A MESSAGE FROM THE CHAIR

It seems hard to believe that Academy 2018 San Antonio is six short months away. Thousands of doctors, students, researchers, and industry leaders will descend upon San Antonio for our annual meeting. As our section continues to evolve, there is much excitement with the direction we are heading. The number of members is growing, more Fellows are reaching out to become involved, and the number of candidates in our Diplomate program is increasing.

Please reach out to the section leadership if you want to become more involved. One of the strengths of our section is the diversity of the members. We are always looking for more volunteers and interaction.

I look forward to seeing you all in San Antonio. Best wishes for a safe and enjoyable summer.

Jeff
ACADEMY 2017 CHICAGO RECAP

The Academy’s annual meeting in Chicago had 4,799 optometrists attend making it the largest meeting in Academy history. The Anterior Segment Section appreciated everyone who stopped by the booth in the exhibit hall. We held our business meeting which allowed for the discussion of new ideas to continue strengthening the section. We also offered a Diplomate Preparatory Course which gave an overview of the diplomate process as well as lectures on Corneal Infection by Dr. Aaron Bronner, Grand Rounds Slide Review by Drs. Aaron Bronner and Harry Green and, lastly, Uveitis by Drs. Jeffrey Varanelli and Nicholas Colatrella. The Anterior Segment Section presented a symposium on New Perspectives in Dry Eye: Neuropathic Corneal Pain. Drs. Anat Galor, Scott Hauswirth and Leslie Small reviewed the anatomy and pathological alterations to nerve morphology as well as case studies and management strategies for neuropathic corneal pain. There were over 145 Anterior Segment Section members in attendance.

LOOKING FORWARD TO 2018 ACADEMY SAN ANTONIO

The Anterior Segment Section will be conducting its 3rd annual Diplomate Preparatory Seminar in San Antonio. This session is designed to help Diplomate candidates, and prospective candidates, navigate through the Diplomate process and prepare. Three hours of continuing education credit will be awarded for attending the planned lectures. We are also excited to announce that the topic for the 2018 Anterior Segment Section Symposium will be Biologic Therapy: Applications in Anterior Segment Disease. We look forward to bringing you the most knowledgeable lecturers and interesting topics at Academy 2018 San Antonio.
A new 56-year-old white male presents with a chief complaint of gradually increasing visual haze over the past 10 years in both eyes. The patient reported being diagnosed with an unknown corneal dystrophy for which he has undergone two previous Phototherapeutic Keratectomy (PTK) procedures in his left eye. He also reported that his mother, brother, and possibly his maternal grandfather also have bilateral corneal abnormalities. The patient’s medical history was significant for hyperlipidemia which was well controlled with simvastatin.

Clinical findings included best corrected visual acuities of 20/25 OD and 20/50 OS with entrance testing results within normal limits. Upon biomicroscopic evaluation, corneal findings were significant for dense arcus 360 degrees, central stromal haze, and crystallization at the level of the epithelium/anterior stroma (Figure 1). Dilated fundus exam yielded unremarkable posterior segment findings.

Figure 1:

Anterior segment OCT revealed subepithelial hyper-reflectivity which correlates to areas of corneal crystallization (Figure 2). Corneal topography indicated corneal irregularity in both eyes (Figure 3). Pachymetry measured 589 and 346 micrometers OD and OS, respectively. Thin pachymetry reading OS likely due to two previous PTK procedures. Corneal sensitivity with cotton wisp revealed no intact sensitivity in the right eye and intact but low sensitivity in the left eye.

Figure 2:

Figure 3:
Differentials with similar crystalline corneal findings that needed to be considered when diagnosing this patient included the following: Fluoroquinolone/Chlorpromazine use, Bietti Crystalline Dystrophy, Cystinosis, Infectious Crystalline Keratopathy, Lymphoproliferative disorders (monoclonal gammopathy + multiple myeloma and Schnyder Corneal Dystrophy.

The patient was diagnosed with Schnyder Corneal Dystrophy (SCD) based upon clinical presentation and family history with autosomal dominant inheritance pattern (Figure 4). Clinical presentation of SCD has been found to be predictable by patient age. It is important to note that at any point in SCD progression, corneal crystals may or may not be present, as only ~54% of SCD patients have been found to present with subepithelial crystals.

Figure 4:

Typical corneal findings of SCD based upon patient age:
- <23 years old: central stromal haze (with or without crystals)
- 23-39 years old: central stromal haze + arcus (with or without crystals)
- >39 years old: central stromal haze + arcus + midperipheral panstromal haze (with or without crystals)

Along with these hallmark corneal findings, visual acuity and corneal sensitivity tend to decrease with SCD progression.

There is no available treatment to stop the progression of SCD. Although penetrating keratoplasty (PKP) and deep anterior lamellar keratectomy (DALK) can be successfully performed in these patients, SCD can recur within the corneal graft. Patients should be referred for phototherapeutic keratectomy (PTK) as needed to remove subepithelial crystals which may be causing bothersome glare for patient. Due to the diffuse corneal irregularity often seen in SCD patients, scleral contact lenses often allow for best acuity. Lastly, genetic counseling is warranted due to SCD being an autosomal dominant condition which can easily be passed on to offspring.

Conclusion
Because Schnyder corneal dystrophy is very rare and may present in a variety of ways, it can be easily misdiagnosed or even overlooked in its early stages. While crystalline deposits are often thought to be one of the landmark clinical findings for patients with SCD, only about half of cases present with them. It is important to understand the various presentations to properly educate, manage, and appropriately refer SCD patients as the dystrophy progresses.
References

NEWSLETTER INFORMATION

We are looking for members to submit cases, as well as anterior segment photos and clinical pearls that can be included in our newsletter. Please forward them to Dr. Grace Brown (grace.a.brown.1@gmail.com) for inclusion in future newsletters.

We invite you to check out the Section and follow our page on www.LinkedIn.com by searching AAO Anterior Segment Section!
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Mission Statement

The mission of the Anterior Segment Section is to promote collaboration between researchers and clinicians with an interest in anterior segment disorders of the eye. Our role is to promote excellence in the care of patients with anterior segment conditions through professional education and by advancing clinical research. Our intent is to identify new questions for research as well as disseminate knowledge, not only to the fellows of the Section, but to the entire Academy and profession of optometry.

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