7:48 AM

Characteristics, Complications, and Surgical Outcomes of Panuveitis Over 25 Years: The KKESH Uveitis Survey Study Group

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OBJECTIVE The attendees will learn about the clinical characteristics, and outcomes of panuveitis at KKESH in a 25-year period. VHK and Behcet's disease are the leading causes of panuveitis in Saudi Arabia.

PURPOSE To describe clinical characteristics, complications, and surgical outcomes of panuveitis in a tertiary center over a 25-year period.

METHODS Retrospective chart review study. Four-hundred patients (727 eyes) with panuveitis were evaluated from January 1986 through December 2011 in a tertiary center.

RESULTS Mean age was 37.7 ± 14.6 (7 to 88) years. Baseline best-corrected visual acuity (BCVA) was 20/125 (0.8 ± 0.67) in both eyes. Baseline intraocular pressure was 12.5 mm Hg OD, and 13.5 mm Hg OS. Onset was sudden in 234 (58.5%) patients. A single episode occurred in 159 (39.8%) patients, and recurrent in 241 (60.3%) patients. Clinical diagnosis included Vogt–Koyanagi–Harada syndrome (VKH) in 151 (37.8%) patients, Behcet's disease in 104 (26%) patients, idiopathic panuveitis in 33 (8.3%) patients, presumed-intraocular tuberculosis (PIOTB) in 21 (5.3%) patients, chronic postoperative panuveitis in 12 (3%) patients, toxoplasmic retinochoroiditis in 9 (2.3%) patients, sympathetic ophthalmia in 5 (1.8%) patients, and 63 (15.8%) patients with no clear diagnosis at presentation. One hundred eighty-one (45.3%) patients underwent surgical procedures secondary to complications. Mean final visit LogMAR BCVA in both eyes was 20/100 (0.7± 0.92).

CONCLUSION VHK and Behcet's disease are the leading causes of panuveitis in Saudi Arabia. Immunosuppressive therapy and surgical intervention helped maintain BCVA in panuveitis patients long-term.

TAKE HOME MESSAGE VHK and Behcet's disease are the leading causes of panuveitis in Saudi Arabia. Immunosuppressive therapy and surgical intervention should be used to maintain BCVA long-term.

7:56 AM

Voclosporin: Efficacy and Safety in Noninfectious Uveitis Involving the Posterior Segment

- Shree K. Kurup, MD

OBJECTIVE Understanding of the design, results and conclusions of a prospective, controlled, dose-ranging trial of voclosporin for the treatment of noninfectious uveitis involving the posterior segment.

PURPOSE To provide an overview of the key findings of the LUMINATE clinical development program for noninfectious uveitis involving the posterior segment (intermediate, anterior and intermediate, posterior, or panuveitis) with voclosporin and how these inform its potential role in the management of the condition.

METHODS Studies LX211-01 (active uveitis) and LX211-02 (clinically controlled, quiescent uveitis), evaluated the treatment of noninfectious uveitis involving the posterior segment; a third trial, LX211-03 was conducted in anterior uveitis. Study LX211-01In patients (N=218) with active uveitis, the co-primary efficacy endpoint was mean change from baseline in vitreous haze (VH) after 16 and 24 weeks of therapy or at the time of rescue, if earlier. Study LX211-02In patients (N=232) with clinically quiescent uveitis, the primary endpoint was the proportion of patients experiencing a protocol-specified inflammatory event.

RESULTS In Study LX211-01, the voclosporin 0.4 mg/kg BID demonstrated statistically significant differences from control at ($p=0.008$ at 16 weeks, $p=0.027$ at 24 weeks). The co-primary endpoints reflect both an initial and persistent treatment effect. Analyses of relevant subpopulations further demonstrate the effect of voclosporin on severe uveitic inflammation. In Study LX211-02,voclosporin 0.4 mg/kg BID reduced the rate of

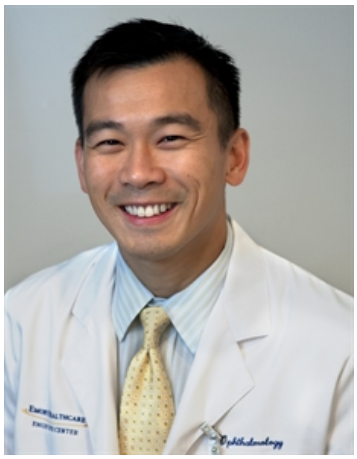
recurrence of inflammatory exacerbation by up to 50% over a 26-week period, relative to control, supporting the effect observed on active inflammation in Study LX211-01.

