

Premium Optics: Tear Film for the Advanced Lens

Esteemed Panel





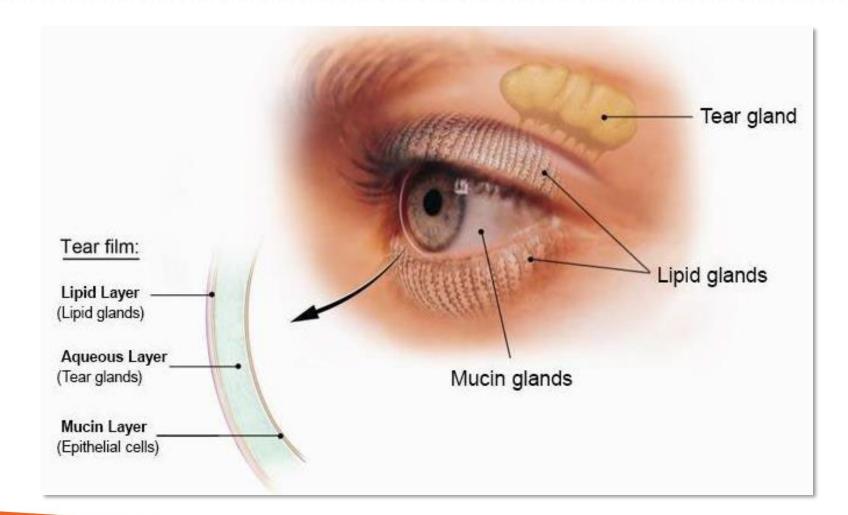


Patti Barkey, COE

Richard Lindstrom , MD

The "Tear Lens"- Vance Thompson





Help you and help your patient. A high percentage of patients will do what is necessary to protect their vision investment. Their investment protection will help you have better outcomes and RAVING patients.



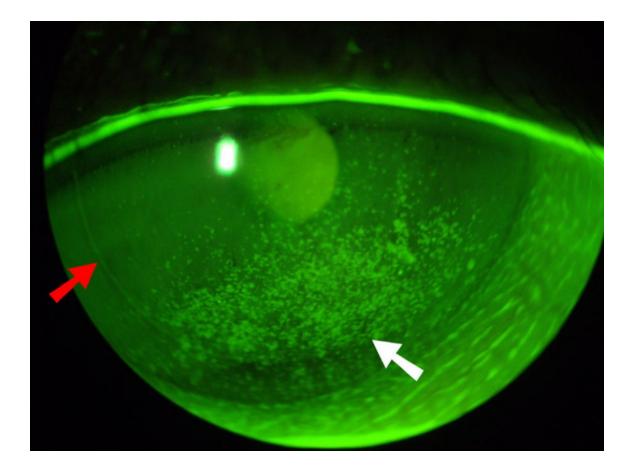




Your patient's 2025 Bentley

The windshield after signing all the paperwork

Fluctuating Vision...Post LASIK, Exposure pattern BUSINESS of REFRACTIVE CATARACT SURGERY dry eye



- How do we get this patient ready for surgery?
 - Post-LASIK expectations

OASCRS

SUMMIT

- Exposure pattern
- Status of the other eye

Dysfunctional Tear Film...

