SUPRACHOROIDAL CLS-TA VERSUS RESCUE THERAPIES FOR THE TREATMENT OF UVEITIC MACULAR EDEMA: A POST HOC ANALYSIS OF PEACHTREE

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ABSTRACT

Background: This post hoc analysis compared the efficacy and safety of CLS-TA to other commonly available treatments for noninfectious uveitis (NIU).

Methods: Results from the PEACHTREE study were compared between subjects randomized to CLS-TA not requiring rescue therapy and those subjects randomized to control and subsequently requiring rescue therapy. Endpoints included best corrected visual acuity (BCVA), central subfield thickness (CST), treatment emergent adverse events (TEAEs), and intraocular pressure (IOP) related safety findings.

Results: In this analysis, there were 83 unrescued CLS-TA subjects and 46 rescued control subjects. At Week 24, 51.9% of the unrescued CLS-TA subjects gained ≥15 letters in BCVA, compared to 37.0% of the rescued control subjects (P = 0.115). Unrescued CLS-TA subjects showed a mean gain of 15.7 versus 10.9 letters in rescued control subjects (P = 0.080). A significantly greater mean reduction in CST was observed for unrescued CLS-TA subjects versus rescued control subjects (174.0 and 148.5 µm; P = 0.040). Of unrescued CLS-TA subjects, 4.9% experienced IOP elevations ≥ 30 mm Hg at any visit versus 10.9% of rescued control subjects. Further, use of IOP-lowering medications appeared lower in unrescued CLS-TA subjects versus rescued control subjects (7.2% versus 13.0%). There were no IOP-related surgical interventions in either group.

Conclusion: CLS-TA subjects experienced significantly greater reduction in CST and tended towards greater improvement in BCVA, compared with rescued

control subjects. Suprachoroidally administered CLS-TA showed a lower incidence of IOP-related safety findings.

KNOWLEDGE, ATTITUDE, AND PRACTICE PATTERNS AND THE PURPORTED REASONS FOR DELAYED PRESENTATION OF PATIENTS WITH SIGHT-THREATENING DIABETIC RETINOPATHY AT A TERTIARY EYECARE FACILITY IN CENTRAL INDIA: A QUESTIONNAIRE-BASED STUDY

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ABSTRACT

Purpose: To identify the reasons for delayed presentation among patients with sight-threatening diabetic retinopathy (STDR) and to assess their knowledge, attitude, and practice (KAP) patterns in context to diabetes mellitus (DM) and diabetic retinopathy (DR).

Methods: Single-center, cross-sectional, questionnaire-based KAP survey. All consecutive cases of STDR who presented to our tertiary eye care facility from June 2020 to November 2020 were recruited. The KAP scoring survey tool was incorporated into the questionnaire to help evaluate and represent the patient's disease.

Results: 170 patients with STDR were enrolled in the study. The mean age of patients was 54 ± 9.34 years (Range: 21-70 years); 110 patients (64.7%) were between 41 and 60 years; 131 patients (76%) had DM for more than 5 years. The STDR changes were more prevalent in patients with an educational qualification of high school or less (n = 142; 83.5%). Fifty-two patients (30.6%) had been informed regarding the detrimental effect of diabetes on the eyes and were recommended to consult an ophthalmologist by the treating physician. Of these, 24 (46.15%) patients were educated about retinal changes due to diabetes. Eighty-five (50%) patients in our study had good knowledge about DM; 13 (7.6%) patients had good knowledge about DR. For patients not compliant for follow-

ups with the treating physician, the use of "home glucometers for self-monitoring (n = 60, 35.3%) was the most prevalent reason. The main reason for poor compliance for undergoing a dilated fundus examination by the ophthalmologist was "Had good vision, so didn't feel the need" in 143 (90.5%) patients.

Conclusion: The absence of visual complaints, lack of knowledge, and failure to undergo a dilated fundus examination in the past were the prevalent risk factors in patients presenting with STDR. Knowledge/practice about DR was poor among the patients with STDR. The treating physicians and ophthalmologists were the most common sources for patient education.

VITREOSCHISIS AND RETINAL DETACHMENT: NEW INSIGHT IN PROLIFERATIVE VITREORETINOPATHY

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ABSTRACT

Purpose: To assess the occurrence of peripheral vitreoschisis-induced vitreous cortex remnants (p-VCRs) in primary rhegmatogenous retinal detachment (RD) and investigate whether the presence of p-VCRs results in a greater risk of RD recurrence, secondary to Proliferative Vitreoretinopathy (PVR) development after pars plana vitrectomy (PPV).

