



Winter Symposium

January 18-20, 2020 • Canyons Grand Summit Hotel, Park City, Utah



PROGRAM CO-CHAIRS:

ALAN G. PALESTINE, MD and ALBERT T. VITALE, MD

AUS 24th Annual Winter Symposium

Guest Speakers



Douglas A. Jabs, MD, MBA Professor of Epidemiology and Director of the Center for Clinical Trials and Evidence Synthesis Professor of Ophthalmology Wilmer Eye Institute Baltimore, MD



Glenn J. Jaffe, MD Robert Machemer Professor of Ophthalmology Chief of the Vitreoretinal Division Duke Eye Center Durham, NC



Kathryn L. Pepple, MD, PhD Assistant Professor of Ophthalmology University of Washington Seattle, WA



James T. Rosenbaum, MD Chair of the Division of Arthritis and Rheumatic Diseases at the Oregon Health & Science University Emeritus Chair of Ophthalmology at Legacy Devers Eye Institute Portland, OR

Program Co-Chairs



Alan G. Palestine, MD Professor of Ophthalmology and Rheumatology University of Colorado Anschutz Medical Campus Aurora, CO



Albert T. Vitale, MD Professor, Ophthalmology and Visual Sciences John A. Moran Eye Center University of Utah Salt Lake City, UT

Saturday Morning, January 18

7:00 - 8:00 AM Registration/Breakfast

7:00 - 9:35 AM **Exhibits**

8:00 - 8:05 AM **Opening Remarks** ALBERT T. VITALE, MD

8:05 - 9:32 AM CASE PRESENTATIONS. FREE PAPERS AND DISCUSSIONS

8:05 - 8:14 AM

Prospective Evaluation of the Use of Imaging Quantification of Inflammation to Monitor Patients with Uveitis (IQI Study) **IORDAN D. DEANER, MD**

8:14 - 8:18 AM **Discussion**

8:18 - 8:27 AM

Long-term Cerebral and Retinal Outcomes of Immunosuppression in Active Susac Disease

SRUTHI AREPALLI, MD Travel Grant Awardee

Purpose: The rare nature of Susac syndrome, combined with its variable systemic manifestations creates a therapeutic challenge for clinicians. The report analyzes the outcomes of 18 patients with active disease, either with complete (cerebral, retina and cochlear involvement) or incomplete (cerebral and retinal involvement) and their response to therapy.

Methods: A retrospective chart review was performed of all Susac patients presenting to the Cleveland Clinic in Cleveland, Ohio, USA (June 1st, 2012 to October 17th, 2019). A rheumatologist, ophthalmologist and an audiologist determined the extent of disease burden in all patients. Patients were classified as active if cerebral and/ or retinal disease was present. Cerebral involvement was confirmed with MRI revealing corpus callosum lesions or T2 hyperintense lesions, or in cases of a normal MRI, symptoms consistent with typical Susac encephalopathy and cognitive dysfunction symptoms. Retinal disease was established

with a dilated fundus examination and fluorescein angiography (FA). Fundus evidence of active or past disease included branch retinal artery occlusion (BRAO), vascular sheathing, sclerosis, neovascularization or vitreous hemorrhage. FA also documented the presence of BRAO, as well as revealed segmental hyperflourescence, vascular leakage, non-perfusion, vascular remodeling and neovascularization. Relapse of disease during follow up was determined by new lesions on MRI, typical Susac encephalopathy, or new retinal or FA findings as described above.

Results: Of the 18 patients, 13 (72%) initially presented with complete and 5 (28%) presented with incomplete disease. The mean age of presentation was 37.3 years (range: 23 years to 45 years) and 14 (78%) were female. The average period of follow up was 27.4 months (range, 5 months to 65 months). A brain MRI was performed in every patient, revealing corpus callosum lesions in 12 (67%) and T2 weighted hyperintense lesions in 4 (22%). Four patients (22%) had a normal MRI at the time of presentation but had convincing evidence of cerebral involvement, including encephalopathy and cognitive dysfunction. On baseline ophthalmic examination, visual acuity ranged from 20/20 to 20/30. Fundus examination revealed a BRAO in 5 patients (28%), vascular sheathing in 3 (17%), sclerosis in 3 (17%), neovascularization in 2 (11%), and vitreous hemorrhage in 1 patient (6%). Fluorescein angiography confirmed the presence of BRAO in 5 patients (28%), segmental hyperflourescence in 4 (22%), leakage in 6 (33%), non-perfusion in 10 (56%), vascular remodeling in 2 (11%), and neovascularization in 2 (11%).

