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RISK FACTORS FOR COMPLICATIONS AFTER CONGENITAL CATARACT SURGERY WITHOUT INTRAOCULAR LENS IMPLANTATION IN THE FIRST 18 MONTHS OF LIFE

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THE EFFECT OF CATARACT EXTRACTION ON THE CONTRACTILITY OF CILIARY MUSCLE

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SNEEZING REFLEX ASSOCIATED WITH INTRAVENOUS SEDATION AND PERIOcular ANESTHETIC INJECTION

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SHORT-TERM RESULTS OF PENETRATING KERATOPLASTY PERFORMED WITH THE FEMTEC FEMTOSECOND LASER

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EVALUATION OF INTRASTROMAL INJECTION OF VORICONAZOLE AS A THERAPEUTIC



For elevated IOP

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- More than 11 years of clinical experience*
- The only PG with 5-year safety and efficacy data¹
- The PG more patients stayed on longer^{2†}

11+
YEARS

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Xalatan®
latanoprost ophthalmic solution

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*In a retrospective analysis of prescription refill records for IOP-lowering agents spanning 6 years (1996-2002), more patients stayed on XALATAN (n=6772) longer than bimatoprost (n=404), travoprost (n=408), timolol (n=12,298), brimonidine (n=5057), betaxolol (n=2458), or dorzolamide (n=1344). Discontinuation/change rates were compared using Cox regression models.

Please see brief summary of prescribing information inside journal.

XALATAN is indicated for the reduction of elevated intraocular pressure (IOP) in patients with open-angle glaucoma (OAG) or ocular hypertension (OH).

Important Safety Information: XALATAN can cause changes to pigmented tissues. Most frequently reported are increased pigmentation of the iris, periorbital tissue (eyelid) and eyelashes, and growth of eyelashes. Pigmentation is expected to increase as long as XALATAN is administered. Iris pigmentation is likely to be permanent while eyelid skin darkening and eyelash changes may be reversible. The effects beyond 5 years are unknown. Most common ocular events/signs and symptoms (5% to 15%) reported with XALATAN in the three 6-month registration trials included blurred vision, burning and stinging, conjunctival hyperemia, foreign-body sensation, itching, increased iris pigmentation, and punctate epithelial keratopathy. XALATAN should be used with caution in patients with a history of intraocular inflammation (iritis/uveitis) and should generally not be used in patients with active intraocular inflammation. XALATAN should be used with caution in aphakic patients, in pseudophakic patients with a torn posterior lens capsule, or in patients with known risk factors for macular edema. The recommended dosage of XALATAN is one drop (1.5 µg) in the affected eye(s) once daily in the evening. If one dose is missed, treatment should continue with the next dose as normal. The dosage of XALATAN should not exceed once daily; the combined use of two or more prostaglandins, or prostaglandin analogs including XALATAN, is not recommended. It has been shown that administration of these prostaglandin drug products more than once daily may decrease the intraocular pressure-lowering effect or cause paradoxical elevations in IOP. There have been reports of bacterial keratitis associated with the use of multiple-dose containers of topical ophthalmic products.

*XALATAN was approved by the Food and Drug Administration in 1996.

PG = prostaglandin.

References: 1. Alm A, Schoenfelder J, McDermott J. A 5-year, multicenter, open-label, safety study of adjunctive latanoprost therapy for glaucoma. *Arch Ophthalmol.* 2004; 122:957-965. 2. Heardon G, Schwartz GF, Mozaffari E. Patient persistency with topical ocular hypotensive therapy in a managed care population. *Am J Ophthalmol.* 2004; 137(1):S3-S12.

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PERSPECTIVE

- 489 **The need for standardization of antiretinal antibody detection and measurement.** *Farzin Forooghian, Ian M. MacDonald, John R. Heckenlively, Elise Héon, Lynn K. Gordon, John J. Hooks, Barbara Detrick, and Robert B. Nussenblatt*

Detection and measurement of serum antiretinal antibodies is important for the diagnosis and management of autoimmune retinopathy. To ensure validity and reproducibility of antiretinal antibody test results, standardized testing that uses stringent internal controls is needed. The authors review the literature on current methods used for the detection and measurement of antiretinal antibodies to suggest guidelines for the development of standardized testing.

ORIGINAL ARTICLES

- 496 **Enhanced depth imaging spectral-domain optical coherence tomography.** *Richard F. Spaide, Hideki Koizumi, and Maria C. Pozzoni*

A novel method of performing spectral-domain optical coherence tomography of the eye provided detailed representations of the full-thickness of the choroid, a structure that has been difficult to image. Application of this technique may help to characterize the structure of the choroid in health and disease.

