Managing Chronic Dry Eye with Scleral Lenses in a Patient Without Lacrimal Glands due to Aspergillosis

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e Presentation

year-old Caucasian female presented on 05/29/2018 for a new scleral lens fitting due to onic dry eye syndrome secondary to lacrimal gland removal OU and poor eyelid cture from multiple facial reconstructive surgeries. 10 years ago, she suffered an ergillosis infection secondary to a bone marrow transplant to treat her acute myeloid kemia. She also has a history of wearing scleral lenses with autologous serum to help h her chronic dryness.

ergillus is a ubiquitous mold that can cause a variety of opportunistic diseases, uding invasive aspergillosis, aspergilloma, and allergic bronchopulmonary aspergillosis. sive aspergillosis continues to pose a significant threat to immunocompromised ents including those with malignancy or undergoing aggressive chemotherapy. With % of patients developing invasive aspergillosis 2 weeks after transplantation, patients h bone marrow transplants have been shown to have a case-fatality rate of 86.7%, a higher than any other underlying condition.

dical History: Acute Myeloid Leukemia, Sinusitis, Depression, Thyroid Dysfunction, Graft sus Host Disease, Aspergillosis infection

lar History: severe ocular dryness OU, Pseudophakia OS

gical History: 17 facial reconstructive surgeries, bone marrow transplant, cataract gery OS

m Findings

ual acuities (sc):
20/40 PH 20/25
20/25
ils: PERRL OU (-)APD
FTFC OD and OS
M: FROM

OD	Slit Lamp Exam	OS
Inferior ectropion, OS>OD	Adnexa	Inferior ectropion, OS>OD
Superior pannus covering entire superior quadrants approaching visual axis, +2 PEE across cornea, (+) filaments	Cornea	Localized neo superior nasal, +2 PEE, stromal incision scars, new neo development inferior to visual axis, (+) filaments
Trace NSC	Lens	PCO – obstructing VA

nagement

to poor fitting lenses causing neovascularization, the patient was re-fit into Digiform scleral lenses and instructed to continue filling her lenses with autologous serum. The ent was also prescribed Pred Forte 1% BID OU to help reduce the further development eovascularization. Both scleral lenses and intraocular pressures were monitored at w up visits.