Methods: Patients who underwent PPV for primary rhegmatogenous RD between January 2016 and December 2018 were included. The presence of residual p-VCRs was confirmed intraoperatively using triamcinolone acetonide (TA). Patients with p-VCRs were divided into two groups: Group A comprised of patients who underwent PPV without p-VCR removal, while Group B included patients who underwent PPV with p-VCR removal.

Results: Four hundred-thirteen eyes with evidence of p-VCR were analyzed. Two-hundred-twenty-three eyes underwent PPV without VCR removal (Group A), while 190 eyes underwent PPV with p-VCR removal (Group B). Primary anatomical success was 91.5% in the Group A and 95.4% in the group B. Retinal re-detachment due to PVR occurred in 17 (7.6%) eyes in Group A and in four (2.1%) eyes in Group B within the first 3 months ($p = 0.01$). Among group A, in 11 eyes, there was a diffuse posterior PVR grade C, while six eyes were focal PVR grade C. In Group B, we observed four retinal re-detachment due to focal PVR grade C.

Conclusion: The presence of p-VCRs seems to be associated with a higher incidence of PVR development and might also result in more complex RD

recurrence, this suggests the need for more aggressive VCRs removal during the first surgery.

RECOMMENDATIONS FOR THE MANAGEMENT OF OCULAR SARCOIDOSIS FROM THE INTERNATIONAL WORKSHOP ON OCULAR SARCOIDOSIS

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ABSTRACT

Aims: To establish expert recommendations for the management of ocular sarcoidosis (OS).

Methods: A question-based survey on the management of OS was circulated to international uveitis experts (members of the International Uveitis Study Group and the International Ocular Inflammation Society) electronically. Subsequently, a consensus workshop was conducted at the 7th International Workshop on Ocular Sarcoidosis (IWOS) in June 2019 in Sapporo, Japan as part of the Global Ocular Inflammation Workshops. Statements on the management of OS that were supported by a two-thirds majority of 10 international panel members of the workshop, after discussion and voting, were taken as consensus agreement.

Results: A total of 98 participants from 29 countries responded to the questionnaire survey. The subsequent consensus workshop established recommendations for the management of OS in five sections. The first section concerned evaluation and monitoring of inflammation. The second, third and fourth sections described ocular manifestations that were indications for treatment, and the management of anterior uveitis, intermediate uveitis and posterior uveitis. In the fifth section, the use of systemic corticosteroids and systemic immunosuppressive drugs were detailed.

Conclusions: Recommendations for management of OS were formulated through an IWOS consensus workshop.

TOPICAL NSAIDS, INTRAVITREAL DEXAMETHASONE AND PERIBULBAR TRIAMCINOLONE FOR PSEUDOPHAKIC MACULAR EDEMA

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ABSTRACT

Background: The purpose of this study is to assess the effectiveness of topical nonsteroidal anti-inflammatory drugs (NSAIDs) and corticosteroids (intravitreal dexamethasone and peribulbar triamcinolone) in treating pseudophakic macular edema (PME).

Methods: Retrospective study of 33 eyes. Variables included best corrected visual acuity (BCVA; logMAR scale) and central retinal thickness (CRT) and central choroidal thickness (CCT) assessed with swept-source OCT. All patients were initially prescribed topical NSAIDs and reevaluated after 2 months. If improvement in BCVA or CRT was noted, topical NSAIDs were continued until resolution. If no improvement was observed at 2 months or subsequent visits, intravitreal dexamethasone implant was performed. Patients who refused intravitreal treatment were offered peribulbar triamcinolone.

Results: After treatment with topical NSAIDs for a median of 2 months, BCVA increased significantly from 0.5 to 0.3 while CRT decreased significantly from 435 to 316 µm. PME resolved in 19 of the 33 eyes (57.6%). Of the 14 recalcitrant cases, 13 were treated with corticosteroids. Of these 13 cases, 9 (69.2%) resolved. BCVA increased non-significantly from 0.7 to 0.4. CRT and CCT decreased significantly from 492 to 317 µm and from 204 to 182 µm respectively.

Conclusions: The overall success rate of the treatment algorithm was greater than 80%, a remarkable finding considering that no randomized study has yet been conducted to determine the optimal therapeutic protocol for PME. This is the first study to evaluate choroidal thickness in PME using SS-OCT, which could

play a key role in its pathophysiology and provide useful information to improve the management of PME.

PNEUMATIC VITREOLYSIS WITH PERFLUOROPROPANE FOR VITREOMACULAR TRACTION WITH AND WITHOUT MACULAR HOLE: DRCR RETINA NETWORK PROTOCOLS AG AND AH

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ABSTRACT

Purpose: To evaluate pneumatic vitreolysis (PVL) in eyes with vitreomacular traction (VMT) with and without full-thickness macular hole (FTMH).