Every patient was started on some form of immunosuppression at presentation. Generally, patients with milder manifestations (n=9, 50%) were treated with a regimen of intravenous immunoglobulin (IVIG), an antimetabolite, and corticosteroids. More severe disease burden (n=9, 50%) warranted a combination of IVIG, an antimetabolite or cyclophosphamide, rituximab and corticosteroids. Overall, 17 patients (94%) were started on IVIG, 14 (78%) on mycophenolate, 1 (6%) on azathioprine, 2 (11%) on cyclophosphamide, 5 (28%) on rituximab and all 18 received corticosteroids.

Of the 9 patients with mild disease, 6 (67%) continued to flare with cerebral and/or retinal involvement requiring re-initiation of immunotherapy. The remaining 3 patients (33%) were successfully tapered off their regimen without reactivation. Similarly, of the 9 patients with more severe disease, 6 (67%) required continued treatment due to poorly controlled disease or recurrence with tapering of their medications. 3 patients (33%) were successfully monitored off treatment without evidence of relapse.

Conclusions: Susac disease can present a diagnostic and therapeutic dilemma requiring long-term immunosuppression. The paucity of literature surrounding initiation of treatment cessation further adds to the challenge of these patients. This large case series demonstrates that the majority of patients require sustained immunotherapy to prevent cerebral and retinal consequences of the disease.

8:27 - 8:31 AM Discussion

8:31 - 8:35 AM Susac or Not? HELEN K. LI, MD

8:35 - 8:38 AM Discussion

8:38 - 8:47 AM Choroidal Thickness as a Marker for Response to **Treatment in Panuveitis** CHRISTIAN A. MEHREGAN, MD

8:47 - 8:51 AM

Discussion

8:51 - 8:55 AM **Rapidly Progressive Bilateral Maculopathy** JEFFREY G. GROSS, MD

8:55 - 8:58 AM Discussion

8:58 - 9:02 AM **Clumps and Dumps** JANE M. WELLS, BMBS, BSc(Optom), FRANZCO

9:02 - 9:05 AM Discussion

9:05 - 9:14 AM

Ophthalmic Manifestations of Lyme Disease in Lymeendemic Connecticut

MAREZ MEGALLA, MD

9:14 - 9:18 AM **Discussion**

9:18 - 9:22 AM

An Unusual Case of Bilateral Retinal Detachments

KEVIN K. MA. MD

9:22 - 9:25 AM Discussion

9:25 - 9:29 AM

Unilateral Retinitis Pigmentosa JULIA SHULMAN, MD

9:29 - 9:32 AM Discussion

9:32 - 9:35 AM Wrap Up

ALBERT T. VITALE, MD

9:35 AM

End of Morning Session

Saturday Afternoon

January 18

3:30 - 4:00 PM **Break**

3:30 - 7:35 PM **Exhibits**

4:00 - 4:05 PM Introduction

ALAN G. PALESTINE, MD

4:05 - 6:05 PM

SCIENTIFIC SESSION 1 -OCULAR IMMUNOLOGY AND BIOLOGIC AGENTS: PAST, PRESENT AND FUTURE

4:05 - 4:50 PM

Ocular Immunology: Mechanisms of Homeostasis and Disease

KATHRYN L. PEPPLE, MD, PhD

The eye is a unique and complex organ that has multiple strategies in place to protect against unnecessary and damaging inflammation. This state of immune privilege was initially attributed to structural factors such

as the blood-ocular barrier and the absence of an ocular lymphatic system. We now know that establishing and maintaining ocular homeostasis is an active process requiring the integration of multiple cellular and soluble mediators. In the case that these homeostatic mechanisms fail, or are overwhelmed by infection, the resulting inflammation manifests clinically as uveitis. The goal of this lecture is to provide uveitis specialists with a review of ocular immunology as it applies to the pathogenic mechanisms of intraocular inflammation. Topics to be covered include an update on basic immunology, a summary of the mechanisms regulating ocular immune privilege, and an introduction to key inflammatory pathways that become dysregulated in disease.

