Maximizing Comfort & Clarity: Managing Ocular Surface Disease for Optimal Contact Lens Wear (1 hour)

Mile Brujic, OD, FAAO
1409 Kensington Blvd.
Bowling Green, OH
43402
mile.brujic75@gmail.com

Summary

Ocular surface disease is becoming an increasingly important part of our practices. It is critically important to understand the influence of the ocular surface on contact lens wearers. This course will review strategies to optimize contact lens wear through appropriately managing ocular surface disease.

Learning Objectives

1) Discuss advances in contact lenses
2) Understand the importance of identifying conditions that can compromise comfortable lens wear
3) Discuss strategies for optimizing the contact lens wearing experience

Course Outline

1) Contact lens advancements
    a. Contact lens dropout
        i. Contact lens discomfort is the number one reason that a patient will discontinue lens wear
            1. 50% of contact lens wearers will discontinue wearing contact lenses because of comfort issues
        ii. It is critical to understand the ocular surface and it's influence on lens wear
    b. Advances in contact lens materials
        i. Daily disposable lenses
        ii. Silicone hydrogel lenses
        iii. New surface treatments
        iv. New material dynamics
    c. Advance in contact lens solutions
        i. New surfactants
        ii. New wetting agents
    d. Advances in specialty lenses
        i. Surface treatments
            1. Tangible HydraPEG
            2. Hydrophilic surface
                a. Promotes moisture retention

b. Reduces lipid deposition

2) Ocular surface disease diagnosis
    a. Case History
    b. Diagnostic work up
        i. Anterior segment examination
            1. Eyelashes – observe for debris and / or collarettes
                a. Volcano sign – earliest sign of inflammation at base of cilia
            2. Meibomian glands
                a. Assess the function of the glands
                    i. Meibomian gland dysfunction (MGD)
                b. Assessing the structure of the meibomian glands
                    i. View at the slit lamp
                    ii. Eyelid transillumination
                        1. Performed at slit lamp
                    iii. Infrared (IR) imaging of the glands
        ii. Fluorescein assessment/Lissamine green
            1. Assess the anterior segment
                a. Tear film break up time (TBUT)
                    1. Visual fluctuation / instability
                    2. Relationship with corneal staining
                b. Symptomatic Non-Invasive TBUT (SNIBUT)
                c. Corneal staining
                d. Conjunctival staining
                e. Lid wiper epitheliopathy / Upper lid margin staining
                f. Tear meniscus
        iii. Point of Care tests
            1. Tear Osmolarity
                a. Measures osmolarity of the tearfilm
            2. Inflammadry
                a. Is positive and above normal range if MMP-9 is greater than 40 ng/mL

3) Treatment
    a. Identify the reason for the ocular surface disease
    b. Blepharitis
        i. Lotilaner 0.25% 1 gtt bid OU for 6 weeks
        ii. Microblepharoexfoliation
    c. Rinsada
        i. Device that provides thorough rinse of the ocular surface
        ii. Studies demonstrate reduction in inflammation levels on the ocular surface
        iii. Reduced inflammation levels show to be reduced 1 month after treatment
    d. Intense Pulse Light Therapy
    e. Low level light therapy
    f. Meibomian gland function

i. Lipiflow
    1. Thermal pulsation
    2. Simultaneous heat on the posterior lid margin with pressure along the anterior lid
    3. TearCare
        a. Warmth along the outer portions of the lid
        b. Sequential expression of the glands after applied heat
    4. iLux
        a. Heat along anterior lid margin with simultaneous pressure along the lid
        b. Can visualize meibum as being expressed

g. Scleral lenses
    i. Provides moisture chamber behind the lens
    ii. Understand basic principles
        1. Central corneal clearance
        2. Limbal clearance
        3. Landing zone

h. Options for patients in demanding environments
    i. Punctal plugs
        1. Discuss importance in management of dry eye
        2. Silicone
            a. Permanent
            b. Visible at slit lamp
        3. Intracanalicular
            a. Dissolvable
            b. Short term
                i. 7 to 14 days
            c. Long term
                i. 3 to 6 months
    ii. Discuss importance of monitoring inflammation levels
        1. Importance of inflammadry results
        2. Grading level of inflammation to guide when plugs are appropriate