

Case Report

RECURRENT CANALICULAR GRANULOMA ASSOCIATED WITH SILICONE STENT AND ITS MANAGEMENT

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Mustafa Durmuş, M.D. / Yavuz Bardak, M.D. / Yusuf Özertürk, M.D.

Department of Ophthalmology, School of Medicine, Süleyman Demirel University, Isparta, Turkey.

ABSTRACT

We are introducing a case with 3 times recurrence of granuloma formation in lower punctum. In the 3th recurrence, we removed the tube and applied mitomycin C following excision. Granuloma was cured, epiphora disappeared for 15 months.

Key Words: Canalicular granuloma, Silicone stent

INTRODUCTION

Silicone stents have been used in canalicular injury, nasolacrimal duct obstruction in infants, and in dacryocystorhinostomy (DCR) by the external or transnasal way to help maintain a patent passage. The tubes can be left in places for several months. However, some complications can be seen associated with silicone tubes. These are punctal erosions, marsupialization of the canaliculi, granuloma formation, corneal erosion and nasal irritation.(1).

CASE REPORT

A 17-years- old girl had been suffering from epiphora for five years. Her refractive and ophthalmologic examination were normal. Dacryocystography revealed nasolacrimal canal occlusion. We planned to perform endoscopic endonasal dacryocystorhinostomy (EED) and informed her about the complications. EED with silicon intubation was performed in March 1996. Postoperatively antibiotic (tobramycin) eye drop was ordered.

Punctal erosion and an inflammatory mass protruding from inferior punctum were noted in the postoperative first month control. The lower punctum was teared, eroded 1 x 3 mm in diameter. Silicon stent was moved to medial. Inflammatory mass was granulomatous in structure, 3 x 3 mm in size and pediculated. It was sitting on the enlarged lower punctum. Epiphora was still present. We resected the mass by scissors. The tube was loosened moving up and down. Antibiotic (tobramycin) eye drop 4 times a day was prescribed. Removal of the silicone tube was not attempted.

Two months after the first excision patient returned with a 1 x 2 mm pediculated granuloma mass at the same place. Granuloma tissue was removed surgically. Three months after the 2nd excision the patient presented again with recurrence of the granuloma in the lower punctum (Fig. 1). Granuloma was 2x2 mm in size, pediculated and obstructing the nasolacrimal passage. Erosion and enlargement of the lower punctum were noticed. We removed the silicone tube and resected the granuloma. We applied mitomycin C 0.4 mg/ml with cellulose sponge applicator to the base of the granuloma for 3 minutes. Eye drops with antibiotic (tobramycin) and corticosteroid (prednisolone) were ordered 4 times daily.

Histopathologic examination of excised mass has been reported as granuloma. In the postoperative controls following the 3th excision, granuloma has not recurred, epiphora was not present. Medications were stopped at postoperative 1st month.

The situation is still stable for 15 months after 3th excision with mitomycin C application (Fig. 2).

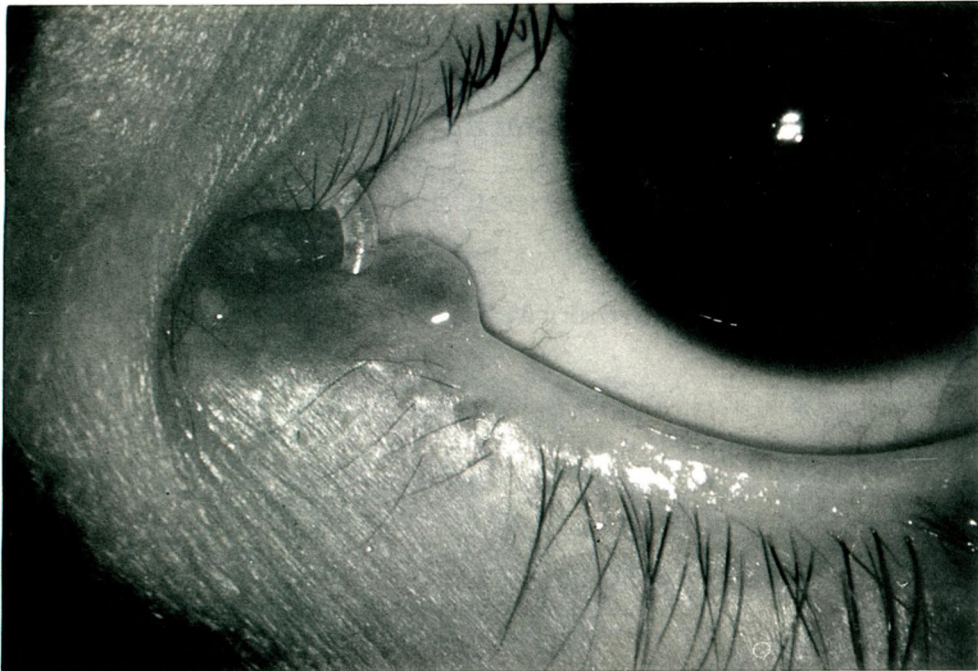


Fig.1.
Granuloma protruding from and sitting on the lower punctum before 3th excision. The lower punctum enlarged and silicone stent moved to medial.