- 501 **High-definition optical coherence tomography features in vitelliform macular dystrophy.** *Giuseppe Querques, Michael Regenbogen, Claudia Quijano, Natalie Delphin, Gisèle Soubrane, and Eric H. Souied*

This study investigates the relationship between the features of high-definition optical coherence tomography findings and fundus examination results at different phases of vitelliform macular dystrophy. Early changes seem to involve the layer between the retinal pigment epithelium (RPE) and the inner segment (IS) and outer segment (OS) interface, first with accumulation of material beneath the sensory retina, and then with IS and OS disruption and attenuation; late changes seem to involve the RPE, which undergoes hypertrophy, disruption, and attenuation.

- 508 **Intraocular pharmacokinetics of bevacizumab after a single intravitreal injection in humans.** *Tim U. Krohne, Nicole Eter, Frank G. Holz, and Carsten H. Meyer*
- The intraocular pharmacokinetics of bevacizumab after a single intravitreal injection in humans were investigated in 30 nonvitrectomized eyes of 30 patients. Aqueous humor samples were obtained one to 53 days after an intravitreal dose of 1.5 mg, and bevacizumab concentrations were quantified. Intraocular concentration of bevacizumab declined over time in a monoexponential fashion with a half-life of 9.82 days.

- 513 **Two-year results of photodynamic therapy for polypoidal choroidal vasculopathy.** *Yumiko Kurashige, Atsushi Otani, Manabu Sasahara, Yuko Yodoi, Hiroshi Tamura, Akitaka Tsujikawa, and Nagahisa Yoshimura*

This article presents the two-year visual outcomes of photodynamic therapy (PDT) for patients with polypoidal choroidal vasculopathy (PCV) patients. Although both the bilateral and unilateral cases showed increases of the

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visual acuity (VA) up until the 12-month follow-up examination, there was a significant decrease noted for the mean VA of the bilateral cases that was not observed in the unilateral cases at the final examination. The long-term efficacy of the PDT for PCV indeed was not the same as that seen in the short-term.

• **520 Interobserver and intraobserver reliability of detecting age-related macular degeneration using a nonmydriatic digital camera.** *Valérie Le Tien, Maté Strého, Philippe d'Athis, Elodie Taillandier-Heriché, Elena Paillaud, Hassina Mahiddine, Gabriel Coscas, Jean-Louis Lejonc, Gisèle Soubrane, and Eric H. Souied*

Interobserver and intraobserver reliability of the nonmydriatic digital camera was evaluated for detection of age-related macular degeneration in older (>55 years) and hospitalized elderly (>70 years) people. Gradable fundus photographs were found in 90% of the 55-year-old persons and in 43% of the disabled 70-year-old persons, who otherwise would have had no access to any form of funduscopy.

• **527 Corneal healing after riboflavin ultraviolet-A collagen cross-linking determined by confocal laser scanning microscopy in vivo: early and late modifications.** *Cosimo Mazzotta, Claudio Traversi, Stefano Baiocchi, Orsola Caporossi, Cristina Bovone, Maria Caterina Sparano, Angelo Balestrazzi, and Aldo Caporossi*

Prospective nonrandomized open trial to assess micromorphological modifications of cross-linked corneas in vivo by means of Heidelberg Retinal Tomography II confocal microscopy. The study shows microstructural changes of the cornea after collagen cross-linking, confirming new hypotheses about its long-term efficacy in preventing keratoconus and secondary ectasia progression. Presence of dense hyperreflective bands and increased density of extracellular matrix in the anterior midstroma indicates in this aspect a different collagen structure and new lamellar interconnections.

• **534 Assessment of the use of anterior segment optical coherence tomography in microbial keratitis.** *Aris Konstantopoulos, Jennifer Kuo, David Anderson, and Parwez Hossain*

Anterior segment optical coherence tomography (AS OCT) provides noncontact, high-resolution corneal and anterior segment imaging. Serial corneal scanning was carried out on seven cases with suspected microbial keratitis. In addition to qualitative assessment, infiltrate and corneal thickness could be measured in six cases, and inflammatory plaque width could be measured in one case. Serial measurements, possible in all cases, allowed objective assessment of the treatment response. AS OCT is a useful imaging method in monitoring the clinical course of corneal inflammatory disease.

• **543 Non-Descemet stripping automated endothelial keratoplasty for endothelial dysfunction secondary to argon laser iridotomy.** *Akira Kobayashi, Hideaki Yokogawa, and Kazuhisa Sugiyama*

We report clinical outcomes after non-Descemet stripping automated endothelial keratoplasty performed as treatment for endothelial dysfunction secondary to argon laser iridotomy. Also, a new endothelial donor insertion pull-through technique is presented that combines use of a Busin glide and an intraocular lens sheet glide (Kobayashi double-glide technique). This modified endothelial keratoplasty procedure reduced donor endothelial cell loss and produced superior visual acuity and minimal induced astigmatism in our small patient series ($n = 6$).

• **550 Long-term Staar toric intraocular lens rotational stability.** *Mario Jampaulo, Michael D. Olson, and Kevin M. Miller*

Neither time nor neodymium-yttrium-aluminum-garnet laser posterior capsulotomy changes the rotational orientation of Staar toric intraocular lenses within the capsular bag beyond the two-week postoperative time point.