

AMERICAN JOURNAL OF OPHTHALMOLOGY®

VOLUME 147

FEMTOSECOND LASERS IN OPHTHALMOLOGY

Soong and Malta

TEAR CYTOKINE PROFILES IN DYSFUNCTIONAL TEAR SYNDROME

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A COMPARISON OF VITAMIN A AND CYCLOSPORINE A 0.05% EYE DROPS FOR TREATMENT OF DRY EYE SYNDROME

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Fraunfelder

INTER-DEVICE VARIABILITY OF THE STRATUS OPTICAL COHERENCE TOMOGRAPHY

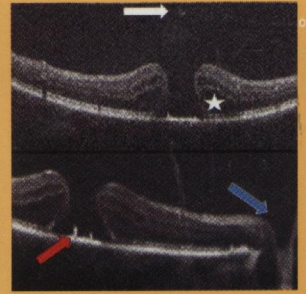
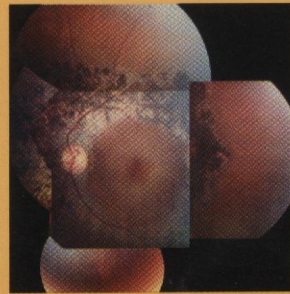
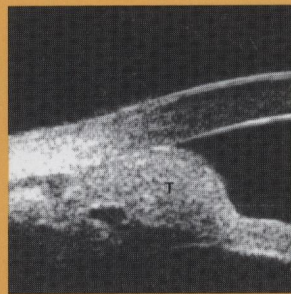
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PROSPECTIVE COMPARISON OF CIRRUS AND STRATUS OPTICAL COHERENCE TOMOGRAPHY FOR QUANTIFYING RETINAL THICKNESS

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REDUCED ZINC AND COPPER IN THE RETINAL PIGMENT EPITHELIUM AND CHOROID IN AGE-RELATED MACULAR DEGENERATION

Erie, Good, Butz, and Pulido



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PERSPECTIVE

- 11 Etiology and treatment of macular edema. *Mark W. Johnson*
This perspective article summarizes current concepts and recent literature regarding the pathogenesis, clinical contexts, and treatment of macular edema, in light of evolving pharmacologic and surgical approaches. Effective management of macular edema is based on recognizing and addressing the pathogenic factors that are operative in a given disease setting. The long-term efficacy and safety of most new therapeutic approaches have yet to be established in controlled clinical trials.

ORIGINAL ARTICLES

- 22 Clinical trials – more than an assessment of treatment effect: LXV Edward Jackson Memorial Lecture. *Frederick L. Ferris*
The public health significance of clinical trials goes beyond the presentation of treatment effects. They also provide

information about the clinical course and risk factors of disease, allowing us to better determine who and when to treat. The determination as to whether a new treatment is safe and effective is important, but the additional information we can obtain regarding natural history, risk factors, and patient satisfaction adds immeasurably to our ability to care for patients.

- 33 Discrepancy between results and abstract conclusions in industry- vs nonindustry-funded studies comparing topical prostaglandins. *Tariq Alasbali, Michael Smith, Noa Geffen, Graham E. Trope, John G. Flanagan, Yaping Jin, and Yvonne M. Buys*
This study evaluated industry- vs nonindustry-funded publications comparing the ocular hypotensive efficacy of topical prostaglandins. Of the 39 publications included in the analysis, 29 (74%) were industry funded. There was no statistically significant difference in significant *P* values of the main outcome measure between industry- vs nonindustry-funded publications. Twenty-four percent of the industry-funded publications had a statistically significant main outcome measure; however, 90% of the industry-funded publications had proindustry abstract conclusions.

- 39 Agreement among glaucoma specialists in assessing progressive disc changes from photographs in open-angle glaucoma patients. *Henry D. Jampel, David Friedman, Harry Quigley, Susan Vitale, Rhonda Miller, Frederick Knezevich, and Yulan Ding*
The agreement among three glaucoma specialists, masked to chronological sequence, in assessing optic disc change from photographs taken in a longitudinal study of glaucoma patients, was poor. Even after adjudication, 4 out of 10 discs that had changed seemed to

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have improved over time. Caution must be exercised when using disc change on photographs as the "gold standard" for diagnosing open-angle glaucoma or determining its progression.

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- **45 Anterior juxtasclear delivery of anecortave acetate in eyes with primary open-angle glaucoma: a pilot investigation.** Alan L. Robin, Abbot F. Clark, David W. Covert, Scott Krueger, Michael V. W. Bergamini, Theresa A. Landry, Jaime E. Dickerson, Jr, Sally A. Scheib, Tony Realini, Joseph M. Defaller, and Gerald D. Cagle

This open-label pilot study is the first to evaluate both a new class of medication, anecortave acetate suspension, and a new method of glaucoma medication delivery, anterior juxtasclear depot, in subjects with open-angle glaucoma taking a prostaglandin analog. Both the injection and medication were well tolerated and produced intraocular pressure lowering lasting months from a single administration. The additivity to a prostaglandin is greater than that seen with other classes of medication.