4:50 - 5:05 PM Discussion

5:05 - 5:50 PM

Emerging Biologics in Rheumatology

JAMES T. ROSENBAUM, MD

Although the tumor necrosis factor inhibitor, adalimumab, is the only FDA or EMA-approved biologic to treat uveitis, several other biologics such as secukinumab (target interleukin (IL)-17A) or gevokizumab (target IL-1b) have been tested for uveitis in large randomized clinical trials, and additional biologics (e.g. other TNF inhibitors, anti-IL-6 receptor, type I interferons, B cell depletion, CTLA soluble receptor, and anti-IL-12/23) have been studied, usually without randomization or masking. Additional targets for biologics include type I interferon receptor, GM-CSF, IL-17 receptor, Complement factor 5, adhesion molecules, IL-23, CD3, insulinlike growth factor receptor-1, CD22, IL-5, and IL-17A and IL-17F (in the form of a single bispecific antibody). This list is not exhaustive and excludes biologics which have been principally marketed to oncologists. The lecture will primarily discuss those biologics which have been designed to treat immune or inflammatory diseases but not yet been tested for relevance to uveitis or scleritis.

5:50 - 6:05 PM **Discussion**

6:05 - 6:25 PM Break

6:25 - 7:18 PM

CASE PRESENTATIONS, FREE PAPERS AND DISCUSSIONS

6:25 - 6:34 PM

Weekly Adalimumab for **Non-Infectious Ocular Inflammatory Diseases**

IENNIFER LEE, MD Travel Grant Awardee

Purpose: To investigate the efficacy of weekly adalimumab (ADA) in patients with non-infectious ocular inflammation who failed ADA every two weeks.

Methods: A single-center, retrospective analysis of patients with refractory ocular inflammation on ADA every 2 weeks who were switched to weekly dosing, seen from January 2012 to April 2019. The main outcome measure was disease control versus treatment failure within 6 months of weekly therapy. Treatment failure was defined by: persistent anterior chamber cell, new or persistent angiographic inflammation, new or persistent tomographic intraretinal or subretinal fluid, active retinal/choroidal lesions, orbital pain, and scleral injection.

Results: Twenty-five patients (18 females, 7 males, median age 14 years, range 2-68 years) were evaluated. The types of uveitis include juvenile idiopathic arthritis (n =6), idiopathic chronic anterior/intermediate uveitis (n=3), scleritis (n=4), sarcoidosis (n= 2), tubulointerstitial nephritis panuveitis (n=1), Vogt Koyanagi Harada syndrome (n=1), birdshot chorioretinopathy (n=2), and HLA-B27 associated chronic anterior uveitis (n=2). Fourteen patients (56%) achieved disease control on weekly therapy with 6 months of follow up. In the treatment success cohort, six were receiving concomitant antimetabolite therapy, five were able to stop topical corticosteroids, and 2 were able to reduce topical corticosteroids. Weekly dosing appeared more likely to succeed in cases of juvenile idiopathic arthritis (5 out of 6).

Conclusion: In this series of patients with refractory ocular inflammation, increasing the dose of ADA from every two weeks to once a week conferred a beneficial reduction in ocular inflammation and disease control in more than half the patients.

6:34 - 6:38 PM Discussion

6:38 - 6:47 PM

Reduction of Anterior Uveitis Flares in Patients with Axial **Spondyloarthritis Following 1 Year** of Treatment with Certolizumab **Pegol: 48-Week Interim Results** from a 96-Week Open-Label Study LARS BAUER, MD

6:47 - 6:51 PM Discussion

6:51 - 6:55 PM

Multiple Evanescent White Dot Syndrome Following Inactivated Influenza Vaccination CALEB C. NG, MD

6:55 - 6:58 PM Discussion

6:58 - 7:07 PM

AAV Mediated Expression of Immunosuppressive Transgenes Prevents Experimental Autoimmune Uveitis BRIAN C. GILGER, DVM, MS

7:07 - 7:11 PM Discussion

7:11 - 7:15 PM

Relapsing Thrombotic Thrombocytopenic Purpura in a **Patient on Long-term Infliximab Treatment for Chronic Uveitis** RENUKA MOPURU. MD

7:15 - 7:18 PM **Discussion**

7:18 - 7:32 PM **INDUSTRY PARTNER PRESENTATIONS**

7:18 - 7:23 PM Allergan, Inc.

