



Foggy with a Chance of Canaliculitis

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Introduction

The following is a case report of a 76-year-old WM who presented for a second opinion on his scleral lens fit due to constant fogging of the right lens. Midday fogging caused by particulate accumulation in the tear reservoir between the ocular surface is a common complaint with scleral lens wear. The particulate accumulation is likely from multiple sources but is most commonly theorized to be from the normal sloughing of corneal epithelial cells¹. **This case report looks at a patient whose midday fogging was a result of canaliculitis.**

Case Detail

Ocular Hx	
Keratoconus OU	Dry Eye OU
POAG OU w/ tube shunt OD	EBMD OU
PKP OD	

Ocular Medications	
Travatan Z QHS OU	Restasis BID OU
Combigan BID OU	

CC: Constant fogging of OD scleral lens

- Due to age of patient's habitual scleral lens and chief complaint, patient was re-fit into a different scleral lens brand
- Part way through fitting process, **patient complained of nasal redness in the right eye.**

Exam Findings:	OD	OS
VA cc (scleral lenses)	20/25 PHNI	20/20-PHNI
Pertinent Anterior Segment Findings (see fig 1)	-- Crusting of sup/inf lashes -- MGD and 2+ diffuse injection of nasal bulbar conjunctiva -- Inferior puncta elevated and hyperemic → Puncta palpated: mixture of yellow-tan granular concretions and mucus expressed	Grossly within normal limits



Fig 1: Photograph of the patient's eyes 8 hours after scleral lens wear. Note the increased injection of bulbar and palpebral conjunctiva OD.

Management

- Patient was instructed to discontinue scleral lens wear. Conservative treatment was initiated and trialed for 2 weeks:
 - Moxeza QID OD**
 - Doxycycline 100 mg BID PO**
- After 2-week period, there was minimal resolution of anterior segment findings
- Dilation and irrigation was attempted but failed due to blockage
- Patient referred for **canaliculotomy procedure** and after 5 months, he was cleared for scleral lens wear
- Since procedure, patient has not complained of midday fogging in the right lens and stated improvement in overall symptoms (see fig 2)

Antibiotic Treatment

- Topical and systemic antibiotic treatment is most effective in patients who present early with acute canaliculitis²
- Concretions within the puncta can shield bacteria from antibiotics resulting in a poor response to medications

Surgical Intervention

- Canaliculotomy:** This procedure places an incision on the canaliculus. The stones, epithelium, and debris are then removed. Afterwards, the canaliculus is then irrigated with antibiotic solution²

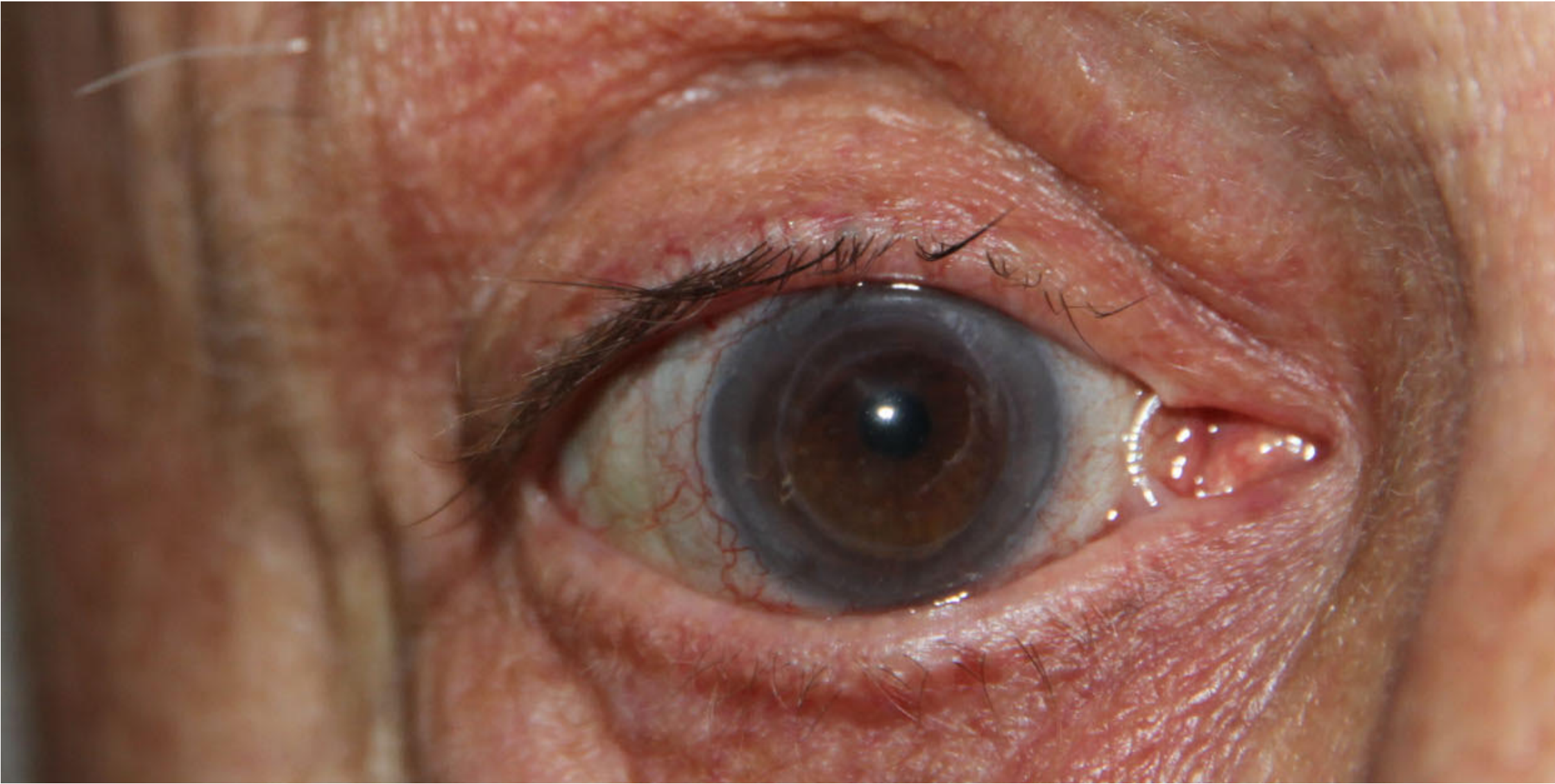


Fig 2: Photograph of patient's right eye 1-month post-canaliculotomy. Note improved injection to fig 1.

Conclusion

Studies indicate that 26-46% of scleral lens wearers experience midday fogging¹.

There are multiple proposed causes of midday fogging, and various ways to modify the scleral lens fit to minimize a patient's symptoms¹:

- Decreasing excessive central clearance
- Steepening the edges of a loosely fit lens
- Adding a preservative-free high viscosity artificial tear into the lens bowl prior to instillation

In cases of fogging with an optimal lens fit and good compliance to a rigorous care regimen, canaliculitis should be considered as a differential diagnosis especially in the presence of a 'pouting' punctum and focal nasal injection.

Antibiotic treatment is warranted to help resolve symptoms and a referral for a canaliculotomy (**fig 3**) can be considered in more severe cases.



Fig 3: Photograph of canaliculotomy with curettage performed in-office under local anesthesia³

References

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Acknowledgements

Thank you to all the faculty and staff at Midwestern University Eye Institute for their continued support!