CONCLUSION In StudyLX211-01, clinically meaningful and statistically significant reduction in inflammation was observed. In Study LX211-02, control of inflammation was maintained in patients receiving voclosporinwith a 50% reduction vs. control in inflammatory recurrence rates. Voclosporin safety is consistent with the class and is manageable with routine monitoring.

TAKE HOME MESSAGE Voclosporin is a potentially viable therapeutic option if and when FDA approved for use in uveitdes

8:04 AM

Clinical Utility of Serologic and Radiologic Testing in the Evaluation of the White-Dot Syndromes



- Steven Yeh, MD
- Gagan Sawhney, MD
- Cecilia S Jung, MD

OBJECTIVE The objective of this study is to assess the diagnostic yield, positive predictive value and sensitivity of serologic and radiographic testing for patients with white dot syndromes.

PURPOSE Patients with white dot syndromes (WDS) often present with protean manifestations and are classified based on clinical and angiographic criteria. The purpose of this research was to assess the clinical utility of infectious and autoimmune inflammatory testing often performed in the evaluation and management of WDS.

METHODS Patients with WDS treated at the Emory Eye Center from 2008-2012 were identified from an imaging database and medical records following Institutional Review Board approval. Inclusion criteria included patients with any of hte following diagnoses:

acute posterior multifocal placoid pigment epitheliopathy (APMPPE) or ampiginous choroidopathy, multiple evanescent white dot syndrome (MEWDS), serpiginous choroidopathy, multifocal choroiditis and panuveitis (MFC), punctate inner choroidopathy (PIC), and birdshot retinochoroidopathy (BRC). Laboratory and radiographic testing were reviewed. Diagnostic yield, sensitivity, and predictive values were calculated for diagnostic tests.

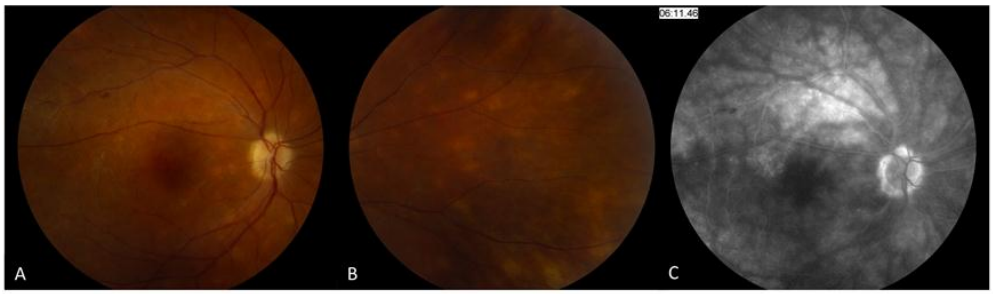
RESULTS Forty-seven WDS patients were identified. 32 were female (68%) and the mean age was 44.5 years (Range 15-72). Diagnoses included BRC (25), serpiginous (6), MFC (5), PIC (4), APMPPE/ampiginous (5) and MEWDS (2). Thirty-seven patients (79%) underwent laboratory or radiologic workup. A total of 220 tests were performed (Mean 4.7 tests/patient). 29 positive tests were identified for a diagnostic yield of 13.2%. Positive tests of clinical significance included 17 of 18 HLA-A29+ tests in patients with suspected BRC and four of 12 tests for tuberculosis (i.e. Quantiferon-TB-Gold or PPD testing). Positive tuberculosis tests in two patients with BRC and two in patients with serpiginous prompted isoniazid therapy. Other notable positive tests included four of 21 ACE levels, two of eight ANA levels, and one of five lysozyme tests, none of which influenced the final diagnosis (Table). The positive predictive value (100%) and sensitivity (94.4%) were highest for the HLA-A29 test for BRC.