7:23 - 7:26 PM **EvePoint Pharmaceuticals**

7:26 - 7:29 PM **UCB**

7:29 - 7:32 PM Gilead Sciences, Inc.

7:32 - 7:35 PM Wrap Up ALAN G. PALESTINE, MD

7:35 PM **End of Evening Session** 7:45 - 10:00 PM **Dinner at The Canyons Grand Summit Hotel**

Sunday Morning January 19

7:00 - 8:00 AM **Breakfast**

7:00 - 9:30 AM **Exhibits**

8:00 - 8:04 AM Introduction ALAN G. PALESTINE, MD

8:04 - 9:30 AM CASE PRESENTATIONS, FREE **PAPERS AND DISCUSSIONS**

8:04 - 8:13 AM **Spectrum of Ocular** Inflammation Associated with Checkpoint Inhibition JASMINE H. FRANCIS, MD, FACS

8:13 - 8:17 AM Discussion

8:17 - 8:21 AM Let It Snow AMY E. YUAN, MD

8:21 - 8:24 AM Discussion

8:24 - 8:33 AM

Incidence and Risk of Cataract Formation in Intermediate Uveitis

CAROLINE MINKUS, MD Travel Grant Awardee

Purpose: To determine the incidence of cataract formation in patients with intermediate uveitis, and evaluate associated risk factors.

Methods: Patients were identified from the Systemic Immunosuppressive Therapy for Eye Diseases Cohort Study. Medical records were reviewed to determine patients' demographic information and clinical data. Patient demographic characteristics, as well as inflammatory exam findings, were compared using statistical models. The primary outcome was development of visually significant cataract as defined by a decrease in visual acuity to 20/40 or less, or requiring cataract surgery.

Results: A total of 2190 eyes from 1302 patients with intermediate uveitis treated at teritiary care uveitis centers were included. The absolute risk of cataract formation was 35.5% at ten years. This was increased in patients with concurrent anterior uveitis causing posterior synechiae (HR=2.68, 95% CI = 2.00-3.59, p<0.001), and in those with epiretinal membrane formation (HR=1.54, 95% CI = 1.15-2.07, p = 0.004). Low dose corticosteroid medications (oral prednisone 7.5mg daily or less, or topical corticosteroid drops less than two times daily) suggested a slightly decreased risk of cataract formation, though this was not statistically significant. Higher doses of corticosteroids significantly increased the incidence of cataract. Patient demographics including age at presentation, race, sex, and smoking status, were not statistically significantly associated with a difference in risk. Similarly, use of several common medications including aspirin, angiotensin converting enzyme inhibitors, nonsteroidal antiinflammatory medications, and statins, did not confer a difference in risk.

Conclusions: Our study found that the absolute risk of cataract formation in intermediate uveitis is moderate. The risk increases with the presence of concurrent anterior uveitis causing posterior synechiae, and with higher doses of corticosteroid medications.

8:33 - 8:37 AM Discussion

8:37 - 8:46 AM

Diagnostic and Clinical Utility of Vitreous Biopsies WEN F. HU, MD, PhD

8:46 - 8:50 AM Discussion

8:50 - 8:54 AM **Immunotherapy Uveitis in** a Primary Angle Closure **Suspect Patient** JONATHAN C. TSUI, MD

8:54 - 8:57 AM **Discussion**

8:57 - 9:06 AM

Ocular Inflammatory Side Effects of Checkpoint Inhibitors YING QIAN, MD

9:06 - 9:10 AM Discussion

9:10 - 9:14 AM

Hidden in the Eyes: Recurrence of **Systemic Hemopathies Reportedly** in Remission: Four Cases MARIE-HELENE ERRERA,

