ARVO EDUCATION COURSE

Saturday, May 3, 2025
8am – 5pm, MST
Salt Palace Convention Center
Salt Lake City, Utah

The New Era of Uveitis: Embracing Modern Technology

Course organizers

Chairperson: Vishali Gupta, MD

Course Coordinators: Rupesh Vijay Agrawal, MD, FRCS, MMed, Esen K. Akpek, MD, David S. Chu, MD, Phoebe Lin, MD, PhD, Careen Y. Lowder, MD, PhD, Quan Dong Nguyen, MD MSc, FARVO and Carlos E. Pavesio, FRCOphth, MD

Cutting edge treatments for uveitis

Moderators: Quan Dong Nguyen, MD MSc, FARVO and John H. Kempen, MD, MPH, MHS, PhD
1:05 – 3:05pm

This session will highlight the advances in the field of treatment of uveitis. The experts shall cover a wide array of spectrum beginning with conventional treatment and elaborating on round the corner newer therapies including both local and systemic therapies.

Presentations		
1:05 PM	**Standard of care (or consensus care) treatment** While in years past uveitis management was largely based on clinical impressions, we now are the beneficiary of a growing body of evidence to guide our clinical management of non-infectious uveitis. Widely accepted approaches to clinical care for typical non-infectious uveitis cases can be thought of as including three phases: “Induction” when active uveitis is suppressed as quickly as possible; “Tapering” after successful induction in order to determine if the uveitis is remitting, and, if not, determining the minimal suppressive dose that keeps uveitis controlled; and “Maintenance”, maintaining the minimal suppressive dose to keep uveitis controlled. Maintenance therapy only applies for chronic uveitis, as remitting or remitting/relapsing uveitis does not require prolonged therapy. Risk minimization is a key aspect of all aspects of such management. Induction typically is accomplished by use of high dose topical and/or oral corticosteroids, rapidly suppressing the uveitis as quickly as possible. The goals for tapering are to avoid side effects that predictably occur with longer term high dose topical or oral corticosteroid therapy, and to guide what (if any) maintenance therapy is needed The clinician gradually reduces the “induction” treatments, looking carefully for signs of reactivation to identify a “minimal suppressive dose” (for non-remitting cases). The minimal suppressive dose must be sufficient to stably control inflammation. Minimal suppressive doses typically would be maintained for long periods of time.	John H. Kempen, MD, MPH, MHS, PhD

	Immunosuppressive therapies typically include antimetabolites as first line, and may also include calcineurin inhibitors, biologics, and occasionally alkylating agents. Newer agents are considered elsewhere in this course. Their most common indication is as corticosteroid-sparing therapy to achieve a (presumably) safe and effective minimal suppressive dose when the topical and/or systemic corticosteroid minimal suppressive dose is causing side effects or likely to cause side effects. Immunosuppressive drugs also may be useful occasionally when corticosteroids are insufficient for "induction" (after an infectious etiology has been carefully ruled out). Initial use of immunosuppression also is recommended for specific severe types of uveitis (or other inflammatory eye diseases), such as for diagnoses with high likelihood of needing corticosteroid-sparing, as well as cases requiring immunosuppression for associated systemic disease. While there is some heterogeneity amongst practitioners' practice patterns using depot corticosteroid injections or implants, they certainly are useful for management of residual macular edema after uveitis has been cleared. Long-lasting implants also can be a valuable second line option for management of chronic non-infectious uveitis where systemic therapy is contraindicated or insufficient.	
1:20 PM	**Clinical and practical endpoints in Uveitis trials** In clinical trials for uveitis, there is an important dichotomy between practical and relevant endpoints. Practical endpoints are typically clinical exam-based, such as slit-lamp examination for ocular inflammation or visual acuity measurements. While they are widely used and easily accessible, they can be limited by poor metrics of agreement and may lack sensitivity in detecting subtle or early changes. On the other hand, relevant endpoints involve advanced imaging techniques, such as fluorescein leakage reduction, inflammatory cells on OCT, and retinal edema metrics obtained through higher-order imaging. These provide more quantitative insights into disease activity. However, these endpoints are less practical, requiring specialized software, expertise, and reading center-based analysis. Ultimately, the best practical and relevant endpoint may be a multiple endpoint design, which combines clinical assessments with multimodal imaging to offer a more comprehensive evaluation of treatment outcomes. This approach enables better sensitivity and accuracy in capturing both the clinical and imaging-based changes in uveitis, aligning with both practical application and relevant disease monitoring.	Sunil K Srivastava, MD
1:35 PM	**Novel Systemic therapeutic targets** Current mainstays in the management of infectious uveitis involve targeting the underlying organism(s) whenever possible; empiric anti-infectious therapy may be considered in various cases. Corticosteroids have been most used in the management of non-infectious uveitis (NIU); however, the side effects of corticosteroids (in all different routes of administration) are notoriously unfavorable toward the patients, especially at high doses. The approval of an anti-TNF agent (adalimumab) for non-infectious uveitis has demonstrated the potential benefits and advantages of targeted therapy pertaining to efficacy and safety. Multiple targets and cell types are being evaluated as more	Quan Dong Nguyen, MD MSc, FARVO