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- **51 Relationship of intraocular pulse pressure and spontaneous venous pulsations.** Steven J. Donnelly and Prem S. Subramanian

Spontaneous venous pulsations (SVP) occur because of variation in intraocular pulse pressure (IOPP) that exceeds cerebrospinal fluid pulse pressure. Although the presence of SVPs suggests normal intracranial pressure, their absence has been considered to be of little diagnostic value. This study demonstrates that the absence of SVPs with normal IOPP may be predictive of increased intracranial pressure.

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- **56 Comparison of Fourier-domain and time-domain optical coherence tomography in the detection of band atrophy of the optic nerve.** Luciana V. F. Costa-Cunha, Leonardo P. Cunha, Roberto F. S. Malta, and Mário L. R. Monteiro

The diagnostic performance of Fourier-domain (FD) and time-domain optical coherence tomography for detection of neural loss in band atrophy (BA) of the optic nerve was compared in eyes with temporal field defect and normal subjects. Using currently available software, FD technology does not appear to enhance the discrimination ability for detecting retinal nerve fiber layer and macular thickness loss in subjects with BA of the optic nerve.

-
- **64 Predicting visual outcome after treatment of pituitary adenomas with optical coherence tomography.** Maud Jacob, Gérald Raverot, Emmanuel Jouanneau, Françoise Borson-Chazot, Gilles Perrin, Muriel Rabilloud, Caroline Tilikete, Martine Bernard, and Alain Vighetto

Thirty-seven eyes of 19 consecutive patients suffering from pituitary adenomas compressing the anterior visual pathways were prospectively included, and compared with 46 eyes of 23 controls. Automated visual fields (VF) and retinal nerve fiber layer (RNFL) evaluated by optical coherence tomography were performed prior to treatment and 3 months later. RNFL thinning was correlated to incomplete recovery of the initial VF defect 3 months after treatment, independently from age and symptoms duration, which carried their own prognostic value.

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- **71 Comparison between three- and six-month postoperative refractive and visual results after laser epithelial keratomileusis with mitomycin C.** Laura de Benito-Llopis, Miguel A. Teus, and José L. Hernández-Verdejo
- Myopic residual refractions three months after myopic laser epithelial keratomileusis with intraoperative mitomy-

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cin C seem to be stable at that moment to perform an enhancement procedure, whereas hyperopic residual refractions seem to improve at least until 6 months postoperatively, in several cases avoiding the need for enhancement.

• **77 Comparative study of higher-order aberrations after conventional laser in situ keratomileusis and laser epithelial keratomileusis for myopia using the Technolas 217z laser platform.** *Caitriona Kirwan and Michael O'Keefe*
A prospective study was performed on 65 laser in situ keratomileusis (LASIK)- and 50 laser epithelial keratomileusis (LASEK)-treated eyes to determine postoperative changes in higher-order aberrations (HOAs). Both groups were matched before surgery in relation to age, pupil size, manifest refractive spherical equivalent, ablation depth, and optical zone. Three months after surgery, HOAs were significantly greater in both groups. The increase was significantly greater in the LASIK treatment group. Total HOAs decreased from 3 to 12 months after surgery in the LASEK group.

• **84 Intravitreal bevacizumab treatment for choroidal neovascularization in pathologic myopia: 12-month results.** *Magda Gharbiya, Francesca Allievi, Luigi Mazzeo, and Corrado Balacco Gabrieli*

In this prospective, nonrandomized, interventional case series, 20 eyes from 20 patients with myopic CNV were consecutively treated with intravitreal bevacizumab 1.25 mg. All patients were scheduled for three monthly injections. At 12 months, treated eyes had a significant improvement in visual acuity. Treatment resulted in complete absence of angiographic leakage in 95% of eyes.

• **94 Intravitreal bevacizumab for choroidal neovascularization attributable to pathological myopia: one-year results.** *Yasushi Ikumo, Kaori Sayanagi, Kaori Soga, Miki Sawa, Motokazu Tsujikawa, Fumi Gomi, and Yasuo Tano*
Sixty-three eyes of 63 patients treated with intravitreal bevacizumab (IVB) for myopic choroidal neovascularization (CNV) were investigated. The best-corrected visual acuity (BCVA) improved in 25 eyes (40%), worsened in 3 eyes (5%), and was unchanged in 35 eyes (56%) after 12 months. Stepwise analysis showed that the number of IVB ($P < .01$), atrophy around mCNV ($P < .05$), and myopia-related chorioretinal atrophy ($P < .05$) were significantly associated factors with 12 months BCVA.

• **101 Evaluation of wound closure in oblique 23-gauge sutureless sclerotomies with Visante optical coherence tomography.** *Mehran Taban, Sumit Sharma, Alexandre A. C. M. Ventura, and Peter K. Kaiser*
Wound construction is critical for sutureless microincision vitrectomy and oblique incisions have been proposed to prevent wound leakage, hypotony, and the secondary risk of endophthalmitis. Anterior segment optical coherence tomography (Visante) examination of sutureless 23-gauge oblique sclerotomy wounds demonstrates that even on postoperative day 1, oblique sclerotomies provide adequate wound closure.

• **108 Nanophthalmos and acquired retinoschisis.** *Elona Dhrami-Gavazi, William M. Schiff, and Gaetano R. Barile*
Three patients with nanophthalmos were observed who presented with bilateral acquired retinoschisis, suggesting that there may be correlation in the mechanisms underlying these ocular disorders. One patient underwent a course of systemic steroids for bilateral uveitis.