

# ASCRS EyeWorld Meeting Reporter

Reporting Live from 2008 ASCRS-ASOA Symposium & Congress

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Today's news from the 2008 ASCRS annual meeting brought to you by EyeWorld magazine.

Sessions continued Sunday at the 2008 ASCRS-ASOA annual symposium in Chicago with hot topics in cornea and glaucoma. The highlighted event at Sunday's general session included the Manus C. Kraff lecture, honoring Michael Merzenich, Ph.D., for his contributions to the field of neuroscience and his research in brain plasticity.

## Managing Ametropia

As part of a symposium on Hot Topics in Cornea and External Disease, corneal controversies in the management of ametropia were discussed.

Among the issues talked about was dry eye after LASIK, by **John Sheppard, M.D.**, professor of ophthalmology, microbiology, and immunology, Eastern Virginia Medical School, Norfolk. Dr. Sheppard said it was important for surgeons to be diligent in looking out for dry eye post-op and listed the kinds of patients who were at high risk for dry eye. Detailing the mechanisms of the condition, he also listed ways in which to detect dry eye such as visual acuity fluctuation, getting patient history, using the slit lamp, performing the Schermer test and tear film break-up time. Dr. Sheppard also discussed treatment of dry eye as recommended by the Delphi Panel. Should dry eye occur post-lasik, he said doctors should repeat the therapy conducted pre-op.

Another issue related to LASIK, the assessment of patient risk for ectasia post surgery, was discussed by **J. Bradley Randleman, M.D.**, Department of Ophthalmology, Emory University, Atlanta. Dr. Randleman started off with a case presentation of a patient who developed ectasia even though the pre-op factors: high myopia, low residual stromal bed, and forme fruste keratoconus, traditionally thought to be the main risk factors, did not apply to him.

Dr. Randleman then went on to talk about a risk score model he and colleagues at the Emory Eye Center devised through a retrospective study of all patients with ectasia who sought treatment at the center from 1998 to 2005 as well as those found in the English language literature through December 2005, identifying a total of 171 cases that were compared with 186 controls. Patient age, gender, preoperative manifest refraction spherical equivalent, preoperative corneal thickness, predicted residual stromal bed thickness, and topographic patterns, were analyzed and the topographic patterns were broken down into three categories: normal, suspected (mildly or significantly), and abnormal.

Dr. Randleman and colleagues determined main risk factors through the data and came up with a risk factor score point system that generated a cumulative score based on the presence of a risk factor in the patient. When they applied this scoring system to their study groups, they found that 98% of the control population was identified as low risk and 93% of the patients with ectasia were identified as high risk. When applying this system to the case he presented at the beginning of his talk, Dr. Randleman said the patient had a score that would not recommend him for LASIK. Dr. Randleman warned that the research team did not have enough data to know if the scale is applicable to surface ablation patients.

*Editors' note: Drs. Sheppard and Randleman have no financial interests related to their presentations.*

## Phaco reduces IOP in glaucoma patients



Given the success he found in his data, **Brooks J. Poley, M.D.**, Minneapolis, said he could foresee a future in which a clear lens extraction would be a surgical option for glaucoma regardless if the patient has a cataract.

"Phacoemulsification with IOL [intraocular lens] implantation may be the most successful and unrecognized way to treat glaucoma," Dr. Poley said.

To get to this conclusion, Dr. Poley performed a retrospective study to assess phaco's effects on glaucomatous eyes in the long term. For the study, he stratified 131 eyes into five groups according to their pre-op IOP: 29 – 23 mmHg (n = 21); 22 – 20 mmHg (n = 22); 19 – 18 mmHg (n = 30); 17 – 15 mmHg (n = 34); and 14 – 6 mmHg (n = 24).

Eyes with the highest pre-op IOP saw the greatest reductions at one-year post-op and at the final measurement.

Average IOP reduction of all eyes was  $3.3 \pm 2.9$  mmHg at one year and  $3.2 \pm 3.1$  mmHg at final. Patient age at surgery did not influence the post-op IOP response. All of the patients with IOPs of at least 20 mmHg (n = 43) had a reduction.

Dr. Poley also noted that patients with the narrowest anterior chambers, which also had the largest lenses, experienced the largest reduction. He postulated that as the lens ages, it becomes a major cause of ocular hypertension and adult glaucoma.

*Editors' note: Dr. Poley does not have any financial interests.*

### Canaloplasty-phaco procedure effective for patients with OAG, cataracts

In a prospective, international, multi-center study of canaloplasty to treat open angle glaucoma (OAG) in patients who also presented with visually significant cataract, **Bradford J. Shingleton, M.D.**, assistant clinical professor, Harvard Medical School; and clinical instructor, Tufts University of Medicine, Boston, and his colleagues treated 57 eyes with a combined canaloplasty-phaco procedure. Pre-op study eyes presented with an average IOP of 24.1 mmHg (n = 57, SD = 6.1) with an average of 1.5 glaucoma medications. At 12 months the average IOP was 14.0 mmHg (n = 29, SD = 4.3) with 0.2 medications. Dr. Shingleton said there were not any threatening complications. Visual acuity on average improved by 0.2 logMAR (2 lines), with no eye demonstrating a loss of visual acuity of 0.3 logMAR (3 lines) or greater. The incidence of surgical complications was low. The most common complication of trace blood in the anterior chamber at one day post-op (28.3%), but it was resolved in almost all cases by one-week follow-up. Other complications included Descemet's membrane separation (1.8%), post-op IOP spike greater than 30mmHg (1.8%) and iris prolapse (1.8%).

Dilation and tensioning of Schlemm's canal in combination with cataract surgery may be an effective surgical treatment for open angle glaucoma and visually significant cataract.

*Editors' note: Dr. Shingleton has financial interests with Alcon (Fort Worth, Texas), Allergan (Irvine, Calif.), Bausch & Lomb (Rochester, N.Y.), iScience Surgical (Redwood City, Calif.), I-Therapeutix (Waltham, Mass.) and Pfizer (New York).*

### ECP, phaco combo effective in IOP lowering

Combining endocyclophotocoagulation of 270 degrees of ciliary processes and phacoemulsification/IOL implantation can be effective in lowering both intraocular pressure (IOP) and the number of medications needed in all forms of glaucoma, according to **Diamond Y. Tam, M.D.**

Dr. Tam retrospectively reviewed the charts of 101 patients with various types of glaucoma who underwent 270 degrees of endocyclophotocoagulation with cataract extraction. Primary end points were pre- and post-op visual acuity, mechanism of glaucoma, IOP, gonioscopic examination and the number of glaucoma medications.

Patients were diagnosed predominantly with primary open-angle glaucoma (69.3%), chronic angle closure glaucoma (13.9%), plateau iris (8.9%), and pseudoexfoliation (7.9%). Mean BCVA pre-op was 20/80, which improved to 20/40 post-op; IOP improved from a mean of 17.7 mm Hg to 14.5 mm Hg. In addition, the average number of topical glaucoma medications decreased from 2.4 preoperatively to 1.8 postoperatively.

"There were no intraoperative complications," he said. However, post-op complications from the procedure included corneal edema, anterior chamber reaction, and late branch retinal vein occlusion.

"A subgroup analysis of patients with the diagnosis of plateau iris revealed in addition to improvement in IOP control and need for topical glaucoma therapy, a marked anatomical widening of the angle as assessed by gonioscopy post-op," he said.

*Editors' note: Dr. Tam does not have any financial disclosures.*



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