

FILAMENTARY KERATITIS: PROTRACTED RESOLUTION FOLLOWING DEHYDRATED MEMBRANE PLACEMENT

INTRODUCTION

Filamentary keratitis is a painful sequela most commonly associated with aqueous deficient dry eye. It is characterized by strands of filaments which bind to the altered corneal surface. The mechanical interactions of the eyelid with the filament strand causes high levels of pain and foreign body sensation in affected individuals. Traditional management of this condition may include debridement, lubrication, mucolytics and soft bandage contact lenses. This report will examine a case of recurrent filamentary keratitis and the prolonged stability achieved with the application of an Atlas Ocular dehydrated amniotic membrane.

CASE SUMMARY

A 75 y/o Caucasian female was referred in for a red, painful, photophobic right eye believed to be herpetic in nature. She had been taking ofloxacin QID OD from her eye care provider for one week with no improvement. Her medical history was significant for thyroid disease for which she was taking levothyroxine. She stated her eye had become intermittently red and uncomfortable over the course of a year with periods of relief followed by exacerbation. Her best corrected visual acuity was 20/300 PH 20/50 in the right eye. Upon exam there was 1+ right upper lid edema, 2+ conjunctival injection, and 19 filaments located central to superior on the cornea. (Image 1/2)

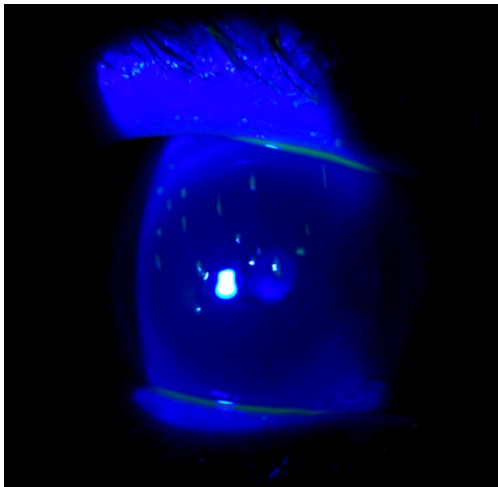


Image 1 (Initial Presentation)

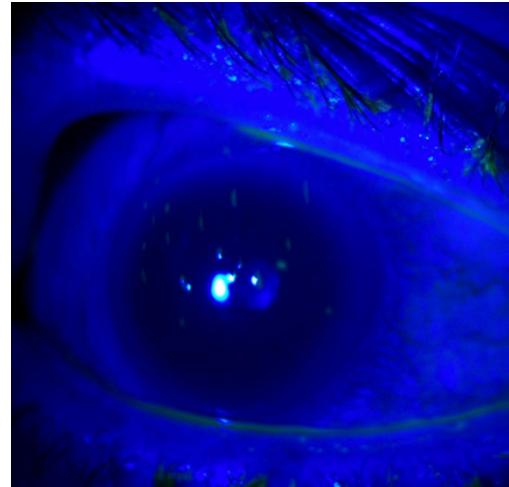


Image 2 (Initial Presentation)

INITIAL TREATMENT/FOLLOW-UP

Initial treatment included superficial debridement of the filaments with a sterile cotton swab, placement of BCL and continuing topical ofloxacin TID OD. At her 3 day follow up and BCL removal visit, there were a few persistent epithelial defects, and she was placed on preservative free tears Q2H and neo-poly-dex drops TID to help with inflammation and over the counter ointment at bed to aid with lubrication. At her one week recheck, there was a recurrence of 10 filaments and the patient's pain and photophobia had returned.

SECONDARY TREATMENT/FOLLOW-UP

At this time, we decided to debride her cornea again and place an Apollo 10mm dry amniotic membrane with Acuvue Oasys 8.4 BCL. (Image 3/4)

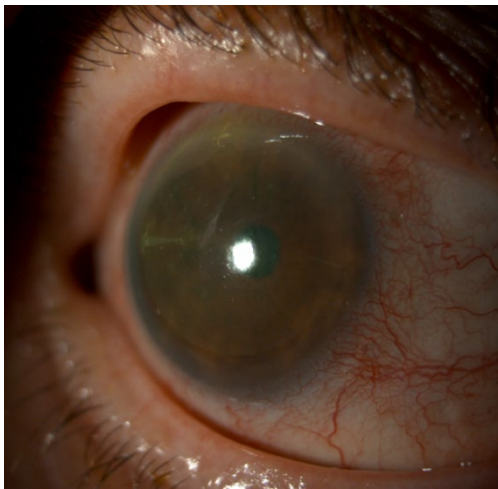


Image 3 (Secondary Treatment)

