Contact Lens Update
2016

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OBJECTIVES:
Familiarize with the Latest Trends in Contact Lens Practice
Identify Newest Lens Designs
Demonstrate Fitting Techniques
Examine Pros and Cons of each modality
Case Examples
Global CL Trends
Survey 2002-2014

- Soft lenses increasing in use—Rigid lenses now less than 10%
- Silicon hydrogels predominate—nearly ¾ of all CLs prescribed worldwide
- Scleral RGP fastest growing rigid lens
- Steep increase in the use of Daily Disposable CLs—now nearly 30% of all CLs prescribed worldwide
- High use of Multipurpose Solns—now used by 90% of all CL wearers
Contact Lens Update 2016

• Scleral RGP Lenses
• Hybrid Lenses
• Daily Disposable Lenses
Scleral RGP Lenses
Why all the excitement about Scleral CLs?
Scleral RGP Lenses: Advantages

- Fastest growing specialty lens
- Provides best visual acuity for irregular corneas
- Comfort similar or better to Soft CLs
- Treats severe dry eye and cornea issues
- Unlimited parameters/Shape and Rx
- Best/Only treatment for some conditions
- Low rate of complications
Scleral RGP Lenses: Disadvantages

- Cost!
- Fitting time consuming/more difficult
- Insertion and removal challenges
Scleral RGP Design

- Large Diameter: 14mm to 20+mm
- Much Larger than corneal RGP
Scleral RGP Design

- Designed to completely vault cornea and limbal area
- Central Vault limited to 200-300 microns is ideal
- Optic section with NaF is used to evaluate vault
MCO Fit Scales

SCLERAL LENS FIT SCALES

[Image of lens scales]
Scleral RGP Design

- Vault is increased to eliminate any lens-cornea touch

- Must wait 30 min with lens on eye for evaluation—lenses will “sink” into conj around 100 microns
Scleral RGP Design

- Ideal design has PC parallel to conj/scleral contour
Parallel peripheral curve

Ideal fit

Sclera
Scleral RGP Design

• Small vessels should not be “pinched” by landing zone-peripheral curves

• Try to avoid “impingement”
Scleral RGP Complications
Scleral Insertion/Removal
Scleral insertion and removal

- Must use preservative free .9% sodium chloride
- Must have face parallel to floor to maintain bowl volume
- Must insert without bubbles
- Insert with plunger, fingers, or another method
- Removal with small plunger
Must fill the lens with non-preserved saline (AKA Inhalation saline) -- Using anything else irritates the cornea and conj
Insertion with either large plunger or fingers
Removal is performed with small plunger or finger-lid pressure
Scleral Lenses are cleaned and disinfected with standard RGP solns
Hybrid Contact Lenses
Who should use Hybrid Lenses?
Hybrid Contact Lenses

- Pts with astigmatism
- Pts with unstable vision with soft toric CLs
- Pts wearing RGPs with comfort issues
- Presbyopic pts with astigmatism
- Soft Multifocal wearers looking for better VA
- Irregular cornea pts looking for new options
Hybrid Contact Lenses

- Synergeyes Duette
- Synergeyes Ultra Health
- Synergeyes KC, A, B—older, lower O2 permeability
Why should we use Hybrid Lenses?
Hybrid Contact Lenses: Advantages

- Improved comfort over RGP with same acuity
- Much lower cost than scleral CLs for irregular corneas
- Easier to remove than scleral and less chairtime to evaluate
- Visually more stable than soft torics
- Available for presbyopic correction
Hybrid Contact Lenses: Disadvantages

- Cost is more than soft toric or RGP
- Requires more chairtime to fit
- Requires 6 month replacement
- Insertion similar to scleral
Hybrid Lens Design

- RGP center and silicon hydrogel skirt
- Older designs (SoftPerm) caused many complications due to lack of oxygen permeability and tight fit
- RGP 8.5mm diam and OAD 14.5 mm
Hybrid Lens Insertion/Removal

- Insertion similar to scleral with fingers or large plunger
- Must fill bowl with preservative free saline with Ultrahealth
- Removal is pinch method with dry fingers similar to soft lenses
Hybrid Lens Insertion/Removal

- Insertion similar to scleral with fingers or large plunger
- Removal with pinch method
- Clearcare preferred care system
Insertion video
Removal video
Daily Disposable Lenses

- Fastest growing lens modality in the world
- Accounts for almost 30% of all CL prescriptions written worldwide
- Now available in high Rx, toric powers, and multifocal powers
- Accounts for 24% of all CLs in USA
Daily Disposable Lenses: Advantages

- Great for occasional use
- Minimal lens care
- Reduced non-compliance
- Decreased depositing
- Decreased Allergy symptoms
- Eradicates GPC
- Virtually every Rx now available
Daily Disposable Lenses: Advantages

- Reduces severity but not frequency of complications
- Great for travel/sports
- Excellent for use in environments with high risk of infection, such as hospital
Daily Disposable Lenses: Disadvantages

- Higher expense if used 365/year
- Not for use with irregular corneas
- Limited size parameters
Daily Disposable CLs

- 2 categories:
  - Silicon based vs non-silicon based
  - Cost—high, medium, and low cost
Silicon Based Daily Disposables
Daily Disposables by Cost: High

- Alcon Dailies Total 1
- Coopervision MyDay
- Acuvue Oasys 1 day
Daily Disposables by Cost: Med

- B&L Biotrue
- Acuvue Trueye
- Clariti 1 Day
Daily Disposables by Cost: Low

- Dailies ACP
- Proclear 1 Day
- Acuvue 1 day Moist
- Miru
Thank you!