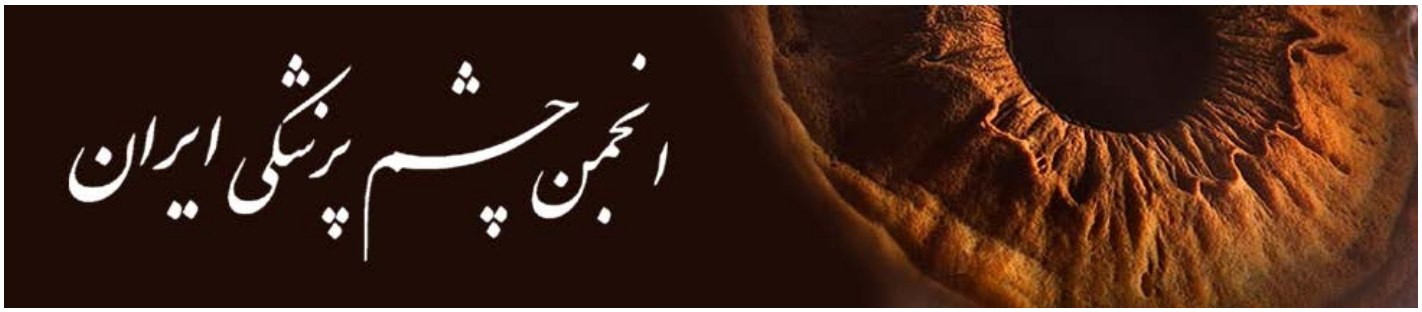


خبرنامه انجمن فوق تخصصی ویتره و رتین

اسفند ماه ۱۳۹۳ – سال دوم – شماره هشتم

Half-Dose Photodynamic Therapy Combined with Bevacizumab For Polypoidal Choroidal Vasculopathy

Methods

Consecutively, 33 eyes were treated with full-dose PDT/IVB and 30 eyes with half-dose PDT/IVB.

Results

At Month 3, half-dose PDT/IVB induced negligible damage to the physiologic choroid but was inferior to full-dose PDT/IVB in achieving complete polyp closure (43.3% vs. 72.7%, P = 0.018) and improving mean best-corrected visual acuity (20/66 vs. 20/43, P = 0.020). At Month 12, the half-dose group achieved comparable visual improvement (20/51 vs. 20/40, P = 0.254) but required more additional injections (a mean of 2.80 vs. 1.03, P = 0.004).

Conclusion:

Despite inferior efficacy in inducing polyp closure, half-dose PDT/IVB followed by additional injections showed promising visual outcomes while avoiding damage to the physiologic choroid.

Lee JH, Lee WK. Half-Dose Photodynamic Therapy Combined with Bevacizumab for Polypoidal Choroidal Vasculopathy. Retina. 2015 Mar 12. [Epub ahead of print]

Choroidal Neovascularization In Caucasian Patients with Longstanding Central Serous Chorioretinopathy

Methods

Retrospective consecutive series of 272 eyes (136 patients) who were diagnosed as having chronic CSC based on clinical and multimodal fundus imaging findings and documented disease activity for at least 6 months. The CNVs were mainly determined by indocyanine-green angiography.

Results:

Patients were evaluated and followed for a maximum of 6 years, with an average follow-up of 14 ± 12 months. Distinct CNV was identified in 41 eyes (34 patients). Based on fluorescein angiography, 37 eyes showed occult with no classic CNV, 3 eyes showed predominantly classic and 1 eye had a disciform CNV. Furthermore, indocyaninegreen angiography revealed polypoidal choroidal vasculopathy lesions, in 27 of the 37 eyes, classified as occult CNV on fluorescein angiography. In total, 17.6% of our patients with chronic CSC were found to have CNV that upon indocyanine-green angiography were recognized as being polypoidal choroidal vasculopathy.

Conclusion:

In our series of Caucasian patients, we found a significant correlation between chronic CSC and CNV, in which the majority of patients with CNV were found to have polypoidal choroidal vasculopathy. Our findings suggest that indocyanine-green angiography is an indispensable tool in the investigation of chronic CSC.