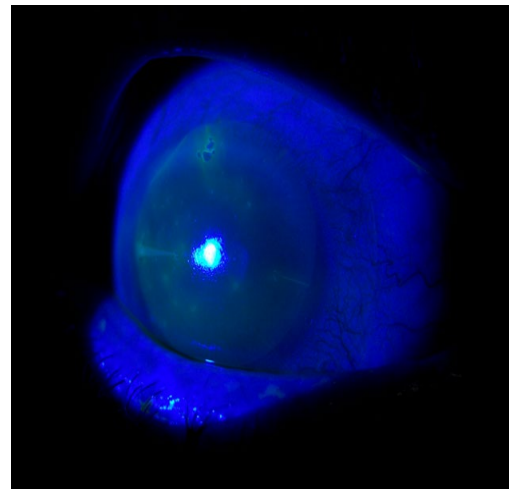


Image 4 (Secondary Treatment)

At her 3-day progress evaluation with BCL removal, her filaments had resolved with minimal residual microcystic changes and punctate epithelial erosions inferiorly. (Image 5) She was instructed to resume her neo-poly-dex drops TID and preservative free tears Q2H upon BCL removal.

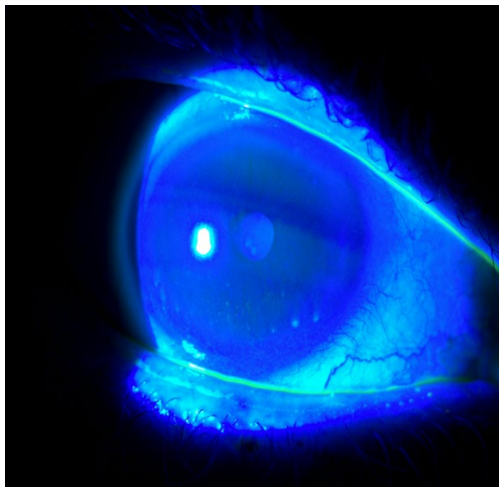


Image 5 (3-day Progress Evaluation)

RESULTS

At her one week follow up her vision was 20/50 PH 20/30, her clinical exam was greatly improved (Image 6) and continued to maintain her filament-free appearance over the subsequent 4 months with the addition of topical immunomodulating therapy and punctal occlusion. We recommended she return to her primary physician to recheck her thyroid levels. She will be watched closely, but the prolonged relief from filament recurrence has been impressive in a patient who had suffered from periodic flares over the course of a year.



Image 6 (One Week Follow-Up)

DISCUSSION

Filamentary keratitis can be challenging and rewarding to manage as a primary eye care provider. Aqueous deficient dry eye and associated complications such as filamentary keratitis is guarded and requires vigilant and aggressive care. Understanding the mechanism of the disease and underlying etiology is paramount to providing effective treatment. In our case, a thyroid condition may have been contributing to her dry eye disease and a more proactive treatment plan was incorporated going forward. Helping a patient improve their quality of life by detecting an underlying disease such as Sjogren's or other autoimmune disease is the responsibility of the optometrist and should not be overlooked in these situations. Using new technology available to help monitor chronic dry eye and incorporating advanced treatment modalities such as amniotic membranes will help improve patient satisfaction and maintain ocular surface health.

Christopher J. Kuc, O.D. FAAO, is the Medical Director at Medical Optometry America in Newtown Square, Pennsylvania. His clinical experience in ocular surface disease, glaucoma, emergency eye care and surgical co-management was refined with the experts at Chester County Eye Care Associates in West Chester, Pennsylvania and internationally renowned doctors at Virginia Eye Consultants in Norfolk, Virginia in his past practice. Dr. Kuc is a fellow of the American Academy of Optometry and a Diplomate of the American Board of Optometry. Dr. Kuc has lectured locally and nationally on ocular disease management. He currently serves as a trustee on the board of the Pennsylvania Optometric Association.