	specific therapeutic opportunities for NIU, alone or in combination therapy. The presentation will focus on selected systemic therapies in development for NIU and ocular inflammatory diseases.	
1:50 PM	**Novel Local therapeutic targets** To present the latest update on the local therapeutic molecules in noninfectious uveitis. Different types of steroids and biologics will be discussed in order to emphasize their efficacy and tolerance. Immunomodulatory cytokines are among therapeutic targets but may have paradoxicl effects, compared with the systemic route. Respect of well-defined criteria is mandatory for an appropriate and safe use of these agents by uveitis and retina specialists.	Bahram Bodaghi, MD, PhD
Case study		
2:05 PM	**Diagnostic and therapeutic dilemma in a case of retinal vasculitis** A case of a young Middle Eastern male with a sudden loss of vision in his left eye. A clinical diagnosis of frosted branch angiitis and hemiretinal vein occlusion was made. Ancillary testing failed to reveal etiology of this condition. A differential diagnosis is discussed. A novel systemic anti-inflammatory therapy resulted in rapidly improved both clinical picture and visual function. Diagnostic and therapeutic dilemma is discussed.	Igor Kozak, MD, PhD
Debates: Local vs. systemic therapy		
Local therapy: Saves patients from Systemic side effects		
2:15 PM	**Local therapy saves patients from systemic side effects.** This debate will discuss whether local therapy can effectively manage uveitis while reducing the systemic side effects of immunosuppressive therapy. We will explore once again the adverse effects of systemic treatments such as systemic steroids (hypertension, diabetes, osteoporosis, adrenal suppression), alkylating agents (infertility, secondary malignancies, bone marrow suppression), methotrexate (liver toxicity, gastrointestinal discomfort, bone marrow suppression), mycophenolate mofetil (infection risk, gastrointestinal issues, leukopenia), TNF inhibitors (infection risk, malignancy concerns, demyelinating disease), IL-6 inhibitors like tocilizumab (neutropenia, elevated liver enzymes, lipid abnormalities). Recent clinical trials on local therapies, including targeted drug delivery, will be highlighted. Additionally, we will address the unmet needs of local therapy. This session aims to provide a balanced perspective on the role of local treatment in uveitis management.	Jia-Horung Hung, MD
2:25 PM	**Local therapy does not save patients from systemic side effects.** Local therapy treatments for uveitis target inflammation directly at the site of disease, reducing ocular symptoms. However, these treatments may not prevent systemic side effects. Systemic steroids or immunosuppressants may still be required in cases of inadequate control or if there is co-existing systemic disease. Prolonged local use can	Sunil K Srivastava, MD

	result in ocular complications, requiring surgery, which carries its own risk of systemic side effects. Newer local therapies targeting specific proteins may reduce ocular inflammation but could still result in some systemic exposure. The Multicenter Uveitis Steroid Treatment (MUST) Trial showed that systemic therapy with corticosteroids and immunosuppressants did not significantly increase systemic side effects compared to regional corticosteroid treatment, except for a higher incidence of antibiotic use for infections.	
2:35 PM	Debate 1: Voting & Concluding Remarks	Quan Dong Nguyen, MD MSc, FARVO
Systemic therapy with Biologics: First Line or Last Resort?		
2:40 PM	**Systemic therapy with biologics should be used as a first line treatment option.** Biologics have played an important role in the treatment of uveitis. As one of the only on-label non steroid therapies for uveitis, we will present data and evidence supporting its use as one of the first line therapy options for the treatment of uveitis.	Christopher Or
2:50 PM	**Systemic therapy with biologics should be used as a last resort treatment option.** This presentation will aim to describe the rationale for use of biologics in ocular inflammation. It will elaborate upon the alternatives to use of biologics and the disadvantages of using biologics in the initial treatment of ocular inflammation. The main debate will focus upon the economic burden as well as the adverse effects of various biologics and how conventional immunosuppressive agents can be used initially as an effective treatment of various non infective uveitis	Mudit Tyagi, MD
3:00 PM	**Voting & Concluding Remarks**	Bahram Bodaghi, MD, PhD

*Presenters and presentations are subject to change without notice.