PHARMD, MD, PhD

9:14 - 9:17 AM Discussion

9:17 - 9:26 AM

Health Disparities in Chronic Non-Infectious Uveitis THIRAN JAYASUNDERA, MD

9:26 - 9:30 AM Discussion

9:30 AM **End of Morning Session**

Sunday Afternoon January 19

3:30 - 4:00 PM **Break**

3:30 - 7:30 PM **Exhibits**

4:00 - 6:05 PM **SCIENTIFIC SESSION 2 -**LOCAL AND SYSTEMATIC TREATMENT OPTIONS **FOR UVEITIS**

4:00 - 4:05 PM Introduction ALBERT T. VITALE, MD

4:05 - 4:50 PM **Local Uveitis Therapy** GLENN J. JAFFE, MD

There are several methods to deliver drugs locally to treat uveitis. Current local delivery methods include topical drops, trans-scleral delivery, periocular or intravitreal injection, and suprachoroidal or intravitreal sustained drug delivery systems. The indication and chosen method may depend on patient preference, response to systemic medications, and the uveitis cause, laterality location, severity. Topical treatment is given primarily to treat anterior uveitis, or to manage uveitic cystoid macular edema. The FDA has approved specific intravitreal Implants. The approved biodegradable implant is an injectable

dexamethasone delivery system approved to treat macular edema and uveitis, and comprises a polymeric matrix that incorporates the drug. Drug is released as the matrix erodes. The advantage is that it can be placed in the office and there is no remaining implant once matrix erodes but drug delivery duration is limited to 6 wks-3 months. Approved non-biodegradable implants that release drug over 2.5-3 years include the surgically implanted fluocinolone acetonide implant and an injectable fluocinolone acetonide implant approved to treat intermediate, posterior and panuveitis. Drug is released across a semipermeable membrane with zero order release kinetics. The advantages of these implants include linear drug delivery from a non-toxic implant that is suitable for very sustained delivery over years. The disadvantage is that the implant retained in eye after drug is depleted. Additional investigational implants are currently under investigation, and include electrophoretic trans-scleral gene delivery, and suprachoroidal delivery systems.

4:50 - 5:05 PM Discussion

5:05 - 5:50 PM

The Role of Systemic Therapy in the Treatment of the Uveitides DOUGLAS A. JABS, MD, MBA

Treatment of non-infectious uveitides is guided by the uveitic anatomic class. Anterior uveitides are treated with topical corticosteroids. For chronic uveitides requiring chronic suppression, topical corticosteroids < 3 times daily have limited ocular side effects. If higher doses are required, systemic medications are added, methotrexate in children and lowdose oral corticosteroids in adults. The majority of patients with intermediate, posterior, and pan-uveitides are treated with systemic medications. For multiple diseases, time-updated modeling of longitudinal data demonstrated that immunosuppression produced superior. The Multicenter **Uveitis Steroid Treatment** (MUST) Trial and Follow-up Study demonstrated that systemic therapy with oral corticosteroids and immunosuppression produced superior long-term visual results to those of a long-lasting (3-year) regional therapy, the fluocinolone acetonide implant. There was a near doubling

of the rate of blindness with regional therapy, largely due to relapse-related chorioretinal damage, highlighting the problem with the relapse-driven reimplantation/reinsertion approach. Other than a greater use of antibiotics for infection, the rate of systemic side effects was no greater with the systemic than with regional therapy. Regional therapy had greater rates of ocular side effects, including cataract and glaucoma. The implication is that the systemic approach is the preferred initial approach for noninfectious intermediate, posterior, and panuveitides.

5:50 - 6:05 PM Discussion

6:05 - 6:25 PM **Break**

6:25 - 7:18 PM **CASE PRESENTATIONS, FREE** PAPERS AND DISCUSSIONS

6:25 - 6:34 PM

Long-term Outcomes of Treatment with Biologics in Eyes with Refractory NIPPU Uveitis SUE LIGHTMAN, MD, PhD, FRCOphth

6:34 - 6:38 PM

Discussion

6:38 - 6:47 PM

Suprachoroidal CLS-TA Improves **Patient Outcomes in Uveitis** of All Anatomic Subtypes: **Subgroup Analysis of the Phase 3 PEACHTREE Study** CHRISTOPHER R. HENRY, MD

6:47 - 6:51 PM Discussion

6:51 - 6:55 PM

Multifocal Mystery MARK W. JOHNSON, MD

6:55 - 6:58 PM Discussion

6:58 - 7:07 PM

Fluocinolone Acetonide Intravitreal Insert for NIU-**PS: Significant IOP Elevations Through 36 Months** MICHAEL A. SINGER, MD