PEIRETTI E et al. Retina. 2015 Mar [Epub ahead of print]

Effect Of Internal Limiting Membrane Peeling On Long-Term Visual Outcomes For Diabetic Macular Edema

Methods:

One hundred and sixteen eyes of 58 patients with the same degree of diabetic macular edema in both eyes underwent pars plana vitrectomy with the creation of a posterior vitreous detachment in both eyes. Internal limiting membrane peeling was performed in one randomly selected eye (ILM-off group), and ILM peeling was not performed (ILM-on group) in the fellow eye. The postoperative follow-up period ranged from 12 months to 161 months (average, 80.4 months).

Results:

In the ILM-off group, the mean best-corrected visual acuity in logMAR units (Snellen equivalent) increased from 0.55 ± 0.31 (20/71) before surgery to 0.35 ± 0.35 (20/45) at 1 year (P, 0.0001) and 0.46 ± 0.43 (20/59) at the final visit (P = 0.058). In the ILM-on group, the mean best-corrected visual acuity increased from 0.55 ± 0.41 (20/71) before surgery to 0.43 ± 0.38 (20/54) at 1 year (P = 0.010) and 0.44 ± 0.45 (20/56) at the final visit (P = 0.043). The differences in the best-corrected visual acuity between the two groups were not significant at any time point.

Conclusion:

Pars plana vitrectomy with or without ILM peeling improves the long-term visual acuity of nontractional diabetic macular edema. Internal limiting membrane peeling does not affect the postoperative best-corrected visual acuity significantly.
KUMAGAI K, et al. Retina. 2014 [Epub ahead of print]

Comparing Aflibercept, Bevacizumab, and Ranibizumab for DME: Analysis of DRCR Protocol T (DRCR-T)

Methods

DRCR-T randomized 660 patients with central-involved DME with Snellen equivalent visual acuity (VA) of 20/32 to 20/320 equally to aflibercept (2.0 mg), bevacizumab (1.25 mg), or ranibizumab (0.3 mg).
During the first 6 months of DRCR-T, participants received injections every 4 weeks unless an eye reached protocol-defined stability (not improved or worsened by at least five letters for at least two injections) and OCT central subfield

thickness was less than 250 µm with VA 20/20 or better. After 6 months, injection was deferred when stability was reached even if the OCT demonstrated DME, and macular laser was applied if DME persisted according to protocol-specified criteria.

Results

Top-line results revealed clinically meaningful VA improvement with all three medications: +13.3 letters with aflibercept, +11.2 with ranibizumab, and +9.7 with bevacizumab. These +2.1 and +3.6 mean letter differences favoring aflibercept were statistically significant (*P* = .03 aflibercept vs ranibizumab; *P* < .001 aflibercept vs bevacizumab; *P* = .12 ranibizumab vs bevacizumab).

In a pre-specified subgroup analysis, the medication effect on VA gains was strongly influenced by baseline VA (*P* < .001 for interaction of VA gain with baseline VA as a continuous variable). Specifically among the 51% of patients with initial mild visual impairment (VA of 20/32 to 20/40), mean VA improvements were similar and not significantly different between the study arms: ranibizumab +8.3, aflibercept +8.0, and bevacizumab +7.5. Among the 49% of patients with initial VA of 20/50 or worse, mean VA improvement was greatest with aflibercept (+18.9) compared to ranibizumab (+14.2) or bevacizumab (+11.8) (*P* = .0031 aflibercept vs ranibizumab; *P* < .001 aflibercept vs bevacizumab; *P* = .21 ranibizumab vs bevacizumab).

Anatomically, aflibercept and ranibizumab were both significantly better retinal-drying agents than bevacizumab, yielding mean optical coherence tomography (OCT) central subfield thickness improvements.

Wykoff C, Hariprasad S. Comparing Aflibercept, Bevacizumab, and Ranibizumab for DME: Analysis of DRCR Protocol T. Ophthalmic Surg Lasers Imaging Retina. 2015; doi: 10.3928/23258160-20150304-01

Adverse event rates low in AMD patients who take anti-VEGFs

The retrospective population-based study included 1,182 patients with AMD who received at least one intravitreal anti-VEGF injection between 2008 and 2011. Mean follow-up was 2 years, and mean number of injections was 4.67.

