

Dry Eyes and Contact Lenses

Outline

By Diane F. Drake, LDO, ABOM, FCLSA

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