

Spontaneous transpalpebral extrusion of solid silicone band: A case report

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Abstract

Solid silicone band used in encirclage surgery for retinal reattachment may extrude rarely. Subsequent infection accelerates the process of extrusion. We describe here a case of 24 year old young female who presented to us with chief complaint of severe pain and extrusion of foreign body from her left eye. As per the patient's record, she was operated for rhegmatogenous retinal detachment and underwent encirclage. On examination her left eye was covered with copious amount of pus and scab, on cleaning a foreign body which later was identified as exposed and infected solid wide silicone band eroding the full thickness upper eyelid. The patient was taken to operation theatre and explant was removed and patient was treated with antibiotics. After a week when infection was treated, the blepharoplasty was carried out. This case is unique in term of extrusion of explant which was spontaneous and involving full thickness upper eyelid. Integrity of the conjunctiva should be checked during routine follow up exams to exclude exposure of the implant in eye undergoing scleral buckling with wide 360° encirclage silicone band.

Keywords: Blepharoplasty, Rhegmatogenous detachment, Solid silicone explants, Transpalpebral extrusion.

Introduction

Extrusion of silicone buckling material is a known complication of retinal reattachment surgery and its incidence is 0.5% (primary case) to 10% (repeat surgeries).⁽¹⁾ Previously few case of extrusion of sponge silicone explant have been reported.⁽²⁻⁴⁾ Migration of a silicone explants element superiorly penetrating full thickness of upper eyelid is extremely rare. Herein, we are reporting a case experiencing spontaneous extrusion of 360° solid silicone band through upper eyelid in its full thickness.

Case Report

A 24 year old female presented to us with left ocular excruciating pain, swollen eyelid, purulent discharge and a band shaped foreign body penetrating spontaneously through her upper eyelid which had persisted for 1 month. She had a past history of rhegmatogenous retinal detachment which had been treated with solid silicone scleral buckling 4 years back operated elsewhere. The left eye underwent a sclera buckling procedure with a placement of 360° encircling band.

Examination revealed visual acuity of perception of light absent (PL -) in the right eye and PL+ in left eye. The left upper lid was ptotic, swollen, indurated and tender. A full thickness penetrating injury of left upper eyelid approximately 3 x 0.5 cm in size extending 1 cm away from medial canthus to 0.5 cm from lateral canthus, situated above upper crease with swollen tender margins and purulent discharge was evident showing a solid silicone band extruding through it (Fig. 1). After cleaning the discharge, the medial and lateral end of this band was traced and was found buried beneath the eyeball. There was marked limitation of ocular movements in all gazes. Conjunctival hyperemia

and chemosis was present along with excessive yellowish discharge. Cornea was oedematous which impaired the clarity and hence other anterior segment structures could not be visualized. We treated the patient with antibiotics and in the mean time B scan was done which revealed old retinal detachment. After a week blepharoplasty was performed to achieve eye lid integrity. Fortunately the infection was extraocular and intraocular spread did not occur. Blood investigation depicted raised total leucocyte count showing active infection. General and systemic examinations were within normal limits.

The patient underwent wound toileting with 5% betadine and encircling silicone band was traced on either side. This band was found to be secured end to end with sutures buried beneath medial conjunctiva and rectus muscle. Sutures were exposed and cut to remove the band through this end. On removal, bulbar conjunctiva and cornea got exposed showing a full thickness eyelid split (Fig. 2). The margins were freshened and blepharoplasty was performed after a week when infection has been effectively controlled and inflammation is considerably reduced, by suturing the eyelid in multi layers (conjunctiva, tarsal, muscle and skin) to achieve reasonable cosmesis. Finally, temporary tarsorrhaphy was carried out to reduce post operative lid lag. After the removal of band symptoms showed rapid amelioration and patient reported symptomatic relief. Both Gram positive and Gram negative bacteria were isolated from the silicone band removed. Patient was treated with systemic antibiotics. Bandage was removed after one day and topical antibiotic ointment with eye drops were started.