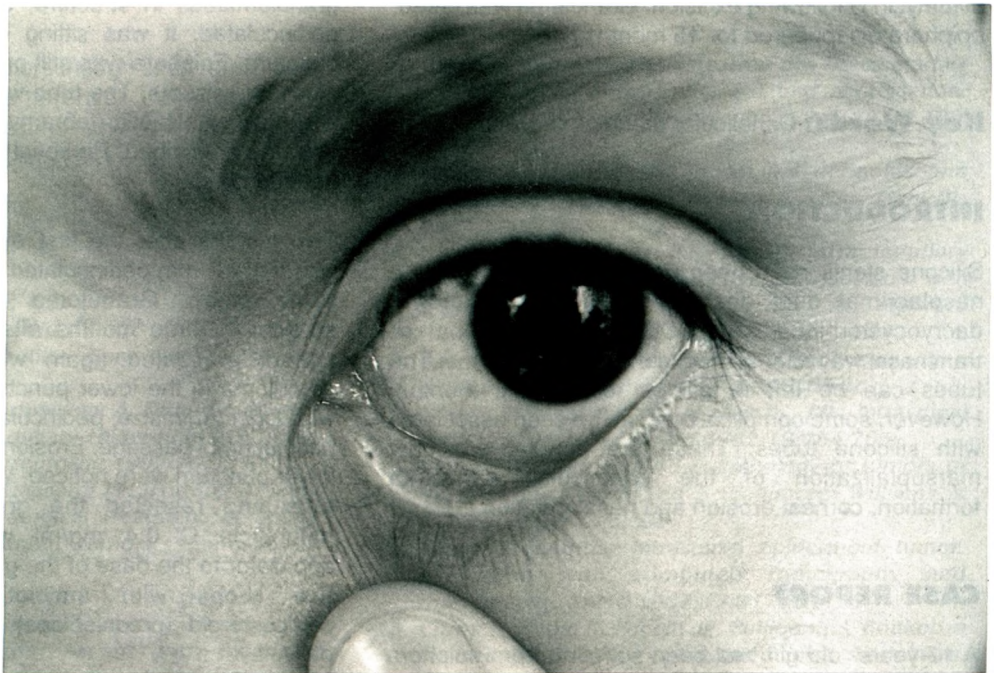


Fig.2.
Photograph of postoperative 15th months following the 3th excision, mitomycin C application and removal of silicone tube.

DISCUSSION

In the literature we could not find any report of recurrent granuloma formation following the DCR with silicone tubing. Granuloma formation is a rare complication associated with silicone stents(2). There is not a widely accepted treatment modality of this rare

condition. Surgical excision alone (3) and surgical excision with silver nitrate or hyfrecation (4) are recommended in the literature.

Rosen et al(3) reported punctal elongation and erosion in 7 of 253 patients who had DCR. Two of these 7 patients had also granuloma and in these 2 patients

early removal of the silicone stent due to the local complications was reported. They treated granulomas by surgical excision(3).

Burns and Cahill(4) stated that punctal granuloma is very rare following the DCR with silastic tube insertion. They recommended excision of the mass and application of silver nitrate or hyfrecation.(4).

Migliori and Putterman(5) used silicone tubes in 38 patients with congenital lacrimal duct obstructions, and encountered only 1 complication of granuloma formation around the Mersilene suture in the nose of 1 patient. They treated this complication applying warm compresses and gentamicin sulfate ointment. They did not remove the tube before 6 weeks.

Dresner et al (2) reported two inflammatory masses due to retained silicone tube mimicking lacrimal drainage system tumor. One of these masses was protruding from superior punctum, and the other was seen in lacrimal sac at reoperation. They stated the cause of the problem as incorrect removal and retrieval of the silicone tubing.

In our case a third recurrence of the granuloma tissue at the same place was observed. We believe that our attempts to keep the silicone tube in place and limited excision to protect the canaliculi were the reason of recurrences. We believe that if the epithelization of

canaliculi is completed the silicone tube can be removed and deep excision of the base of granuloma with application of mitomycin C 0.4 mg/ml for 3 minutes is an effective treatment of the recurrent granulomas.

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