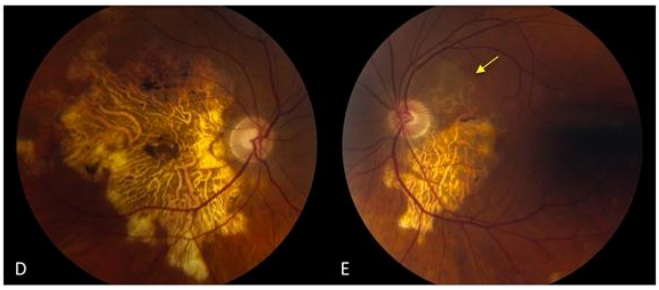
CONCLUSION Extensive laboratory and radiologic testing for WDS were generally of low diagnostic yield with the exception of HLA-A29-testing in patients with suspected BRC. Quantiferon-TB and PPD testing were relevant and influenced management, prompting anti-tuberculosis therapy in four patients prior to immunosuppression. Consideration should be given to a limited workup for the WDS.

TAKE HOME MESSAGE Extensive workup may not be indicated for the white dot syndromes. HLA-A29 testing for birdshot has the greatest clinical value and tuberculosis testing should be considered in some patients.

Lab/Radiology Test	Disease	No. of Tests Ordered	Positive/ Abnormal (%)	Negative/ Normal (%)
HLA-A29	Birdshot	18	17 (94)	1 (6)
RPR	Syphilis	26	0 (0)	26 (100)
FTA-ABS	Syphilis	19	0 (0)	19 (100)
PPD	Tuberculosis	4	1 (25)	3 (75)
Quantiferon-TB	Tuberculosis	8	3 (38)	5 (62)
ACE	Sarcoidosis	21	4 (19)	17 (81)
Lysozyme	Sarcoidosis	5	1 (20)	4 (80)
Ionized calcium	Sarcoidosis	6	0 (0)	6 (100)
Chest X-ray	Sarcoidosis, tuberculosis	15	0 (0)	15 (100)
ANA	Lupus	8	2 (25)	6 (75)
Toxoplasmosis IgM/IgG	Toxoplasmosis	5	0 (0)	5 (100)
Toxocariasis IgM/IgG	Toxocariasis	1	0 (0)	1 (100)
Borrelia burgdorferi IgM/IgG	Lyme disease	9	0 (0)	9 (100)
Bartonella IgM/IgG†	Cat-scratch disease	4	0 (0)	4 (100)
HIV	HIV/AIDS	2	0 (0)	2 (100)
HTLV I/II	HTLV	2	0 (0)	2 (100)
ANCA	ANCA-positive vasculitis	1	0 (0)	1 (100)
Antibodies for HSV, CMV, EBV	Herpes related uveitis	5	0 (0)	5 (100)
ESR	*	7	0 (0)	7 (100)
CRP	*	4	0 (0)	4 (100)
CBC	*	28	0 (0)	28 (100)
Comprehensive metabolic panel	*	22	1 (5)	21 (95)

*Not available or applicable
†Both *B. henselae* and *B. quintana* included





8:18 AM

Fluocinolone Acetonide Implant Versus Systemic Therapy For Noninfectious Uveitis: Combined Results Of Three Clinical Trials

- Sunil Srivastava, MD
- Thomas A. Albini, MD
- David Callanan, MD
- Goldstein Debra
- Quan Dong Nguyen, MD, MSc

OBJECTIVE To describe the pooled results of eyes treated with fluocinolone implant vs those treated with systemic therapy for non infectious uveitis from 3 clinical trials

PURPOSE To report outcomes of patients treated with the fluocinolone acetonide implant (Retisert) and standard of care therapy from the pooled data of three clinical trials examining the use of the implant in non-infectious uveitis. Subgroup analysis was performed to examine the outcomes in specific groups of uveitic patients.