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REVIEW/UPDATE: AN ALGORITHM FOR THE PREOPERATIVE DIAGNOSIS AND TREATMENT OF OCULAR SURFACE DISORDERS 671 **REVIEW/UPDATE** An algorithm for the preoperative diagnosis and treatment of ocular surface disorders Christopher E. Starr, MD, Preeya K. Gupta, MD, Marjan Farid, MD, Kenneth A. Beckman, MD, Clara C. Chan, MD, FRCSC, Elizabeth Yeu, MD, José A.P. Gomes, MD, PhD, Brandon D, Avers, MD, John P. Berdahl, MD, Edward J. Holland, MD, Terry Kim, MD, Francis S. Mah, MD, the ASCRS Cornea Clinical Committee Any ocular surface disease (OSD), but most commonly, dry-eye ot using modern diagnostic tests and advanced treatments disease (DED), can reduce visual quality and quantity and To address these educational gaps, the ASCRS Cornea Clinical adversely affect refractive measurements before keratorefractive Committee developed a new consensus-based practical diagand phacorefractive surgeries. In addition, ocular surgery can nostic OSD algorithm to aid surgeons in efficiently diagnosing exacerbate or induce OSD, leading to worsened vision, and treating visually significant OSD before any form of refractive increased symptoms, and overall dissatisfaction postoperatively. surgery is performed. By treating OSD preoperatively, postoper-Although most respondents of the recent annual American Soci ative visual outcomes and patient satisfaction can be signifiety of Cataract and Refractive Surgery (ASCRS) Clinical Survey cantly improved. recognized the importance of DED on surgical outcomes many were unaware of the current guidelines and most were J Cataract Refract Surg 2019: 45:669–684 © 2019 ASCRS and ESCRS ry-eye disease (DED) is a common cause of paof 60% of routine cataract patients were asymptomatic. tients seeking medical advice and a frequent source yet 50% had central corneal staining. In another study, of blurry or fluctuating vision.1 We know that pathe incidence of OSD in patients presenting for cataract tients who have DED and are considering keratorefractive surgery was over 80%, and in those who were asymptomsurgery, in particular, laser in situ keratomileusis (LASIK), atic, over 50% had an abnormal tear osmolarity or matrix should be cautioned that these surgeries might worsen metalloproteinase-9 (MMP-9) level. The impact of DED their DED or other ocular surface conditions.2 DED and OSD on topography, biometry, keratometry, and should be treated effectively before the patient has keratorhigher-order aberrations is one of the major causes of disappointing postoperative outcomes.8,9 efractive or phacorefractive surgery.3 DED can cause a reduced visual function and might compromise the overall The annual American Society of Cataract and Refractive results of corneal, cataract, and refractive surgery.4,5 The Surgery (ASCRS) Clinical Survey of its membership identiincidence of DED and ocular surface disease (OSD) in fied DED and OSD as recurring general sources of confucataract surgery candidates who are asymptomatic is sion. In the past few years, more than 75% of respondents higher than previously thought. In one study,6 upwards were unfamiliar with the TFOS DEWS II (Tear Film & Submitted: August 25, 2018 Final revision submitted: December 18, 2018 Accepted: December 19, 2018 From Well Cornel Medicine, New York-Presbyterian Hospital (Starr), New York, New York, Duke University Eye Center, (Oupta, Kim), Durham, North Carolina, Gavin Herbert Eye Institute (Farid), University of California, Invine, the Department of Ophthalmology, The Ohio State University and Comprehensive EyeCare of Central Ohio

Beckman), Westervile, Ohio, Eastern Virginia Medical School, Virginia Eye Consultants (Yeu), Nortok, Virginia, Vance Thompson Valon (Berdah), Sloux Falle, South Dakota, Wile Eye Hospital (Ayens), Philadephia, Pernaylwania, Cincinnal Eye Institute Holland, Liviensky of Cincinnal, Chais, Sorbpo Cinci, Mark, Laude, Califonia, USA; her Department of Ophthamology and Valon Science, University of Tochnol (Charu, Charles, Charle), Charles, Mark São Paulo, Brazil, Supported by the ASCRS and a departmental unrestricted grant from Research to Prevent Bindness (C.E.S., Weil Cornell Medicine). The funding organizations had no

role in the design or conduct of this research. We would like to thank Johnson & Johnson for allowing the use and modification of the SPEED questionnaire and Steven Dell, MD, for the use and modification of his

Cataract & Refractive Lens Exchange C Corresponding author: Christopher E. Starr, MD, Weil Cornell Medicine, New York-Presbyterian Hospital, Department of Ophthalmology, 1305 York Ave, New York, NY

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ASCRS PREOPERATIVE OSD ALGORITHM

