

Not A Dry Eye In The House (2 hours)

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Summary

Our knowledge of ocular surface disease has increased tremendously over the last several years. This course will highlight contemporary findings emphasizing new diagnostic and treatment protocols to help optimize outcomes.

Learning Objectives

- 1) Understand the prevalence and the reasons for discrepancy when discussing dry eye diagnosis
- 2) Understand the pathophysiology of the disease state
- 3) Discussion of the diagnostic tests available to help in diagnosing and monitoring treatment success
- 4) Understand current treatment options including new thoughts on therapeutically managing the disease
- 5) Understand the meibomian glands and their critical function for the ocular surface and strategies to rehabilitate the gland
- 6) Understand how to confidently translate services performed to CPT codes

Course Outline

- 1) Epidemiology
 - a. Prevalence – importance with an aging population
- 2) Understanding the Pathophysiology
 - a. Understanding the causes:
 - i. Poor aqueous production
 - ii. Deficient mucin layer
 - iii. Deficient lipid layer
 - iv. Understand the combined effects of the issues described above
 - b. Understanding the creation of a hyperosmotic tear film
 - i. The creation of a pro-inflammatory environment
 - c. Understand the inflammatory consequences
 - d. Discuss potential effects on the conjunctiva and cornea
- 3) Diagnosis
 - a. Case History
 - i. Current medications
 1. Discussion of those that medications that can cause ocular surface symptoms
 - ii. Concurrent medical conditions
 1. Autoimmunity

2. Diffuse joint pain
- b. Diagnostic work up
 - i. Anterior segment examination
 1. Eyelashes – observe for debris and / or collarettes
 - a. Differentiate demodex blepharitis
 2. Eyelid Margins
 - a. Differentiate normal from abnormal (tylosis)
 3. Meibomian glands
 - a. Assess the surface of the glands – assess presence or absence of capping
 - b. Assess the oils produced by the glands through expression – assess meibomian gland stasis
 - c. Understand obvious and non-obvious meibomian gland dysfunction
 - d. Assessing the structure of the meibomian glands
 - i. Eyelid transillumination
 - ii. Infrared imaging of the
 4. Tear meniscus
 5. Conjunctival hyperemia
 - a. Grading scales
 - ii. Fluorescein assessment
 1. Fluorescein stain applied to eye
 - a. Understand hydrophilic properties of fluorescein
 - b. Understand it's interaction with the anterior segment
 - c. Discuss importance of viewing with a cobalt blue light and wratten filter
 2. Assess the anterior segment
 - a. Tear film break up time (TBUT)
 - i. Understand methodology and importance of assessing the dynamic nature of the tear film
 - ii. Describe and understand what a decreased TBUT represents
 - iii. Discuss clinical consequences of decreased TBUT
 1. Visual fluctuation / instability
 2. Corneal staining
 - b. Symptomatic Non-Invasive TBUT (SNIBUT)
 - i. Patients symptoms determine measurement
 - c. Corneal staining
 - i. Describe what flourescein staining means to the cornea
 - d. Lid wiper epitheliopathy / Upper lid margin staining
 - i. Understand interaction between margin and cornea / conjunctiva
 - ii. Important diagnostic marker

- iii. Understand how to grade this clinical finding
 - e. Tear meniscus
 - i. Easily visible with fluorescein
 - iii. Rose Bengal / Lissamine Green assessment
 - 1. Understand similarities and differences between these two stains
 - 2. Describe the cells that stain
 - 3. Understand the importance of conjunctival staining
 - iv. Schirmer testing
 - 1. Schirmer #1 test
 - 2. Basic Lacrimation Test
 - 3. Understand normal values
 - a. Discuss variability interpreting the results
 - v. Phenol Red Thread Test
 - vi. Point of Care tests
 - 1. Tear Osmolarity
 - a. Measures osmolarity of the tearfilm
 - 2. Inflammadry
 - a. Measure's MMP-9
 - b. Is positive if MMP-9 is greater than 40 ng/mL
- 4) Treatment
 - a. Enviornmental modifications
 - i. Understand work environments
 - 1. Computer work
 - 2. Fans, air conditioners, etc
 - b. Artificial Tears
 - i. Considering the modifying factors
 - ii. Understand lubricity – review tissue / tissue studies
 - iii. Understand the effects on TBUT
 - iv. Differentiating between over the counter products
 - 1. Artificial tears vs. “gets the red out” products
 - 2. Multi-dose vs. single dose
 - c. Supplements
 - i. Importance of essential fatty acids
 - ii. Omega 3's
 - 1. Discussion of mechanism of action to help control inflammation
 - 2. Discuss proposed mechanism of action on the ocular surface and meibomian glands
 - 3. Understand how to identify quality formula
 - 4. Understand the best time to take essential fatty acids
 - d. Prescription Treatment
 - i. Oral antibiotics
 - 1. Tetracyclines
 - a. Understand mechanism of action

- b. Understand appropriate dosages
 - ii. Lifitegrast 5%
 - 1. LFA-1 antagonist
 - iii. Cyclosporine 0.05%
 - 1. Immunomodulator
 - 2. Discuss appropriate expectations with patients and clinically
 - e. Meibomian gland function
 - i. Heat and lid massage
 - 1. Thermal packs
 - 2. lipiflow
 - ii. Topical therapy
 - 1. Anti-inflammatory agents, antibiotics
 - iii. Essential fatty acids
 - iv. Role of cyclosporine
 - f. Autologous serum
 - i. Understand it's importance in dry eye management
 - ii. Discussion of accessing autologous serum
 - g. Punctal plugs
 - i. Discuss importance in management of dry eye
 - ii. Review of the current literature – understanding when to perform punctal occlusion
 - iii. Understand intracanalicular versus silicone plug
- 5) Follow-up visits
 - a. Monitor therapy
 - b. Identify those measurable markers including: case history, physical exam and monitoring compliance with therapy
 - c. Keys to succeeding with therapy regimens
- 6) Importance of managing condition
 - a. Discuss the disconnect that is sometimes noticed between the signs and symptoms of dry eyes
 - i. Review current literature to describe this further
 - b. Develop a standard protocol
 - c. Understanding the logic behind actively managing dry eyes
- 7) Case Presentations Illustrating concepts discussed to guide the attendee through the whole process and implement confidently into their practices