7:07 - 7:11 PM Discussion

7:11 - 7:15 PM

Unilateral Retinal Vasculitis with Central Retinal Vein Occlusion as the Presenting Manifestation in a Sjogren's Syndrome Patient DANIEL BRILL, MD

7:15 - 7:18 PM Discussion

7:18 - 7:27 PM **INDUSTRY PARTNER PRESENTATIONS**

7:18 - 7:21 PM Bausch + Lomb

7:21 - 7:24 PM **Clearside Biomedical**

7:24 - 7:27 PM **Mallinckrodt Pharmaceuticals**

7:27 - 7:30 PM Wrap Up ALBERT T. VITALE, MD

7:30 PM **End of Evening Session**

8:00 - 10:00 PM Dinner

Monday Morning January 20

7:00 - 8:00 AM Breakfast

7:00 - 10:00 AM **Exhibits**

8:00 - 8:05 AM Introduction ALAN G. PALESTINE, MD

8:05 - 10:00 AM **CASE PRESENTATIONS, FREE** PAPERS AND DISCUSSIONS

8:05 - 8:14 AM

Intraocular Pressure Following Administration of Suprachoroidal Triamcinolone Acetonide Suspension (CLS-TA): Post-Hoc Analysis from the Phase 3 PEACHTREE **Clinical Trial for Uveitis** PAULINE T. MERRILL, MD

8:14 - 8:18 AM Discussion

8:18 - 8:22 AM **Dot Within a Dot** AKSHAY S. THOMAS, MD, MS

8:22 - 8:25 AM Discussion

8:25 - 8:34 AM

Optimizing the Patient Pathway for Idiopathic **Acute Anterior Uveitis from Accident and Emergency** NICOLE K. SCRIPSEMA, MD

8:34 - 8:38 AM Discussion

8:38 - 8:42 AM

Macular Ischemia Associated with **Retinal Vasculitis and Oral Ulcers** TAYLOR FIELDS, MD

8:42 - 8:45 AM Discussion

8:45 - 8:54 AM

Clinical Utility of Anti-infliximab Antibodies and Serum Infliximab **Levels in Noninfectious Uveitis and Scleritis Patients** Treated with Infliximab LIANNA VALDES, MD

8:54 - 8:58 AM Discussion

8:58 - 9:02 AM

The Double-edged Sword RACHEL PATEL, MD

9:02 - 9:05 AM Discussion

9:05 - 9:09 AM

Refractory Sclerouveitis in Pregnancy - A Diagnostic and Therapeutic Dilemma HAYLEY R. JAMES, MD

9:09 - 9:12 AM Discussion

9:12 - 9:16 AM

Anterior Uveitis In Reverse -A New Syndrome For An Old Pathogen? K. MATTHEW MCKAY, MD

9:16 - 9:19 AM Discussion

9:19 - 9:23 AM **A Thorny Case** RENE CHOI, MD, PhD

9:23 - 9:26 AM Discussion

9:26 - 9:30 AM When All Else Fails...What Now? LAUREN BIERMAN, MD

9:30 - 9:33 AM Discussion

9:33 - 9:42 AM

Efficacy of Targeted Janus Kinase (IAK) Inhibition by Tofacitinib in Birdshot Chorioretinitis. LYNN M. HASSMAN, MD, PhD

9:42 - 9:46 AM Discussion

9.46-9.50 AM

A Case of Relentlessly Blinding Scleritis...For Real?! DAVID LIU, MD

9.50 - 9.53 AM Discussion

9:53 - 10:00 AM **Closing Remarks** ALAN G. PALESTINE, MD AND ALBERT T. VITALE, MD

10:00 AM **Meeting Adjourned**

Save The Date

AUS 25th Annual Winter Symposium Canyons Grand Summit Hotel, Park City, Utah January 16-18, 2021

INDUSTRY PARTNERS

The AUS gratefully acknowledges the following companies for their support:

PLATINUM

Allergan, Inc.

GOLD

EyePoint Pharmaceuticals UCB

SILVER

Bausch + Lomb
Clearside Biomedical
Gilead Sciences, Inc.
Mallinckrodt Pharmaceuticals



Medical Conference Planners Intl. aus@medconfs.com www.medconfs.com