Design: Two multicenter (28 sites) studies: a randomized clinical trial comparing PVL with observation (sham injection) for VMT without FTMH (Protocol AG) and a single-arm study assessing PVL for FTMH (Protocol AH).

Participants: Participants were adults with central VMT (vitreomacular adhesion was ≤3000 µm). In Protocol AG, visual acuity (VA) was 20/32 to 20/400. In Protocol AH, eyes had a FTMH (≤250 µm at the narrowest point) and VA of 20/25 to 20/400.

Methods: Pneumatic vitreolysis using perfluoropropane (C_3F_8) gas.

Main outcome measures: Central VMT release at 24 weeks (Protocol AG) and FTMH closure at 8 weeks (Protocol AH).

Results: From October 2018 through February 2020, 46 participants were enrolled in Protocol AG, and 35 were enrolled in Protocol AH. Higher than expected rates of retinal detachment and tear resulted in early termination of both protocols. Combining studies, 7 of 59 eyes (12% [95% CI, 6%-23%]; 2 eyes in Protocol AG, 5 eyes in Protocol AH) that received PVL developed rhegmatogenous retinal detachment (n = 6) or retinal tear (n = 1). At 24 weeks

in Protocol AG, 18 of 23 eyes in the PVL group (78%) versus 2 of 22 eyes in the sham group (9%) achieved central VMT release without rescue vitrectomy (adjusted risk difference, 66% [95% CI, 44%-88%]; P< 0.001). The mean change in VA from baseline at 24 weeks was 6.7 letters in the PVL group and 6.1 letters in the sham group (adjusted difference, -0.8 [95% CI, -6.1 to 4.5]; P = 0.77). In Protocol AH, 10 of 35 eyes (29% [95% CI, 16%-45%]) achieved FTMH closure without rescue vitrectomy at 8 weeks. The mean change in VA from baseline at 8 weeks was -1.5 letters (95% CI, -10.3 to 7.3 letters).

Conclusions: In most eyes with VMT, PVL induced hyaloid release. In eyes with FTMH, PVL resulted in hole closure in approximately one third of eyes. These studies were terminated early because of safety concerns related to retinal detachments and retinal tears.

DEVELOPMENT OF A GENOTYPE ASSAY FOR AGE-RELATED MACULAR DEGENERATION: THE EYE-RISK CONSORTIUM

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ABSTRACT

Purpose: To develop a genotype assay to assess associations with common and rare age-related macular degeneration (AMD) risk variants, to calculate an overall genetic risk score (GRS), and to identify potential misdiagnoses with inherited macular dystrophies that mimic AMD.

Design: Case-control study.

Participants: Individuals (n = 4740) from 5 European cohorts.

Methods: We designed single-molecule molecular inversion probes for target selection and used next generation sequencing to sequence 87 single nucleotide polymorphisms (SNPs), coding and splice-site regions of 10 AMD-(related) genes (ARMS2, C3, C9, CD46, CFB, CFH, CFI, HTRA1, TIMP3, and SLC16A8), and 3 genes that cause inherited macular dystrophies (ABCA4, CTNNA1, and PRPH2). Genetic risk scores for common AMD risk variants were calculated based on effect size and genotype of 52 AMD-associated variants. Frequency of rare variants was compared between late AMD patients and control individuals with logistic regression analysis.

Main outcome measures: Genetic risk score, association of genetic variants with AMD, and genotype-phenotype correlations.

Results: We observed high concordance rates between our platform and other genotyping platforms for the 69 successfully genotyped SNPs (>96%) and for the rare variants (>99%). We observed a higher GRS for patients with late AMD compared with patients with early/intermediate AMD ($P < 0.001$) and individuals without AMD ($P < 0.001$). A higher proportion of pathogenic variants in the CFH (odds ratio [OR] = 2.88; P = 0.006), CFI (OR = 4.45; P = 0.005), and C3

(OR = 6.56; P = 0.0003) genes was observed in late AMD patients compared with control individuals. In 9 patients, we identified pathogenic variants in the PRPH2, ABCA4, and CTNNA1 genes, which allowed reclassification of these patients as having inherited macular dystrophy.

Conclusions: This study reports a genotype assay for common and rare AMD genetic variants, which can identify individuals at intermediate to high genetic risk of late AMD and enables differential diagnosis of AMD-mimicking dystrophies. Our study supports sequencing of CFH, CFI, and C3 genes because they harbor rare high-risk variants. Carriers of these variants could be amendable for new treatments for AMD that currently are under development.

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