Scleral buckle infection presenting as subretinal inflammatory mass lesion

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Introduction
Scleral buckling (SB) is an important and effective surgical technique for the management of rhegmatogenous retinal detachment.¹,² Scleral buckle exposure with or without infection remains most common complication of the surgery requiring removal of the explant or implant.³–⁵ Intraocular infection following SB surgery is extremely rare,⁶ the procedure being mostly extraocular. We report a case of subretinal inflammatory mass lesion following scleral buckle infection and its successful management.

Case report
A 40-year-old female underwent uncomplicated retinal detachment surgery in the form of inferior scleral buckle (276 segmental silicone sleeve from 3–8⁰ clock hours with 240 circumferential band), cryopexy with no subretinal fluid drainage for a post-traumatic subtotal macula involving retinal detachment of the left eye. She recovered good vision postoperatively and was lost to follow-up. She came to us again after 10 years with complaints of mild pain and discharge. Her vision in the right eye was 6/6, N6 and left eye 6/45, N36. The anterior segment in the right eye was within normal limits. The left eye showed an exposed scleral buckle in the inferior fornix. There was no conjunctival congestion or associated scleral thinning. Intraocular pressure in both eyes was 16 mmHg. Fundus examination of the right eye was normal and left eye showed an attached retina with good buckle effect inferiorly. Patient was advised buckle removal but did not report for the same. She was also diagnosed as a case of microcytic hypochromic anaemia for which she was started on medical therapy.

Patient came again after 4 years of last presentation with complaints of sudden diminution of vision, pain, redness in the left eye of 1 month duration. Her vision dropped to counting finger one meter, <N36 in the left eye and anterior segment showed hyperemic conjunctiva, exposed buckle inferiorly with surrounding discharge. Cornea was clear and anterior segment showed grade 1 cells. Dilated fundus examination showed vitreous haze with a diffuse elevated subretinal lesion and surrounding subretinal fluid in the temporal quadrant (around 3⁰ o clock) suggestive of a subretinal inflammatory lesion. Rest of the retina was flat with good buckle effect seen inferiorly. Ultrasound of the left eye showed a retinochoroidal elevation with high surface reflectivity and heterogenous internal reflectivity over the buckle. CT scan of the orbit showed ill-defined soft tissue thickening of the temporal periocular area continuous with the lateral rectus insertion. Scleral buckle was removed under general anaesthesia, and the buckle and sutures were sent for microbiological investigations. Surgery was uneventful, and the buckle was noted to have blackish deposits on the surface. There was no scleral perforation, abscess or granuloma noted intraoperatively. Microbiological studies from the buckle revealed methicillin-sensitive Staphylococcus aureus and Aspergillus terrus. Patient was treated postoperatively with oral Ciprofloxacin 500 mg twice daily for 5 days and oral Fluconazole 200 mg twice daily for 3 weeks, fortified Gentamicin eye drops every 1 hourly with weekly tapering schedule for 1 month. Postoperatively on the third day, fundus examination showed clearer media with a decrease in size of the retinochoroidal lesion. On

Figure (A–C) External photograph and fundus pictures of a patient with exposed scleral buckle and painful drop in vision 14 years after surgery. Note the blackish material at the junction of the exposed and unexposed buckle (arrow). (B and C) The vitreous haze with exudation temporally (arrow) and a mass-like lesion anterior to it (arrow in C).
follow-up at 3 months, vision improved to 6/36, N36 and fundus examination showed clear media, attached retina with good buckle effect with a flat plaque of subretinal hard exudates. There was no subretinal fluid or mass visible though residual buckle effect was noted. Ocular movements were full range and painless. Patient was advised a regular follow-up after 6 months henceforth.

Discussion
SB is an extraocular procedure with an associated risk of intraocular infection being only 0.19%.
Intraocular infection is mainly associated with procedures like subretinal fluid drainage, gas injections or accidental needle perforation during suturing. The most common causative organism in buckle infections includes Staphylococcus aureus, Staphylococcus epidermidis, Proteus and

Figure (D–F)  B scan images of the same eye showing vitreous echoes suggestive of inflammation (arrow in D). (E) A temporal mass-like lesion of variable reflectivity and an area of echolucency suggestive of the solid silicone buckle element (arrow). (F) The appearance of the exposed buckle—seen as an echolucent structure with no evidence of inflammation or damage to the surrounding areas.

Figure (G)  CT scan shows a soft tissue mass around the scleral buckle continuous with the lateral rectus insertion.
significantly after removal of the buckle without the use of steroids or intravitreal antibiotics, indicating that the changes were secondary to the exposed, infected buckle. It is interesting to note that the area of the exposed buckle did not show any abscess, but it was the segment that was covered by conjunctiva that had the subretinal lesion beneath it.

This is a unique case where an inflammatory retinal lesion simulated an endophthalmitis-like picture but resolved after scleral buckle removal and conservative management with systemic and topical antibiotics.

References

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