Neovascularization: Congenital or progressive?
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Sclerocornea is a rare congenital anomaly where the clear corneal tissue is replaced by vascularized scleral tissue. The scleralization can involve the entire cornea or just the periphery, to varying degrees. It is often seen in conjunction with cornea plana. Cornea plana is another congenital corneal anomaly that occurs in autosomal dominant and recessive forms. Patients may present with a variety of clinical signs including: high hyperopia, a large corneal radius of curvature, slight microcornea, sclerocornea, a widened limbal zone, a shallow anterior chamber, irregular corneal architecture and arcus senilis.

A 34-year-old male patient presented for a contact lens fit with a previous diagnosis of cornea plana. He was currently wearing hydrogel toric contact lenses for a few hours a day, with wear time limited upon recommendation of his previous practitioner. He expressed interest in a lens he could wear longer “without damaging his eyes.” Anterior segment evaluation revealed peripheral sclerocornea and associated neovascularization, greater superiorly. Cornea plana typically presents with keratometry readings of 30-35D, but anything less than 43D can qualify. The patient’s flat keratometry readings were OD 41.88D and OS 42.25D. A concurrent diagnosis of sclerocornea was made. Despite this change in diagnosis, the clinical management remains the same. Several alternate contact lens options were discussed, including small diameter GP lenses, scleral GP lenses, and soft silicone hydrogel toric lenses. Success was achieved with soft silicone hydrogel toric lenses and the patient was able to increase wear time to 12 hours per day with no adverse effects.

Sclerocornea and cornea plana are rare congenital conditions that can exist separately or together. Several contact lens options may work well for these patients, including GP lenses or Si-Hy lenses. Doctors should feel comfortable recommending these contact lens options, despite the unusual corneal appearance of both conditions, since the neovascularization is congenital and typically non-progressive. Fitting these patients into contact lenses has the potential to significantly improve their visual function and quality of life. With any corneal condition, close follow-up is essential to promote healthy long-term contact lens wear.

Thank you to Wendy W. Harrison, O.D., Ph.D. for her assistance in the co-management of this case.
References

Dr. Sicks received her Doctor of Optometry degree from the Illinois College of Optometry. She completed a Cornea and Contact Lens residency program at Northeastern State University Oklahoma College of Optometry. Dr. Sicks is currently an assistant professor at the Illinois College of Optometry, where she participates in didactic, clinical, and research activities.

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