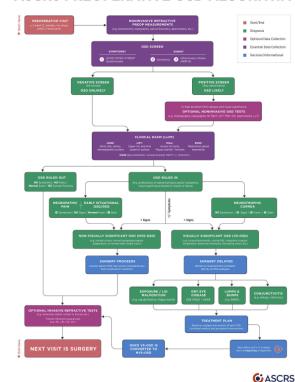


Figure 1. The ASCRS preoperative OSD algorithm (ADDE = aqueous-deficient dry eye; CL = contact lens; DED = dry-eye disease EBMD = epithelial basem membrane dystrophy; EDE = evaporative dry eye; IOL = intracular lens; LLPP = Look, Lift, Pull, Push; LLT = lipid layer thickness; LRI = limbal relaxing incisions; LVC = laser vision correction; MGD = meibornian gland dysfunction; MMP-9 = matrix metalloproteinase-9; NI-TBUT = noninvasive tear breakup time; NVS-OSD = nonvisually significant ocular surface disease; OCT = optical coherence tomography; OSD = ocular surface disease; OSI = ocular scatter index; SPEED = Standard Patient Evaluation of Eye Dryness; TBUT = tear breakup time; TMH = tear meniscus height; VS-OSD = visually significant ocular surface disease).

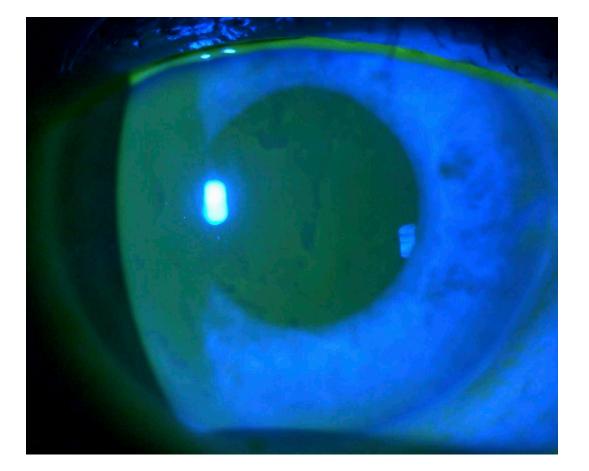
Volume 45 Issue 5 May 2019

• What are the first line treatments to get the patient ready for surgery?

- Steroids •
- Lifitigrast (Xiidra)
- Cyclosporine (Restasis)
- Meibo
- Punctal occlusion
- Thermal pulsation
- How long do you wait?

No one can get my glasses right....





Anterior or Epithelial Basement Membrane Dystrophy

∂ Open Access Full Text Article

CLINICAL TRIAL REPORT

Treatment of Epithelial Basement Membrane Dystrophy to Optimize the Ocular Surface Prior to Cataract Surgery

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Purpose: To assess the effectiveness of cryopreserved amniotic membrane (CAM) after debridement in treating epithelial basement membrane dystrophy (EBMD) prior to cataract surgery.

Methods: This pilot study included 2 treatment groups: a prospective study group of 9 subjects with significant EBMD who received debridement followed by self-retained CAM, and a retrospective, control group of 10 consecutive subjects who received debridement followed by a bandage contact lens (BCL). Slit-lamp photography after fluorescein staining were used to monitor healing. Corneal topography and IOL calculation were compared at baseline and 1 month after the procedure. Refraction and ocular surface stability were also compared after cataract surgery.

Results: Corneal reepithelialization after debridement occurred in 4.6 ± 0.8 days in the study group and 6.8 ± 0.6 days in the control (p < 0.05). Corneal topography showed changes in curvature from $43.5 \pm 1.2D$ at baseline to $44.6 \pm 1.2D$ at 1 month in the study group and from $45.0 \pm 0.6D$ to $45.7 \pm 0.8D$ in the control (p = 0.38). Average change in IOL calculation was 1.56 D in the study group, compared to 0.95 D in control (p = 0.29). Post-cataract refraction in both groups was within ± 0.5 Diopter of the anticipated, and corneal surface remained stable without EBMD recurrence.

