Dry Eyes and Contact Lenses

Outline

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Introduction

- Patient History – Relative to dry eye
- Anatomy of the tear layer, and their function
- Causes of dry eye
  - Environmental factors
  - Contributing factors – patient non-compliance
- Ocular signs and symptoms
- Contact lens options for patients with dry eye
- Other management considerations

Patient History – Relative to dry eye

- How important is this to identifying dry eye concerns?
- Getting a complete history
  - Asking the right questions
  - Solutions
  - Wearing schedule
  - Replacement schedule
  - Medications
  - Allergies

Anatomy of the tear layer, and their function

- Precorneal tear layer – three layers
  - Lipid layer
    - Meibomian gland
    - Purpose
    - What can affect lipid layer
  - Aqueous layer
    - Lacrimal gland
    - Glands of Wolfring and Krause
    - Purpose
    - What can affect aqueous layer
  - Mucin layer
    - Goblet Cells located in conjunctiva
    - Purpose
    - What can affect mucin layer
- Interruption of tear film layers
Causes of dry eye

- Systemic
- Medications
- Chemical causes
- Environmental
  - Allergies
  - Exposures
- Contact lens solutions
- Contributing factors
  - Patient non-compliance
  - Others
- Other causes of dry eye

Ocular signs and symptoms

- Diagnostic tests
  - Slit lamp findings
  - Tear meniscus/prism
  - TBUT
  - Staining
    - Fluorescein staining
    - Rose Bengal, Lissamine Green
  - Schirmer test
  - Others
- Signs
  - Results of diagnostic tests
  - Injection
  - Evaluation of tight lenses
- Symptoms
  - Red eyes
  - Discomfort
  - Reduced wearing time
  - Fluctuating vision
  - Use of OTC lubricating drops

Contact lens options for patients with dry eye

- How water content affects the dry eye patient
  - Low water vs. high water
- Silicone hydrogel contact lenses
- Evaluation of solutions

Other management considerations

- Lens lubricants
• Use of non-preserved solutions
• Change of materials/parameters
• Environmental changes
• Use of Meds
• Dietary supplements

Conclusion/Questions/Answers