Resolution of recalcitrant chronic papillary conjunctivitis associated with epiphora following punctoplasty and lacrimal stenting

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ABSTRACT ●

Objective: To assess the use of lacrimal stenting for chronic papillary conjunctivitis associated with epiphora in young adults with little or no atopic background.

Methods: A retrospective interventional case series of 21 consecutive patients (36 eyes) treated for epiphora and chronic papillary conjunctivitis at a tertiary university-affiliated medical center between January 2014 and August 2015 by the same oculoplastic surgeon (I.A). Data were collected by retrospective file review. Patients with a history of ocular disease were excluded from the study. Treatment modalities included lacrimal stenting, punctoplasty, and conservative topical medication. The main outcome measure was post-treatment presence of epiphora and conjunctivitis.

Results: Mean patient age was 40 ± 11 years; 86% of patients were female. Fifteen (72%) had bilateral disease. Mean follow-up time was 3.9 ± 1.7 months. Delayed tear clearance as well as a patent lacrimal apparatus were noted in all eyes. No apparent cause of the symptoms was found in any of the eyes. In 12 of the 13 patients (92%) who underwent tube or stent placement, the conjunctivitis and epiphora resolved. In the remainder, symptoms resolved bilaterally in only 1 of 4 patients (25%) who underwent punctoplasty and in only 1 of 4 patients (25%) treated conservatively.

Conclusion: Recalcitrant papillary conjunctivitis improves following nasolacrimal stenting. Further studies are needed using a prospective controlled design and longer follow-up time.

Chronic conjunctivitis, defined as cases lasting >3 weeks, is a common ocular condition encountered in clinical practice. Its causes include immunologic, traumatic, toxic, and neoplastic, as well as infectious factors. Regardless of etiology, symptoms usually include ocular discomfort, pruritus, redness, and tearing or discharge. Common signs are periocular skin, blepharitis, or cicatricial changes; lid edema; and injection of the bulbar and pretarsal conjunctiva. The presence of conjunctival papillae is suggestive of allergic disorder although not specific to it. Excessive tearing is often encountered in patients with conjunctivitis and results from reflex tearing caused by ocular surface irritation. Frank epiphora, defined as an overflow of tears upon the cheek, is occasionally reported by patients with chronic conjunctivitis, and can cause significant discomfort and disability.[1,2] Treatment options for chronic conjunctivitis are directed by the presumed etiology and usually include local lubricating agents, antihistamines, mast cell stabilizers, vasoconstrictors, nonsteroidal anti-inflammatory drugs (NSAIDS), and steroids.[3]

Recently, we encountered several cases of chronic papillary conjunctivitis associated with epiphora in young adults with little or no atopic background. In all cases, the condition proved unresponsive to common modalities of medical treatment, and to the complete cessation thereof. In all cases, lacrimal probing and irrigation demonstrated complete patency of the lacrimal drainage system, and fluorescein dye retention test showed delayed tear clearance. Because epiphora was the main complaint of these patients, most underwent punctoplasty or nasolacrimal stenting procedures; the results are reported in this study.

Methods

This is a retrospective interventional case series from a tertiary care center. We reviewed the records of all patients with chronic papillary conjunctivitis and epiphora treated surgically at our institution (Rabin Medical Center, Petach Tikva, Israel) by the same oculoplastic surgeon (I.A.), between January 2014 and August 2015. The study followed the tenets of the 1964 Declaration of Helsinki and approval from the local ethics committee of Rabin Medical Center for the use of medical records was obtained.

Records were reviewed for demographic data ocular symptoms, prior medical or ocular conditions, treatments or procedures, the results of ophthalmological evaluation as described as follows, and for the presence of intraoperative and postoperative complications.

Preoperatively, all patients underwent a complete ophthalmological examination, including: slit-lamp biomicroscopy, best spectacle-corrected visual acuity (BSCVA), applanation tonometry and fundoscopy, tear break-up time test, lacrimal system irrigation, and fluorescein dye

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disappearance test (FDDT). FDDT was performed by instilling 1 drop of fluorescein (FUL-GLO, Akorn Inc., Lake Forest, Ill.) into the lower fornix. Tear clearance was defined as abnormal when a high meniscus of fluorescein was visible 5 minutes after the instillation.

Main outcome measures were resolution or improvement of conjunctivitis and epiphora as reported by the patients during follow-up, or the need for further medical treatment following intervention due to persistence of symptoms.

