocular foreign body retained for sixty years. *Cont Lens Anterior Eye* 2014;37:234-5.
3. El-Asrar AM, Al-Amro SA, Khan NM, Kangave D. Retinal detachment after posterior segment intraocular foreign body injuries. *Int Ophthalmol* 1998;22:369-72.
4. Xia T, Bauza A, Soni NG, Zarbin MA, Langer PD, Bhagat N. Surgical management and outcomes of open globe injuries with posterior segment complications: A 10-year review. *Semin Ophthalmol* 2016;14:1-6.
5. Nicoara SD, Irimescu I, Calinici T, Cristian C. Intraocular foreign bodies extracted by pars plana vitrectomy: Clinical characteristics, management, outcomes and prognostic factors. *BMC Ophthalmol* 2015;15:151.
6. Lakhanpal RR, Humayun MS, de Juan E Jr, Lim JI, Chong LP, Chang TS, *et al*. Outcomes of 140 consecutive cases of 25-gauge transconjunctival surgery for posterior segment disease. *Ophthalmology* 2005;112:817-24.
7. Gupta OP, Weichel ED, Regillo CD, Fineman MS, Kaiser RS, Ho AC, *et al*. Postoperative complications associated with 25-ga. pars plana vitrectomy. *Ophthalmic Surg Lasers Imaging* 2007;38:270-5.
8. Azad RV, Chanana B, Sharma YR, Vohra R. Primary vitrectomy versus conventional retinal detachment surgery in phakic rhegmatogenous retinal detachment. *Acta Ophthalmol Scand* 2007;85:540-5.
9. Heussen N, Feltgen N, Walter P, Hoerauf H, Hilgers RD, Heimann H. The SPR Study Group. Scleral buckling versus primary vitrectomy in rhegmatogenous retinal detachment study (SPR Study): Predictive factors for functional outcome. Study report no. 6. *Graefes Arch Clin Exp Ophthalmol* 2011;249:1129-36.
10. Temkar S, Takkar B, Azad SV, Venkatesh P. Endoillumination (chandelier) assisted scleral buckling for a complex case of retinal detachment. *Indian J Ophthalmol* 2016;64:845-6.