After anti-VEGF treatment was started, 19 patients experienced myocardial infarction, 16 patients experienced stroke and 43 patients died, for a total of 78 events in 68 patients. Ten patients experienced more than one adverse event.

The age-adjusted incidence rate per 100,000 person-years was 350.2 for myocardial infarction, 299.3 for stroke and 778.9 for mortality. Weighted incidence rates in the general population were comparable: 427.1 per 100,000 person-years for myocardial infarction, 340.4 for stroke and 921.3 for mortality.

Ng, Wei Yan et al. American Journal of Ophthalmology, Volume 159, Issue 3, 557 - 564.e1

Association of Smoking and CFH and ARMS2 Risk Variants With Younger Age at Onset of Neovascular Age-Related Macular Degeneration

Background

Genetic and environmental risk factors combine to lower the age of onset of neovascular age-related macular degeneration (AMD). The CFH Y402H and ARMS2 A69S gene polymorphisms are the two most important genetic risk variants associated with AMD. Smoking is the most consistently and strongest reported environmental risk factor for AMD.

Results

Compared with never smokers, past smokers developed choroidal neovascularization (CNV) an average 4.9 years earlier and current smokers developed CNV 7.7 years earlier.

Homozygous carriers of CFH Y402H developed disease 2.8 years earlier and homozygous carriers of ARMS2 A69S developed disease 5.2 years earlier than the reference groups.

Individuals with all four risk alleles had an age of onset of neovascular AMD 12.2 years earlier than did individuals with no risk alleles, whereas current smokers with no risk alleles developed CNV 14.5 years earlier than never smokers with no risk alleles.

The worst risk group (past smokers with all four risk alleles) had an age of onset 22.4 years earlier than never smokers with no risk alleles.

Lechanteur YE, van de Camp PL, Smailhodzic D, et al. Association of Smoking and CFH and ARMS2 Risk Variants With Younger Age at Onset of Neovascular Age-Related Macular Degeneration. JAMA Ophthalmol. Published online February 19, 2015. doi:10.1001/jamaophthalmol.2015.18.

Effects of posterior vitreous detachment on aqueous humour levels of VEGF and inflammatory cytokines

Methods

In a prospective comparative study, acquous humour was collected at the beginning of cataract surgery and the concentrations of VEGF and other inflammatory cytokines were determined using ELISA and a multiplex cytokine assay. PVD was examined by B-mode ultrasonography, and the subjects were divided into complete PVD group (PVD group) or the other group (without PVD group).

Results

Multiple regression analysis revealed that the logarithmic concentration of VEGF, IP-10, MCP-1, CXCL13 and CCL11 were significantly lower in the eyes with PVD than in those without PVD independently of age, sex and axial length ($p=0.01$, $p=0.002$, $p=0.009$, 0.006 and 0.03, respectively).

Conclusions

PVD is related to the change in the multiple intraocular inflammatory cytokines.

Takahashi H et al. Br J Ophthalmol. 2015 Feb 26. pii: bjophthalmol-2014-306051. doi: 10.1136/bjophthalmol-2014-306051. [Epub ahead of print]

Progression of retinal pigment epithelial atrophy in antiangiogenic therapy of neovascular age-related macular degeneration

Purpose:
To monitor retinal pigment epithelial (RPE) atrophy progression during antiangiogenic therapy of neovascular age-related macular degeneration (AMD) over two years using polarization-sensitive optical coherence tomography (OCT).

Results:
Progressive RPE atrophy and GA developed in the majority of eyes. Atrophic RPE changes included RPE thinning, RPE porosity, focal RPE atrophy and development of GA. Early RPE loss (i.e. RPE porosity, focal atrophy) increased progressively during initial monthly treatment and remained stable during subsequent PRN-based therapy. GA developed in 61% of eyes at month 24.