Fig. 1: Exposed silicone band



Fig. 2: Full thickness wound after removal

After 3 weeks, substantial healing of the sutured wound was complete and tarsorrhaphy was left to be released after six weeks (Fig. 3).

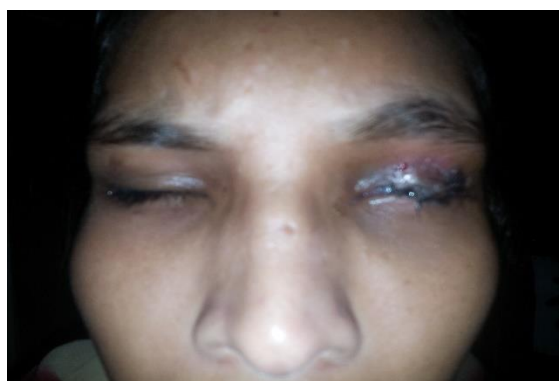


Fig. 3: Healing after 3 weeks

Discussion

Among the complications associated with sclera buckling procedures are inflammation, infection, extrusion and intrusions.⁽⁵⁻⁶⁾ Explant of various materials has been reported to have extruded. Postoperative extrusion of hard silicone explants is relatively rare than sponge extrusion. Previously few cases of extrusion and anterior segment displacement of a buckle migrating through rectus muscles have been reported.⁽²⁻⁴⁾ Maguire reported two cases, where solid silicone buckle extruded by cheese wiring through the recti muscle.⁽⁷⁾

To our knowledge and literature we could find this is the first case report describing superior migration of

360° encirclage silicone band penetrating full thickness of upper eyelid. We propose that the encirclage band was first displaced anteriorly due to cheese wiring of sclera followed by superior erosion of conjunctiva later on causing full thickness erosion of upper eyelid and hence band extrusion. On certain occasions this event is known to be triggered by allergic reaction to explants material.⁽¹⁾ The process further hastens by superseding infections. The various explants material and sutures used in retinal detachment surgery are foreign bodies and can become nidus for infection. The organism responsible are frequently coagulase-positive staphylococci but may be Gram-negative bacteria.⁽⁶⁾ The incidence varies, depending on the surgical technique.

This case suggests that the explants used in encirclage procedure in retinal detachment surgery might not only erode through conjunctiva but also can split the eyelid which eventually can result in total loss of the eye. Hence integrity of the conjunctiva covering the explants well should be evaluated during routine follow-up examinations of retinal detachment surgery to prevent exposure and complications of this magnitude.

Although the visual prognosis was not the issue in this case; yet patient's concern in the form of severe pain and infection alleviates the importance of surgical removal of silicone band for the patient at the earliest.

References

1. Flindall RJ, Norton EMD, Curtin VT, Gass JD. Reduction of extrusion and infection following episcleral silicone implants and cryopexy in retinal detachment surgery. *Am J Ophthalmol.*1971;71:835-7.
2. Amitava AK, Garima G, Ahuja A. Transpalpebral Explant Extrusion- a case report. *Asia Pacific Journal of Ophthalmology.* 1999;11:32-3.
3. Ozerturk Y, Bardak Y, Durmus M. An unusual complication of retinal reattachment surgery. *Ophthalmic Surg Lasers.* 1999;30:483-4.
4. Winward KE, Johnson MW, Kronish JW. Transpalpebral extrusion of a silicone sponge explants. *Br J Ophthalmol.*1991;75:499-500.
5. T. Birgul, B. Vidic, Y. El-Shabrawi. Intrusion of an encircling buckle after retinal detachment surgery. *Am J Ophthalmol.*2003;136:942-44.
6. O. Oz, D.H. Lee, S.M. Smetana, L. Akuduman. A case of infected sclera buckle with *Mycobacterium chelonae* associated with chronic intraocular inflammation. *Ocular Immunology and Inflammation.* 2004;12:65-67.
7. Hwang KI, Lim JI. Hydrogel exoplant fragmentation 10 years after sclera buckling surgery. *Arch Ophthalmol.*1977;115:1205-6.