

CASE REPORT

Total extrusion of a silicone encircling band through the muscle insertions presenting as orbital cellulitis

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ABSTRACT

Introduction: We present an unusual case of anterior migration of a solid silicone encircling band 9 years after scleral buckling surgery.

Materials and Methods: An 83-year old woman presented with acute onset of pain and discharge in her left eye. She had undergone cataract surgery complicated by endophthalmitis and managed with pars plana vitrectomy nine years earlier.

Results: The patient was treated with transection and removal of the extruding encircling band. Pain ceased within two days. Two weeks postoperatively, the conjunctiva was well adapted without any discharge, ocular motility was as preoperatively.

Discussion: Anterior migration of an encircling band through all four rectus muscle insertions is a very uncommon late complication following scleral buckling surgery. The remarkably good preservation of ocular motility in our case can be attributed to the slow advancement of the encircling band over nine years, which allowed a gradual reattachment of the rectus muscle insertions to the sclera.

Keywords: Encircling band, extrusion, retinal detachment

INTRODUCTION

Anterior extrusion of an encircling band through all 4 rectus muscle insertions is a very uncommon late complication of scleral buckling surgery.¹ An inadequately placed encircling band as a result of poor surgical technique may lead to erosion of the muscle insertion and consequently to explant migration.^{1–8}

We present a rare case of anterior migration of a solid silicone encircling band through all 4 rectus muscles, 9 years after scleral buckling surgery presenting as orbital cellulitis.

CASE REPORT

An 83-year old woman presented with subacute onset of pain, redness, lid edema and discharge in her left

eye. According to her history, she had undergone cataract surgery complicated by endophthalmitis, which was managed with pars plana vitrectomy, 9 years earlier. Two weeks after the vitrectomy, she developed a retinal detachment, which was successfully treated with vitrectomy combined with a placement of a solid silicone encircling band, however the vision was not restored.

At presentation in our department, there was eyelid edema and mild proptosis of the left eye. Slit-lamp examination -performed with difficulty due to lid edema- revealed a phthisic left eye with an almost totally extruded encircling band (Figure 1). Scleral sutures securing the explant were not visible. Ocular motility was painful but preserved almost in all fields of gaze with a moderate limitation. The patient was admitted in our clinic and antibiotics were administered.

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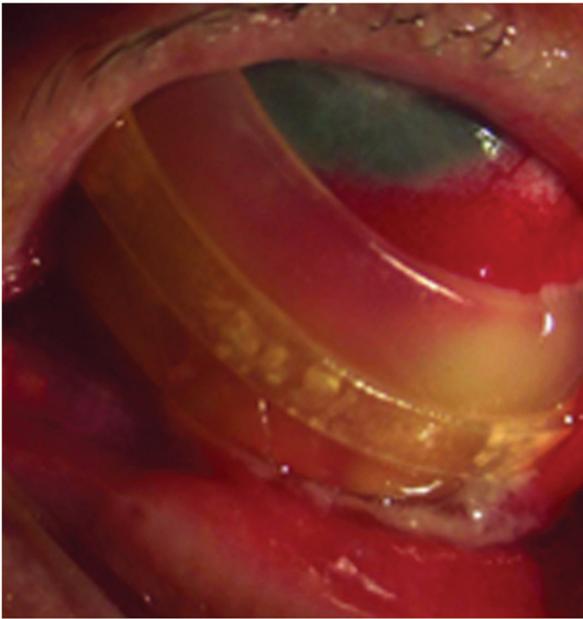


FIGURE 1. Migration of the band through the inferior rectus muscle insertion.

The following day the patient was taken to theatre and careful transection and removal of the extruding encircling band without cutting the muscles was performed under general anaesthesia. During surgery and after the removal of the buckle no severe scleral dehiscence was observed. The band, when removed, was intact, and therefore had not broken and had migrated through all 4 muscle insertions as an intact encirclement. Pain ceased, followed by a fast resolution of the lid edema within 2 days postoperatively. Two weeks postoperatively, the conjunctiva was well adapted without any discharge, intraocular pressure was 9 mmHg, and ocular motility was completely restored (Figure 2).

DISCUSSION

A rare complication of scleral buckling surgery is the anterior migration of an encircling band through the muscle insertions. Buckle migration has been associated with elevated intraocular pressure and glaucomatous changes that may lead to optic atrophy.² If the extruding band or sponge gets infected it may lead to endophthalmitis or orbital cellulitis.

In our case, the impressive migration of the explant through all 4 rectus muscles could be attributed to the phthisic state of the eye. The constant irritation of the conjunctiva by the scleral buckle was responsible for the pain, the discharge and the clinical picture presenting similarities with orbital cellulitis. In the majority of patients reported in the literature, explant removal was a prerequisite for symptomatic relief, but has also been linked to a small risk of redetachment, especially within 6 months postoperatively.³

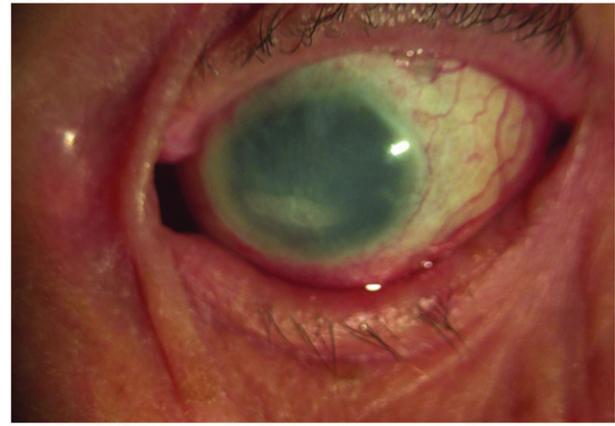


FIGURE 2. Preservation of preoperative ocular motility; Adduction.

It has been reported that small collateral vessels may be observed adjacent to the silicone explants in similar situations. These friable vessels have the tendency to bleed secondarily to constant buckle movement. Continuous mechanical stress from the buckle may sever the anterior ciliary muscular arteries thus leading to collateral vessel formation. It has been postulated that this process may also lead to the anterior migration of the explants as it occurred in our case.⁴

Preservation of rectus muscle function and consequently of ocular motility has been observed in several cases reported in the literature,⁵ however, most patients experience some restriction of ocular motility. In this case, the remarkably good preservation of ocular motility could be attributed to the slow advancement of the encircling band over 9 years, which allowed a gradual reattachment of the rectus muscle insertions to the sclera. Careful removal of the extruding silicone scleral buckle—without interfering with the muscle insertions—prevented the possibility of endophthalmitis.

DECLARATION OF INTEREST

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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