Conclusion: Management of ocular surface disorders prior to cataract surgery stabilizes IOL calculation and reduces postoperative refractive surprises. CAM relatively accelerated healing after debridement; however, it was not better than BCL in stabilizing the ocular surface and improving visual outcome. The use of CAM in cases of EBMD remains speculative.

Keywords: amniotic membrane, cataract, EBMD, ocular surface

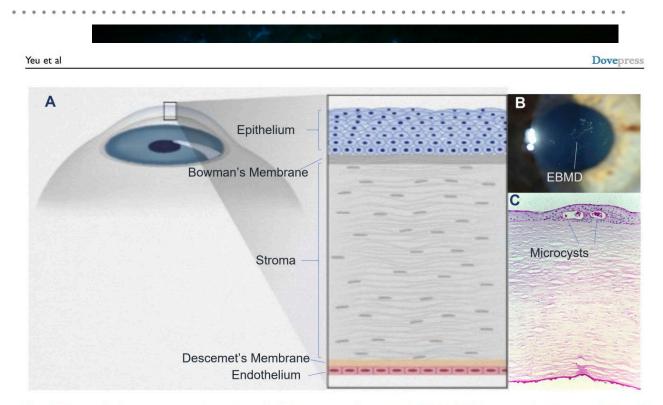


Figure I Anatomy, clinical picture, and histopathology of corneal epithelial basement membrane dystrophy (EBMD). EBMD occurs at the level of corneal epithelium and basement membrane (A). Clinically, it manifests as map-dot fingerprint opacities (B). Histology shows microcystic changes of the epithelial basement membrane (C).



Why did I lift the eyelid?

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Salzmann's Nodules

Superficial keratectomy with mitomycin-C for the treatment of Salzmann's nodules

Patrick J. Bowers Jr., MD, Marianne O. Price, PhD, Steven S. Zeldes, MD, Francis W. Price Jr., MD

Purpose: To evaluate the success of treatment and prevention of recurrence of Salzmann's nodules by superficial keratectomy with intraoperative mitomycin-C (MMC).

Setting: Price Vision Group, Indianapolis, Indiana, USA.

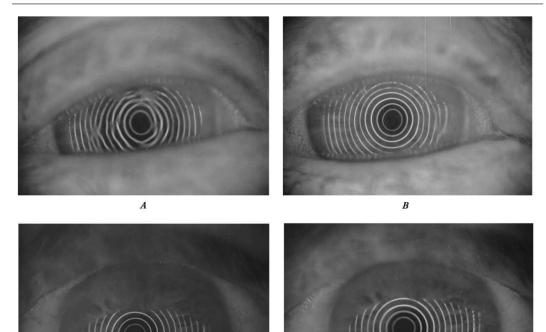
Methods: This retrospective consecutive case series comprised 30 eyes of 25 patients who had superficial keratectomy with MMC between January 1997 and June 2000 at a large tertiary-care center.

Results: Twenty-four patients reported improvement in their symptoms. The remaining patient lost 1 line of visual acuity. Ninety-seven percent of eyes maintained or improved best corrected visual acuity. No patient had a recurrence of Salzmann's nodular degeneration over a mean follow-up of 28 months \pm 15 (SD) (range 4.0 days to 4.1 years).

Conclusion: Superficial keratectomy with MMC appears to be a valid and safe method for treating and preventing the recurrence of Salzmann's nodular degeneration.