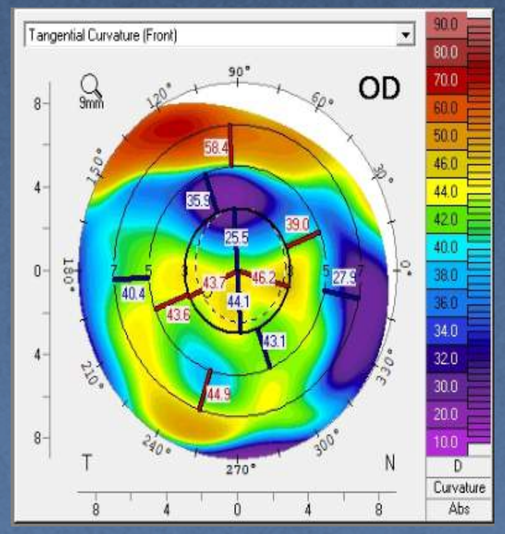

Image A: OD corneal topography – 40.1/44.2@001

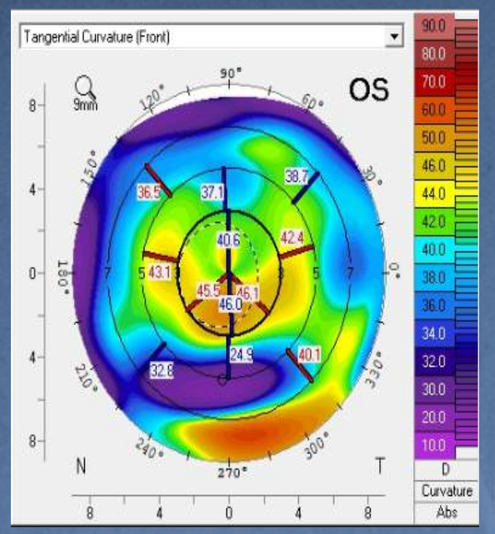

Image B: OS corneal topography – 43.3/47.3@095

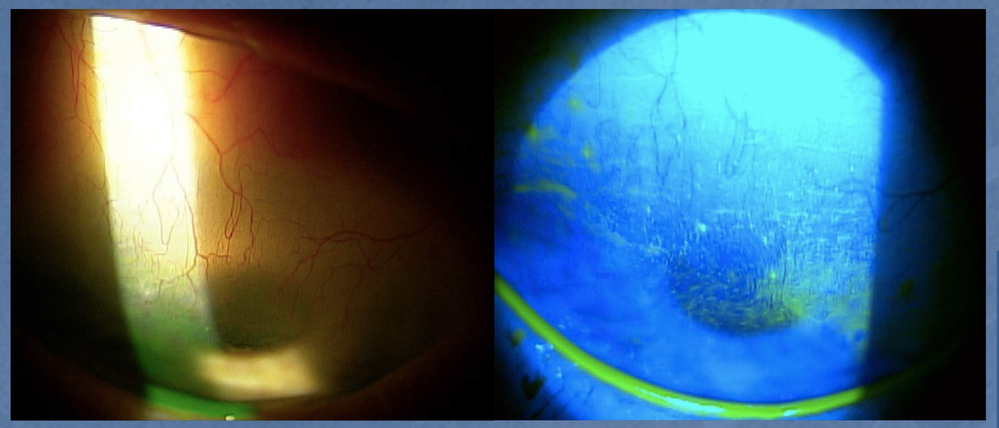

Image C: OD superior corneal pannus

Image D: OD corneal staining after debridement of filaments

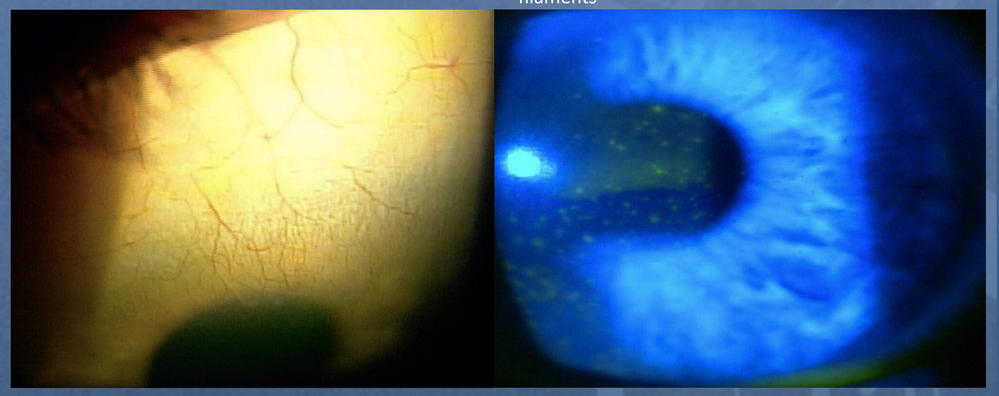

Image E: OS superior corneal neovascularization

Image F: OS corneal staining after debridement of filaments

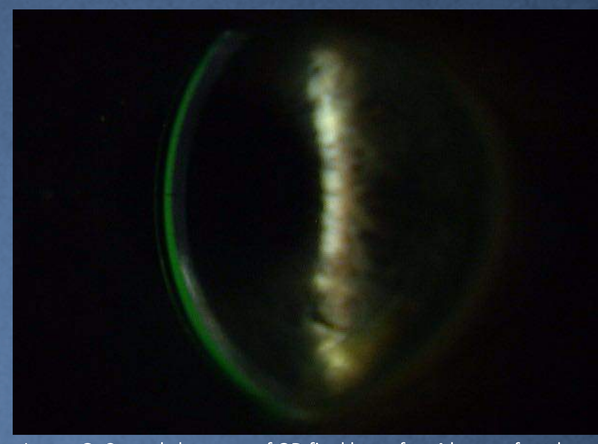

Image G: Central clearance of OD final lens after 4 hours of settleme

OD	Lens Parameter	OS
-1.50 DS	Power	+2.25 D
8.00 mm	Base Curve	8.25 m
16.6 mm	Diameter	16.6 m
Contamac Optimum Extra	Material	Contamac Op Extra

Table 1: Final lens parameters (Digiform 16.6 scleral lenses)

Discussion

As discussed by Lin et. al., bone marrow transplant recipients more likely to develop a disseminated disease, which become more difficult to treat and more likely to affect multiple organ systems. Currently, the standard of care for aspergillosis is amphotericin B, however, Lin et. al. discovered in a systemic review of 50 studies involving 1941 patients, that 50% of sub died despite having received treatment.

Due to her bone marrow transplant, the patient suffered an invasive aspergillosis that affected her lungs, sinuses, and lac glands, which eventually had to be removed. Since the remov her lacrimal glands, she has suffered severe ocular dryness th has been managed by scleral lenses and autologous serum. S she began wearing scleral lenses, her quality of life has impro

Conclusion: Scleral lenses are a great modality to help impro symptoms of severe dryness. Not only do they provide vision lubrication for these patients, but in cases such as our patien they can also serve as a form of protection for the ocular surf

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References
1. Lin, SJ., Schranz, J., Teutch, S.M. "Aspergillosis Case-Fatality Rate: Systemic Review of the Literature." *Clinical Infectious Diseases,* vol. 36, 2001, pp. 35