Punctoplasty procedures and mini monoka stent insertion were performed under local anesthesia, whereas Crawford tubes were inserted under general anesthesia. Three-snip punctoplasty and the placement of a Crawford bicanalicular tube or a mini monoka monocanalicular stent (FCI Ophthalmics, Pembroke, Mass.) were conducted as described earlier.[4–6] Following surgery, patients were given topical ofloxacin 0.3% (Oflox, Allergan Pharmaceuticals, Ireland) three times a day for a week. Patients were scheduled for evaluation at the first postoperative week, at the second postoperative month when the stent was usually removed, 6 months postoperatively, and afterward as needed. Follow-up time as presented in this study refers to time from surgical intervention.

Results

This series included 36 consecutive eyes from 21 patients with chronic papillary conjunctivitis and epiphora. Patients with prior ocular or nasolacrimal trauma or surgery were excluded from the study. Mean age at diagnosis was 40 ± 11 years. Eighteen of 21 (86%) patients were female. Fifteen (72%) patients had bilateral disease. Mean postoperative follow-up was 3.9 ± 1.7 months (range: 2–6 months). All cases were referred to our oculoplastic service by their primary ophthalmology service because of epiphora that was noted several times a day. All patients had received various regimen of lubricating agents, antiallergic treatment, and corticosteroid drops for chronic conjunctivitis. In all patients there was a complete cessation for at least a month prior to surgery. All patients were instructed to cease all use of makeup and facial creams, and avoid eye rubbing.

Variable punctal edema was noted in all 36 eyes during the ophthalmic examination. The fluorescein dye disappearance test showed delayed tear clearance, and probing and irrigation indicated a patent lacrimal apparatus distal to the punctum. No patients presented signs of canaliculitis or obvious etiology of epiphora (lid laxity or malposition, blepharitis, dry eye, foreign body, etc.).

Four eyes of 2 patients had Crawford tube placement; 18 eyes of 11 patients had mini monoka stent placement. In all cases, tubes or stents were removed 2 months after surgery. Seven eyes of 4 patients underwent punctoplasty. Four additional patients (7 eyes) declined surgical intervention and were treated conservatively with antihistamine drops and lubricating agents.

All 13 patients who underwent tube or stent placement reported marked postoperative improvement in symptoms of epiphora, ocular irritation, redness, and discharge while the tube or stent was in place. Objective improvement of conjunctivitis was observed in the first weeks following surgery and as early as 1 day postoperatively. All but 1 patient remained symptom-free following the removal of tubes and stents. In one patient's eye both conjunctivitis and epiphora recurred 4 months after the bilateral removal of the mini-monoka tube. Reinsertion of another mini-monoka tube, present at the last follow-up visit, resolved the symptoms.

Of the 4 patients that underwent punctoplasty, only 1 had bilateral resolution of the symptoms of epiphora and conjunctivitis. Of the 4 patients treated conservatively, symptoms were resolved bilaterally in only 1 patient, whereas 3 remained symptomatic with minor and short-term improvements vaguely related to medical treatment regimen changes.

There were no intraoperative complications in any surgery. One eye developed a pyogenic granuloma following mini monoka stent insertion, which regressed after a short course of local steroid treatment.

Figure 1 demonstrates preoperative and 12 weeks postoperative images of a patient with chronic papillary conjunctivitis and epiphora that underwent a Crawford

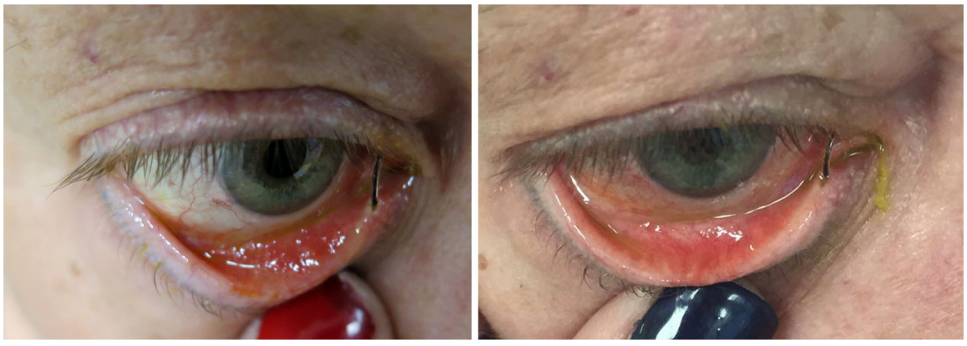

Fig. 1—Chronic papillary conjunctivitis before and 8 weeks after Crawford tube placement, prior to its removal. Following the procedure this patient remained drug free and asymptomatic.