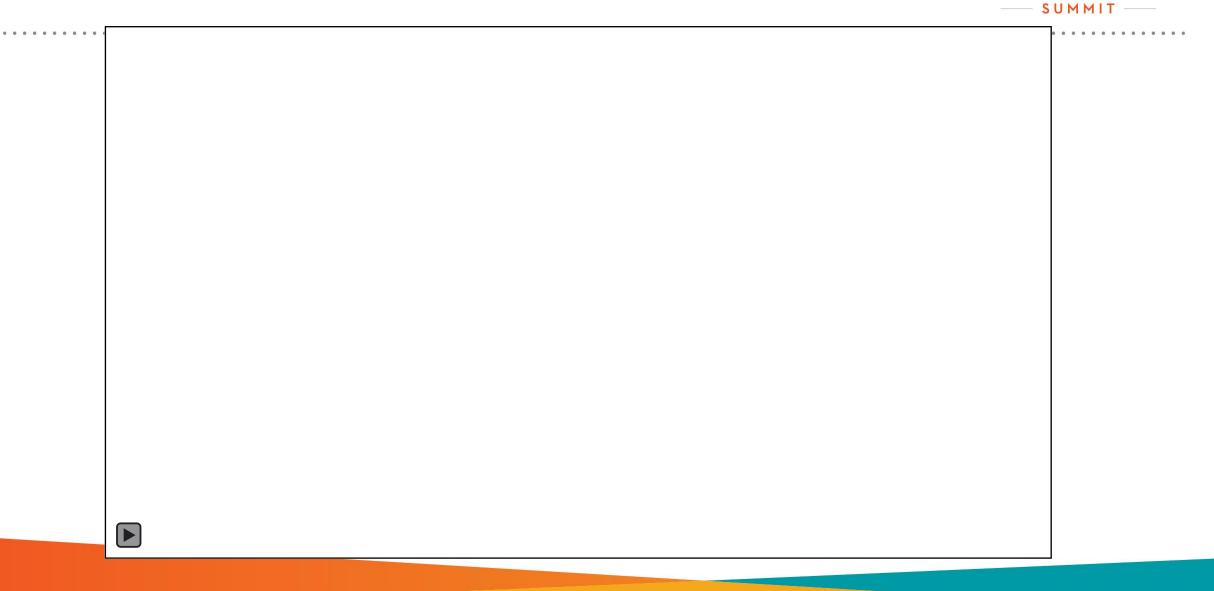
J Cataract Refract Surg 2003; 29:1302–1306 © 2003 ASCRS and ESCRS

KERATECTOMY WITH MITOMYCIN-C FOR SALZMANN'S NODULES



C D Figure 1. (Bowers) Preoperative and 1-month postoperative corneascope images. A: Irregular astigmatism caused by Salzmann's nodules in a female patient. B: Improved corneal surface in the same woman after superficial keratectomy and MMC treatment. C: Irregular astigmatism caused by Salzmann's nodules in a male patient. D: Improved corneal surface in the same man after superficial keratectomy with MMC treatment.

Treatments of Salzmann's Nodules

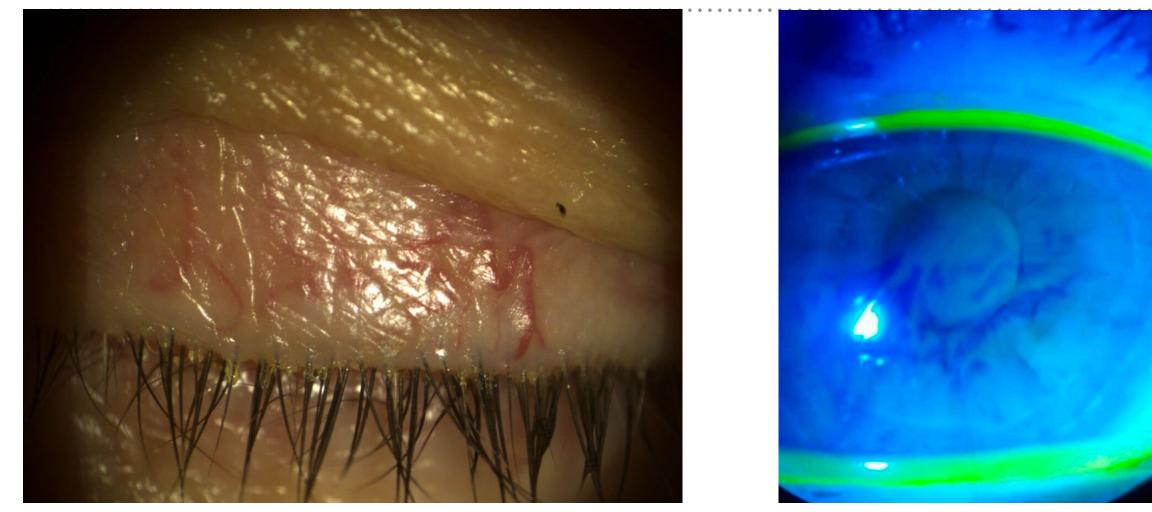


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Do I Need to Treat?