Schütze, Christopher et al. American Journal of Ophthalmology. 2015 Mar 10. pii: S0002-9394(15)00109-9. doi: 10.1016/j.ajo.2015.02.020. [Epub ahead of print]

Influence of the Vitreomacular Interface on Treatment Outcomes in the Comparison of Age-Related Macular Degeneration Treatments Trials

Objective
To assess the association of the vitreomacular interface with outcomes of eyes treated with anti–vascular endothelial growth factor drugs for neovascular age-related macular degeneration (AMD).

Conclusions
In eyes in the CATT, VMT and VMA were infrequent. At baseline and follow-up, VMT or VMA were not associated with VA. Eyes with VMT or VMA treated as needed required on average 2 more injections over 2 years.

Cuilla, Thomas A. et al. Ophthalmology . Published Online: March 28, 2015

Spectral-Domain Optical Coherence Tomography Angiography of Choroidal Neovascularization

Purpose
To describe the characteristics as well as the sensitivity and specificity of detection of choroidal neovascularization (CNV) on optical coherence tomography angiography (OCTA) using spectral-domain optical coherence tomography.(AngioVue OCTA system)

Conclusions

Using OCTA allows the clinician to visualize CNV noninvasively and may provide a method for identifying and guiding treatment of CNV. The specificity of CNV detection on OCTA compared with FA seems to be high. Sensitivity was 50% (4/8) and specificity was 91% (20/22).Future studies with larger sample sizes are needed to elaborate better on the sensitivity and specificity of CNV detection and to illustrate clinical usefulness.

de Carlo, Talisa E. et al. Ophthalmology 2015 Mar 17. pii: S0161-6420(15)00103-7. doi: 10.1016/j.ophtha.2015.01.029. [Epub ahead of print]

Peripheral Lesions Identified on Ultrawide Field Imaging Predict Increased Risk of Diabetic Retinopathy Progression over 4 Years

Objective

To determine whether peripheral diabetic retinopathy (DR) lesions identified on ultrawide field (UWF) imaging are associated with increased DR progression.

Design

Prospective, longitudinal cohort.

Participants

Two hundred eyes of 100 participants previously enrolled in a comparative instrument validation study.

Methods

Baseline mydriatic 7-standard field Early Treatment Diabetic Retinopathy Study (ETDRS) photographs and UWF images were obtained. On UWF images, DR lesions with a greater extent outside versus inside standard ETDRS fields were defined as predominantly peripheral lesions (PPLs). Follow-up ETDRS photographs were obtained 4.2±0.3 years after baseline. Baseline and follow-up DR severity were graded from ETDRS photographs.

Main Outcome Measures

Rates of 2-step or more progression and progression to proliferative DR (PDR) in eyes with PPLs compared with eyes without PPLs identified on UWF imaging at baseline.

Results

In eyes without PDR (n = 109) at baseline, 56 (51%) had at least 1 field with PPLs and 43 (39%) had DR progression. Compared with eyes without PPLs, eyes with PPLs had a 3.2-fold increased risk of 2-step or more DR progression (6 [11%] vs. 19 [34%]; $P = 0.005$) and a 4.7-fold increased risk for progression to PDR (3 [6%] vs. 14 [25%]; $P = 0.005$). These findings remained statistically significant after adjusting for gender, diabetes type, diabetes duration, hemoglobin A1c (HbA1c) levels, and baseline DR severity. Increasing extent of fields with PPLs increased the risk for 2-step or more DR progression ($P = 0.004$) and progression to PDR ($P = 0.009$).