METHODS Data from the three fluocinolone acetonide trials (415-001,002,004) were obtained and combined into a master data sheet. Outcome measures including logMar ETDRS vision, time to recurrence, number of recurrences and fluorescein leakage were evaluated at baseline, 12 months and 24 months. Three distinct groups were analyzed - implant eyes (IMP), fellow eyes of implanted eye (FEL) and eyes treated with standard of care (SOC)

RESULTS 1170 eyes were included in analysis, 577 eyes with the implant (IMP), 450 fellow (FEL) eyes and 133 standard of care (SOC) eyes. IMP eyes had worse vision at baseline (.54) vs. FEL (.40) and SOC (.3). At 24 months, IMP eyes improved to .45 while FEL eyes worsened to .46 and SOC eyes stayed about the same (.3) ($p<.01$). At 24 months, 30% of IMP eyes improved 3 lines or better vs. 15% of FEL eyes and 10% of

SOC eyes (p<.0001). 12% of IMP eyes lost 2 lines or more vs 20% of FEL eyes and 23% of SOC eyes. By 24 months, 73% of IMP eyes with baseline leakage had resolution of leakage vs 26% of FEL eyes and 28% of SOC eyes (p<.0001). Those eyes with resolution of macular leakage were more likely to have vision improvement.IMP eyes diagnosed with birdshot choroidopathy were more likely to have significant visual improvement than FEL or SOC eyes. IMP eyes of pediatric patients also had superior vision and visual improvement at 24 months in comparison to FEL eyes.

CONCLUSION IMP eyes were more likely to have significant vision improvement vs SOC and FEL eyes. IMP eyes on average improved 1 line over 24 months. IMP eyes were also more likely to have improvement in fluorescein leakage than FEL and SOC eyes at 24 months. Eyes with a diagnosis of birdshot choroidopathy had more visual improvement with an IMP vs SOC and FEL.

TAKE HOME MESSAGE Eyes treated with the fluocinolone acetonide implant were more likely to have visual improvement over 2 years and reduction of macular leakage vs systemic therapy

8:26 AM

Visual Outcomes in Uveitis With Angiographic Macular Leakage Treated with the Fluocinolone Acetonide Implant or Standard Treatment

- Thomas A. Albini, MD
- Goldstein Debra
- David Callanan, MD
- Quan Dong Nguyen, MD, MSc
- James Bena
- Sunil Srivastava, MD

OBJECTIVE To determine the relative efficacy of fluocinolone acetonide implant in the treatment macular vascular leakage as compared to standard treatment for uveitis.

PURPOSE Macular leakage associated with cystoid macular edema is a common cause of severe vision loss in patients with uveitis. This study examines the visual acuity outcomes of eyes treated with implant as compared to fellow eyes or those treated with standard of care.

METHODS Patients with macular leakage at baseline were identified from three prospective, randomized clinical trials examining the use of fluocinolone acetonide in the treatment of non-infectious posterior uveitis. Fluorescein angiograms were performed on each patient at regular time points. A centralized reading center analyzed and graded each angiogram. Visual outcomes were examined and analyzed at baseline and the two year time point. Three specific treatment groups were identified and analyzed – those eyes treated with the fluocinolone acetonide implant (IMP), fellow eyes (FEL) of patients with implants and eyes treated with standard of care systemic (SOC) medications.

RESULTS A total of 250 eyes treated with the IMP device had macular leakage identified at baseline. In comparison, 163 FEL eyes and 59 SOC eyes had baseline macular leakage. The mean baseline logMAR visual acuity was significantly worse in IMP and FEL eyes (.56 in both) vs SOC eyes (.39), ($p<.01$) IMP eyes had a significantly greater improvement of vision over 24 months (.56 to .41) in comparison to both SOC eyes (.39 to .40) and FEL eyes (.56 to .64), ($p<.01$) In eyes without evidence of macular leakage at baseline, all groups had some improvement of vision over 24 months: IMP (.41 to .33), FEL (.28 to .24) and SOC (.12 to .09). The amount of improvement was not statistically different between these groups.

CONCLUSION In eyes with fluorescein evidence of macular leakage, fluocinolone acetonide device resulted in a statistically significant greater improvement in visual acuity over 24 months vs FEL eyes and SOC eyes. In eyes with macular leakage, the fluocinolone acetonide device may offer superior improvement of visual acuity over 2 years in comparison to eyes treated with standard of care therapy.

TAKE HOME MESSAGE The fluocinolone acetonide implant results in greater visual acuity benefit than standard of care in posterior noninfectious uveitis among patients with macular vascular leakage.