THERAPEUTIC INDICATIONS FOR CUSTOM SOFT CONTACT LENSES

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LEARNING OBJECTIVES

- Identify patients in your practice who can benefit from custom soft lenses
- Learn to become comfortable collecting information needed to order initial lens
- Understand how to troubleshoot custom soft lenses

INDICATIONS

Non-Therapeutic:
- Large/Small Corneal Diameter
- Non-Standard Lens Power/Customized MFs
- Sports Performance
- Heterochromia/Cosmetic

Therapeutic:
- Corneal Ectasia/ Irregular Astigmatism
- Iris Trauma/ Pupil Abnormalities
- Photophobia/ TBI/ Migraines

TYPES OF CUSTOM SOFT LENSES

- Clear Lenses with Customizable Parameters
- Prosthetic/ Cosmetic/ Theatrical Lenses
- Tinted Lenses
- Pupil Blocking Lenses

CUSTOMIZABLE PARAMETERS

- Base Curve
- Power Profile
- Overall Diameter
- Optic Zone Diameter
- Center Thickness
- Decentered Optics
- Material
- Color

DISCLOSURES

I have no disclosures... yet 😊
SOFT LENS FIT

Centration
Coverage
Movement

SAGITTAL DEPTH

Rule of Thumb:
- HVID + 2mm = Minimum Lens Diameter

Daily Disposable Lenses: Spherical

Empirical Fitting
Diagnosti c Fitting

EMPIRICAL FITTING

Keratometry Values + Manifest Refraction + HVID

HOW TO ORDER INITIAL LENS

https://commons.pacificu.edu/work/ns/380b99ad-5f0b-4e77-a286-a8d1f74bdfe9

https://specialeyesqc.com/how-to-measure-hvid


http://blog.specialeyesqc.com/introducing-the-new-specialeyes-arc-length-calculator
CASE 1: PELLUCID MARGINAL DEGENERATION

53-year-old Female
- Pellucid Marginal Degeneration OS > OD
- History of Scleral Lens Intolerance OD

Habitual Lenses:
OD: Custom Soft Keratoconic Lens/ Base Curve: 7.90 mm SAG: 4550/ Power: -0.75-3.25x 119/ Diameter: 14.8 mm/ Material: Contamac Definitive
OS: Scleral Lens/ SAG: / Base Curve: 9.12 mm/ Power: +3.75/ Diameter 18.0mm/ Material: Hexa 100/ HydraPeg Coating

GOAL: Improve comfort of lenses with acceptable vision

Troubleshooting OD:
- Happy with comfort compared to scleral
- Reports vision is clearer when she slides lens up
- Infero-temporal decentration

Re-Order:
- Right eye: Custom Soft Keratoconic Lens/ Base Curve: 7.90 mm SAG: 4550/ Lens Power: -0.75-3.25x 119/ Diameter: 14.8 mm/ Material: Contamac Definitive

Final Lens:
OD: Custom Soft Keratoconic Lens/ Base Curve: 7.90 mm SAG: 4550/ Lens Power: -0.75-3.25x 119/ Diameter: 14.8 mm/ Material: Contamac Definitive
BCVA: 20/20
**CASE 1: PELLUCID MARGINAL DEGENERATION**

**OD Axial Topography Display**
- Ks: 42.66@065/ 48.99@155
- Corneal astigmatism: 6.33 D

**OS Axial Topography Display**
- Ks: 44.54@112/ 56.70@022
- Corneal astigmatism: 12.16 D

OD OS

**Diagnostic Fitting OS:**
- Over-refraction:
  - OS: -3.50 -1.75x115

**Topographical Corneal Mires (OS)**

**Topographical Mires Over Custom SCL (OS)**

ΔK = 12.16

ΔK = 5.20

**Left eye:** Custom Soft Keratoconic Semi-Scleral Lens/ Base Curve: 6.70 mm/ Lens Power:-8.00 -1.25 x115/ Diameter: 17.0 mm/ Center Thickness: 0.50 mm/ Material: Contamac Definitive; BCVA: 20/20

**CASE 2: IRIS TRAUMA**

47-year-old Male
- History of Ocular Trauma OS
- Significant Macular Scarring OS
- Photophobia

Uncorrected Acuity:
- OD: 20/20
- OS: 20/400 PH 20/100
- No previous history of CL wear

**GOAL:** Decrease glare and light sensitivity OS
**CASE 2: IRIS TRAUMA**

Empirically Ordering Lens:
- Ks: 42.97 @178/ 45.66 @088
- HVID: 11.65 mm
- Manifest Refraction: +1.25 -1.75 x 178