Demodex Blepharitis



Photo courtesy of Paul Karpecki, OD

Chemical

Production of cytokines, chemokines, and other inflammatory biomarkers may cause lid margin inflammation^{1,2}



Photo courtesy of Paul Karpecki, OD

Mechanical

Demodex mites can cause eyelash distension/loss, and the mite claws can cause microscopic epithelial abrasions^{1,3,4}



Artist's rendering

Bacterial

Demodex mites transport bacteria on their surface and in their gut^{2,3}

Common Treatments

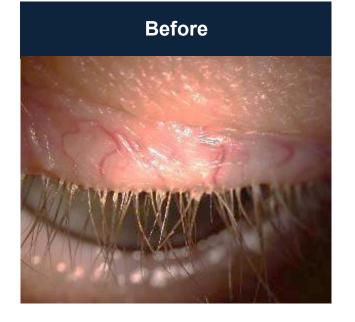
Blepharoexfoliation

Tea-Tree oils Hypochlorous acid

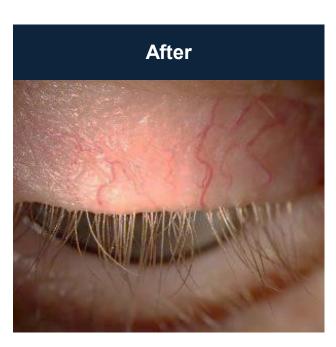
New Treatments of Demodex Blepharitis

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Xdemvy (lotilaner 0.25%)



All images are of actual patients who participated in clinical trials for Tarsus Pharmaceuticals.

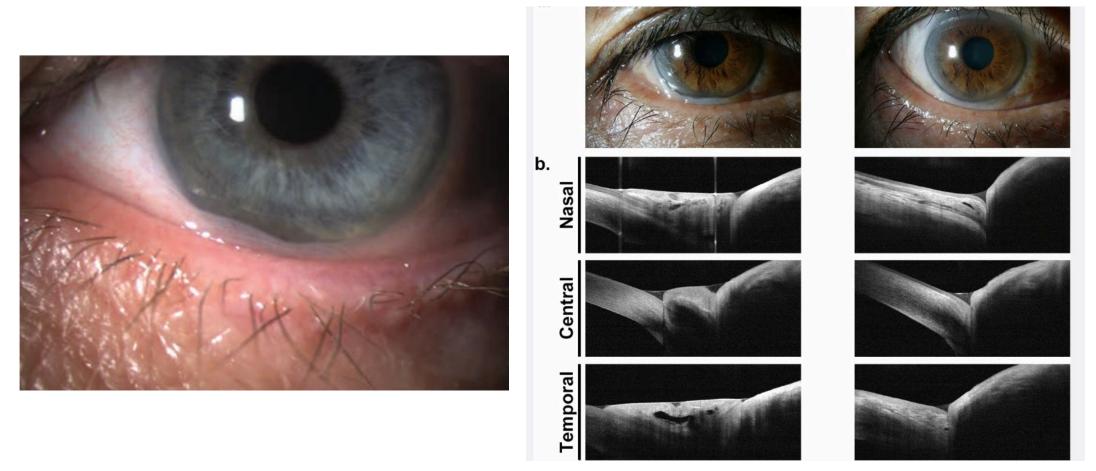


	SATURN-1/SATURN-2 Combined Data at Day 43 (N=833)
Collarette Reduction (≤2 collarettes)	50% vs 10% vehicle
Mite Eradication (0 mites/lash)	60% vs 16% vehicle
Erythema Cure (Grade 0)	25% vs 8% vehicle
Collarette Reduction (≤10 collarettes)	85% vs 28% vehicle

Reference: Yeu E, et al. Treatment of *Demodex* blepharitis with lotilaner ophthalmic solution, 0.25%: combined analysis of two pivotal, randomized, vehicle-controlled, multicenter trials. Saturn-1 and Saturn-2 combined data. Presented at: ARVO 2023; April 23-27, 2023; New Orleans, LA.

