SCLERAL LENSES IMPROVE PTOSIS IN PATIENTS WITH CONCURRENT OCULAR SURFACE DISEASE: A CASE SERIES

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Introduction

- Scleral lenses are a well-established option for patients with corneal irregularity and/or ocular surface disease
- They vault over the cornea and rest on the conjunctiva

- Scleral lenses have an additional benefit of improving eyelid ptosis
- This benefit has been minimally reported in the literature

- Scleral lenses offer a non-surgical and non-pharmacological option for ptosis improvement, particularly in cases of mild ptosis and/or when the patient is not a good surgical candidate
- They are a good option for improving ptosis in patients with concurrent ocular surface disease as they offer corneal protection as the eyelid retracts

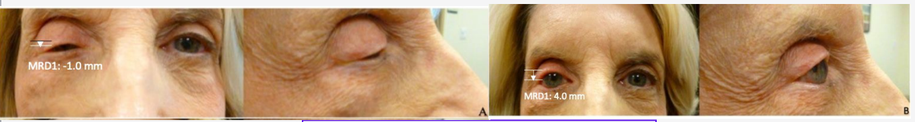
Purpose

- To highlight the use of scleral lenses for ptosis management in patients with concurrent ocular surface disease. It suggests a non-surgical or non-pharmacological alternative for ptosis improvement leading to improved cosmesis and, in some cases, vision.

Case descriptions

Case 1: A 65-year-old white female with ptosis OD following radiation therapy for basal cell carcinoma

Case 1: Ptosis OD | **Case 1: Improvement in Ptosis with scleral lens OD**



Final Lens:

18.5 mm diameter
Toric Back surface
500 µm of central clearance, after settling
Opifrocon A (Boston Equalens II)
MRD1 improvement: 5.0 mm

Case 2: A 43-year-old white male with ptosis OU secondary to amotrophic lateral sclerosis

Case 2: Bilateral Ptosis | **Case 2: Improvement in Ptosis with scleral lenses OD & OS**

Final Lens:

19.0 mm diameter
Toric Back surface
500 & 400 µm of central clearance,
OD & OS, respectively after settling
Hexafocon B (Boston XO2)
MRD1 improvement, OD & OS: 7.0 mm & 6.0 mm

Case 3: A 57-year-old white female with ptosis and recurrent epithelial erosions OS

Case 3: Ptosis OS | **Case 3: Improvement in Ptosis with scleral lens OS**

Final Lens:

18.0 mm diameter
Toric Back surface
400 µm of central clearance, after settling
Opifrocon A (Boston Equalens II)
MRD1 improvement: 2.0 mm

MRD1: Marginal Reflex Distance

Discussion

- It is theorized that the main contributing factor to ptosis improvement is increased bulk of the scleral lens, resulting in a shelf for the upper eyelid to sit
- Adjusting several parameters to increase the sagittal height of the lens has been shown to be helpful

- Parameters to increase sagittal height include increasing lens diameter, steepening BC and adjusting secondary curves
- It is important to highlight the possible complications of fitting scleral lenses with excessive fluid reservoir thickness including hypoxia, reservoir debris, blurry vision, lens decentration and lens discomfort.
- It is prudent to fit these patients in hyper or ultra-Dk material and closely monitor for any signs of corneal hypoxia

- The use of scleral lenses offers an alternative method for improving ptosis but does not go without potential complications. Ultimately, a risk vs. benefit analysis must be discussed with the patient and other members of the co-management team.

References