From The Trenches: Advanced Scleral Lens Fitting Techniques from 4 Specialty Contact Lens Practice Owners

Breakout CE: One Hour (Part 1)

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Speakers:
Caitlin Morrison, OD, FAAO, FSLS: (Part 1)
Owner: In Focus Specialty Contact Lens & Vision Solutions (Scottsdale, AZ)
Roxana Hemmati, OD, FAAO, FSLS (Part 1)
Owner: Austin Contact Lens Institute (Austin, TX)

Course Description: Skilled practitioners have mastered how to assess the fit of a scleral lens. But what about when a fit goes south? Join four residency-trained cornea and contact lens specialists, all who own their own specialty contact lens practice, for a two-part panel discussion on interesting and novel “in the trenches” techniques that have led to patient success.

Course Outline

Course Learning Objectives:

1. Start thinking beyond the “traditional” fit
2. Learn about the similarities of each subgroup of patients and the complications that arise from their fits.
3. Anticipate and fix complications before they arise
4. Have confidence in providing care to difficult patients
5. Take home specific techniques

Outline (Part 1 - One Hour)

1.0 Introduction
- 1.1 Drs Morrison & Hemmati
  - 1.1.1 Sharing what made us start our own specialty practices
  - 1.1.2 What made us want to take on the extremely complicated patients?

2.0 Complications of fitting scleral lenses on patients with:
- 2.1 Radial keratotomy
  - 2.1.1 Suction
  - 2.1.2 Spectacle blur
- 2.2 Penetrating keratoplasties (PKs)
  - 2.2.1 Graft rejection
- 2.3 Advanced keratoconus
  - 2.3.1 Conjunctival hyperemia
  - 2.3.2 Suction
  - 2.3.3 "Sagging Lenses"
- 2.4 Peripheral elevations
  - 2.4.1 Conjunctival compression/hypertrophy
  - 2.4.2 Importance of not interacting with/damaging tube-shunts/blebs
  - 2.4.3 Options to manage them

3.0 Review Cases in a Panel from Each Doctor:
- 3.1 Dr. Morrison:
  - 3.1.1 The Problem? Lens Suction with Conjunctival Hyperemia
  - 3.1.2 Case Report: Radial keratotomy patient has unresolved conjunctival hyperemia with many lens changes
  - 3.1.3 The Solution:
    - 3.1.3.1 Add landing zone fenestrations to lens
    - 3.1.3.2 Increase the diameter of the lens
    - 3.1.3.3 Decrease limbal clearance
- 3.2 Dr. Morrison:
  - 3.2.1 The Problem: edge irritation
    - 3.2.1.1 To make things more complicated: this cannot be resolved with just loosening and tightening edges
  - 3.2.2 The Case: 2 patients with lens irritation and what we did:
    - 3.2.2.1 1: Patient with inferior temporal conjunctival irritation resolves with landing lens closer to the limbus, beefing up edges, and decreasing limbal clearance
    - 3.2.2.2 Patient with temporal redness resolves with changing the thickness of the edge of the lens
  - 3.2.3 The Solution:
    - 3.2.3.1 Pull in limbus (land earlier)
    - 3.2.3.2 Decrease limbal clearance
    - 3.2.3.3 Thicken lens edge
    - 3.2.3.4 Smooth lens edges in manufacturing
- 3.3 Dr. Hemmati:
  - 3.3.1 The problem: large pterygia
    - 3.3.1.1 Patient with dry eye OU and large pterygia OD leading to irregular astigmatism and poor vision
    - 3.3.1.2 What lens options did we have?
      - 3.3.1.2.1 Pros/cons of different lens options

- 3.3.1.3 Options on how to fit scleral lens over large pterygia
  - 3.3.1.3.1 Notch
  - 3.3.1.3.2 Microvault
  - 3.3.1.3.3 Scan designed lens
  - 3.3.1.3.4 Mold design lens
- 3.3.1.4 Solution: Scan designed lens
  - 3.3.1.4.1 Images of final results

3.4 Hemmati: large 3-9 corneal scar from penetrating eye injury

- 3.4.1 Challenges with case:
  - 3.4.1.1 Dense scar from nasal conjunctiva to temporal conjunctiva
  - 3.4.1.2 Sutures still in place
    - 3.4.1.2.1 Recent injury; cannot disrupt sutures
  - 3.4.1.3 Aphakic due to injursy
- 3.4.2 Lens options:
  - 3.4.2.1 Pros/cons with each
- 3.4.3 Solution: mold designed lens
- 3.4.4 Secondary challenge: epithelial bullae
  - 3.4.4.1 Solution: change in power/lens thickness
- 3.4.5 Images of final results

3.5 Conclusion

3.6 Questions