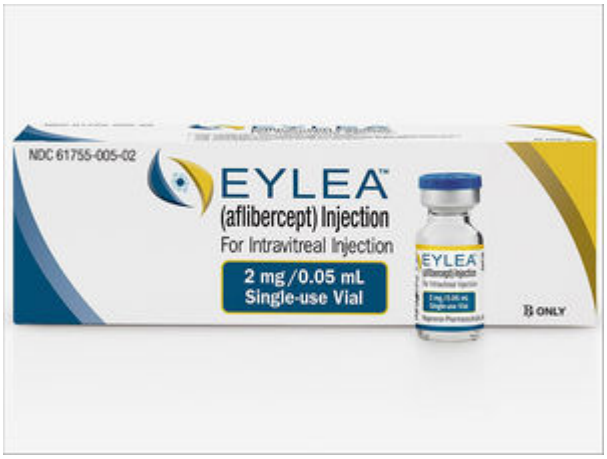
Conclusions:

Presence and increasing extent of PPLs were associated with increased risk of DR progression over 4 years, independent of baseline DR severity and HbA1c levels. Increasing extent of PPLs substantially increased the risk of DR progression and progression to PDR, especially with less severe DR at baseline. These findings demonstrate that detailed peripheral retinal evaluation provides important information that is necessary to assess completely the risk of DR progression.

Silva PS, et al. Peripheral Lesions Identified on Ultrawide Field Imaging Predict Increased Risk of Diabetic Retinopathy Progression over 4 Years. Ophthalmology.

اخبار

FDA approves Eylea to treat diabetic retinopathy in patients with diabetic macular edema



The FDA has approved Eylea injection to treat diabetic retinopathy in diabetic macular edema patients, according to an agency press release. Two clinical studies evaluated the safety and efficacy of Eylea (aflibercept, Regeneron) vs. macular laser photocoagulation in 679 patients, with results showing significant improvement in the severity of diabetic retinopathy at 100 weeks after Eylea injection compared with laser, the release said.

Ohr Pharmaceutical Announces Final Topline Data From OHR-102 (0.2% squalamine lactate ophthalmic solution) Phase 2 IMPACT Study in Wet AMD

In the intent-to-treat (ITT-LOCF) population with classic containing choroidal neovascularization (CNV) (OHR-102 n=38, Lucentis monotherapy n=32), 42% of the patients receiving OHR-102 achieved a greater than or equal to 3 line gain at 9 months, as compared to 28% in the Lucentis monotherapy group. Less of a benefit

was seen in the overall population (classic containing and occult only CNV lesions).
In patients with classic CNV (ITT-LOCF), mean gains in visual acuity were +10.5 letters for the OHR-102 combination arm and +5.4 letters with Lucentis monotherapy, a clinically meaningful benefit of +5.1 letters. Detailed data will be presented at the upcoming Association for Research in Vision and Ophthalmology (ARVO) scientific meeting, which will take place May 3-7.
Source: Ohr Pharmaceutical

Alcon drug meets primary endpoint of change in BCVA for wet AMD

RTH258 met its primary endpoint of mean change in best corrected visual acuity from baseline to week 12 in a phase 2 study of patients with neovascular age-related macular degeneration, Alcon announced in a press release.
RTH258, formerly known as ESBA 1008, is a novel, single-chain antibody fragment, which at a dose of 6 mg was compared with 2 mg Eylea (aflibercept, Regeneron) in a prospective, multicenter, randomized, double-masked study of 90 eyes.
The drug demonstrated “promising visual acuity gains that were non-inferior to aflibercept,” according to the release.
Both RTH258 and aflibercept were well-tolerated, with no adverse events, the release said. “Patients treated **every 3 months** with RTH258 also experienced a prolonged duration of action, potentially leading to a reduced treatment burden,” according to the release.

گردهمایی های بهار ۱۳۹۴

کنگره / گردهمایی	مکان	زمان
سمینار سالیانه گروه ویتره و رتین، انجمن چشم پزشکی ایران	اصفهان	۲ تا ۴ اردیبهشت ۱۳۹۴
ARVO Annual Meeting	Denver, Colo.	May 3- 7, 2015
International Workshops on Granulomatous Uveitis and Ocular Behcet's Disease and APIISG Meeting	Cebu	May 15-17, 2015
AAO Mid-Year Forum	Washington, D.C.	April 15- 18, 2015
4th Annual Ophthalmology Innovation Summit	San Diego, CA	April 16, 2015
APAO Congress	Guangzhou	April 1- 4, 2015
SOE 2015 (European Society of Ophthalmology)	Vienna	June 6- 9, 2015

انجمن فوق تخصصی ویتره و رتین

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