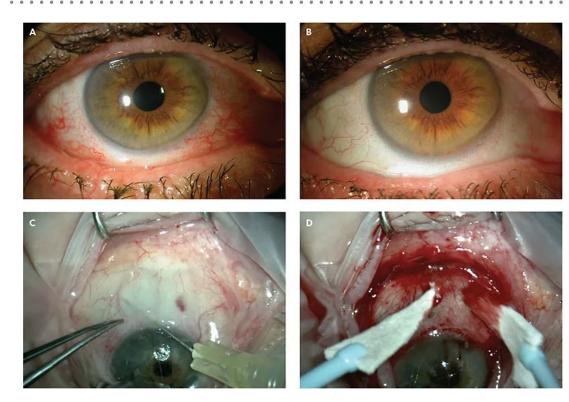
I feel like there is something in my eye...





Huang Y, Sheha H, Tseng SC. Conjunctivochalasis interferes with tear flow from fornix to tear meniscus. Ophthalmology 2013;120:8:1681-7.

Conjunctivochalasis Treatment



Coutesy of Neel Desai, MD, CORNEAL PHYSICIAN, APRIL 1, 2020VOL 24, ISSUE APRIL 2020PAGE(S): 36-38, 40

Paste-pinch-cut conjunctivoplasty: subconjunctival fibrin sealant injection in the repair of conjunctivochalasis

Linden R Doss ¹, E Lauren Doss, R Philip Doss

Affiliations + expand PMID: 22406947 DOI: 10.1097/ICO.0b013e3182400100

Abstract

Purpose: To describe a new surgical technique for the repair of conjunctivochalasis (CCh) using subconjunctival injection of fibrin sealant followed by conjunctival resection and to present a case series demonstrating our experience with the paste-pinch-cut technique.

Methods: A total of 139 eyes of 70 patients (43 women, 27 men) with CCh unresponsive to medical therapy received the described surgical treatment. The procedure consists of 3 primary steps-paste: fibrin sealant is injected subconjunctivally in a line inferior to the limbus; pinch: the conjunctiva is grasped with curved ptosis forceps, gathering the excess conjunctiva into a ridge, which is held, allowing the sealant to polymerize; and cut: the ridge of excess conjunctiva and sealant is resected. Subjective symptoms were assessed after surgery.

Results: Conjunctival redundancy was absent postoperatively in all eyes, resulting in a smooth conjunctival surface and restored tear meniscus. At the 3-month follow-up visit, 91.4% of patients reported improvement in symptoms. There were no recurrences or significant complications.

Conclusions: The present retrospective, noncomparative, consecutive, interventional case series study introduces paste-pinch-cut conjunctivoplasty as a simple and an effective surgical treatment for the repair of CCh in symptomatic patients.

Arenas E, Muñoz D. A new surgical approach for the treatment of conjunctivochalasis: Reduction of the conjunctival fold with bipolar electrocautery forceps. Scientific World Journal 2016;2016:6589751. Doss LR, Doss EL, Doss RP. Paste-pinch-cut conjunctivoplasty: Subconjunctival fibrin sealant injection in the repair of conjunctivochalasis. Cornea 2012;31:959–962. Serrano F, Mora LM. Conjunctivochalasis: A surgical technique. Ophthalmic Surg 1989;20:12:883-4.

Take Home Points

- Pay attention to the tear film/lens pre-operatively and post-operatively
- Wait until placido imaging is stable prior to biometry