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**CASE 2: IRIS TRAUMA**

**Lens Parameters:**
- Custom Soft Prosthetic Toric
- Base Curve: 8.20
- Power: +1.25 -1.75 x 178
- Diameter: 14.5 mm
- Iris Diameter: 11.25 mm
- CLEAR Pupil Diameter: 5.0 mm
- Material: methafilcon A 55%
- Color: U2 (Pecan)-54 (Chestnut) Starburst
- BCVA: 20/80-1

1 Month Follow-Up:
- Happy with lens, less glare complaints
- Interested in a lens with an opaque pupil

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**CASE 2: IRIS TRAUMA**

**Lens Parameters:**
- Custom Soft Prosthetic Toric
- Base Curve: 8.20
- Power: +1.25 -1.75 x 178
- Diameter: 14.5 mm
- Iris Diameter: 11.25 mm
- OPAQUE Pupil Diameter: 5.0 mm
- Material: methafilcon A 55%
- Color: U2 (Pecan)-54 (Chestnut) Starburst
- BCVA: 20/80-1

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**CASE 2: IRIS TRAUMA**

Dim Lighting Conditions
CASE 2: IRIS TRAUMA

Bright Lighting Conditions

CASE 3: ACHROMATOPSIA

18-year-old Male
- Achromatopsia - photophobia, nystagmus, color blind
- Ripped last pair of tinted contact lenses 8 months ago
- Complaining that latest set of lenses were not as dark as previous lenses

Habitual Lenses:
- Amber tinted lenses x 4 years

Uncorrected BCVA: 20/200 OD, OS

GOAL: Reduce light sensitivity for more comfortable vision

CASE 3: ACHROMATOPSIA

Manifest Refraction:
- OD: +0.50 -2.00 x 010
- OS: +2.50 -2.00 x 170

Troubleshooting:
- OD: Custom Soft Tinted Lens/ Base Curve: 8.9 mm/ Power: +0.50 -2.00 x 010/ Diameter: 14.5 mm / Tint Diameter: 12 mm/ Darkest Amber Tint/ Material: hioxifilcon B 49%
- OS: Custom Soft Tinted Lens/ Base Curve: 8.9 mm/ Power: +2.50 -2.00 x 170 / Diameter: 14.5 mm / Tint Diameter: 12 mm/ Darkest Amber Tint/ Material: hioxifilcon B 49%

CASE 3: ACHROMATOPSIA

Lens Parameters:
- Custom Soft Tinted Lens
  - Base Curve: 8.90 mm
  - Power: +0.50 -2.00 x010
  - Diameter: 14.5 mm
  - Iris Diameter: 12.00 mm
  - Color: Darkest Amber
  - Material: hioxifilcon B 49%

BCVA: 20/150

1 Month Follow-Up:
- Happy with lens, less photophobic

CASE 4: MIGRAINES

60-year-old Male
- Migraines occurring 22-29 times a month
- Already managed with medication and avoiding known triggers
- Referred for tinted contact lens for migraines

New contact lens wearer

GOAL: Lessen frequency and relieve symptoms while having migraines

CASE 4: MIGRAINES

Empirically Ordered:
- Manifest Refraction:
  - OD: plano - 0.50 X 090
  - OS: -0.25 DS
  - HVID: 12 mm OD, OS

https://orionvisiongroup.com/therapeutic/
CASE 4: MIGRAINES

Final Lens:
OD: Custom Soft Therapeutic Lens/ Power: Plano/ Base Curve: 8.4 mm/ Diameter: 14.0 mm/ Tint Diameter: 12.0 mm/ Color: Migraine 55 / Material: methafilcon A 55%
OS: Custom Soft Therapeutic Lens/ Power: Plano/ Base Curve: 8.4 mm/ Diameter: 14.0 mm/ Tint Diameter: 12.0 mm/ Color: Migraine 55 / Material: methafilcon A 55%

Outcome: Reduced frequency and symptoms of migraines

CLINICAL PEARLS

- There are patients in your chair that could benefit from custom soft lenses
- Goal isn’t always about improving visual acuity
- When in doubt, call your lab consultants!

REFERENCES

- Worp, Eef van der. “Pacific University SCL Sagittal Depth Story.” CommonKnowledge, Contact Lens and Anterior Eye, 1 Jan. 2021. commons.pacificu.edu/work/m/3666/385-4677-d2a1b01b/b7d04d8d9e.

QUESTIONS?