Therapeutic Applications of Scleral Contact Lenses in Ocular Cicatricial Pemphigoid
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Background:
- Ocular cicatricial pemphigoid (OCP) is a rare autoimmune, sight-threatening disorder with an incidence anywhere between 1/8000 and 1/60,000
- Corneal and conjunctival cicatrization from ocular surface inflammation, compromised lid anatomy and function along with decreased tear production may lead to corneal opacification, ulceration, perforation, and devastating vision loss.

Symptom management in Ocular Cicatricial Pemphigoid (OCP) is challenging due to the progressive factors of dry eye, scarring, trichiasis and vision impairment. We set out to evaluate the benefits and therapeutic effect of scleral contact lenses in the management of OCP.

Methods:
A retrospective review was performed over a database of 20 patients (36 eyes) fitted with scleral lenses (SL) at the Department of Ophthalmology, Emory University from May 2018 to April 2021. We evaluated, the time required for the ocular surface stabilization, vision rehabilitation success, and OCP-related ocular surface signs (including trichiasis and symblepharon (Figures 3A & 3B).

Results:
- The mean age was 67.4 (range, 43-81) years, with 4 to 1 female to male predominance
- Mean duration of follow-up was 17.5 months (range, 1.5-35)
- Mean wearing time was 10.9 hours a day, with no overnight wear permitted
- Mean keratopathy grading improved from 2.1±0.8 to 1.4±0.7 at the last documented visit (Figure 1)
- Mean visual acuity improved from 20/80 to 20/30 with SL (range, 20/400 to 20/20) (Figure 2)
- All fitted patients reported a subjective improvement in ocular comfort after initiations of SL wear (Figure 4)
- 96% of fitted eyes responded well to therapy and continued scleral lens wear
- Patients who initially presented with fornix shortening, symblepharon, and trichiasis remained stable

Conclusions:
Patients presenting with fornix foreshortening, symblepharon, keratopathy, and trichiasis remained stable throughout the study period. Scleral lenses offer both ocular surface protection and improved visual acuity in patients with OCP. Scleral lenses should be given strong consideration as an ancillary therapy in patients with OCP.

References:

Figure 1: Change in ocular surface keratitis graded presentation from initial to last documented visit (Figure 1)