

RESEARCH UPDATE

See the Scientific Posters: First Session

Every year, the posters sessions during the Annual Meeting represent research from several hundred researchers who both ask the big questions and investigate the nuances in their areas of expertise. They push the edges of knowledge farther out and create a deeper understanding of ophthalmology.

EyeNet is highlighting a representative selection of this year's "Best Posters"—a designation that is determined by the Annual Meeting Program Committee. But remember that there are many other excellent posters that we weren't able to cover, and they, too, are worthy of your notice. Take some time to head over to Hall D to take a look for yourself.

CATARACT**Lens Zonule Changes After Vitreoretinal Surgery**

Guo and colleagues suspected a relationship between prior vitreoretinal surgery and changes in lens zonules/anterior segment integrity—a potential key issue when planning for cataract surgery. The authors used ultrasound biomicroscopy to examine the anterior segment and lens zonules in 13 eyes that had undergone previous vitreoretinal surgery. These eyes were then compared with 10 eyes that had no prior surgeries.

The investigators found that seven of the 13 eyes with vitreoretinal surgery (54 percent) showed absent or disorganized lens zonules and deepened posterior chamber in at least one quadrant, compared with none in the control group. "This knowledge allows for a proper planning of future cataract surgery to better manage intraoperative complications, such as lens zonular dehiscence or subluxated cataract," said Suqin Guo, MD, assistant professor of ophthalmology and visual science at the University of Medicine & Dentistry of New Jersey.

—Lori Baker Schena

■ **Poster #12** will be presented Sunday from 11 a.m. to 12:30 p.m. in Hall D. The presenters also will be at their poster for one additional hour indicated on a mock clock by the poster board.

CORNEA**Endothelial Cell Count After Femtosecond Laser-Assisted Penetrating Keratoplasty**

Endothelial cell count following laser-assisted penetrating keratoplasty using the Femtec femtosecond laser was performed for the first time in 11 patients during a study conducted by Holzer and colleagues of the International Vision Correction Research Centre in Heidelberg, Germany. They sought to identify any differences in endothelial cell loss between this procedure and traditional keratoplasty, which typically yields a loss of 40 percent.

Prior to surgery, endothelial cells were measured using a specular microscope and ranged from 2,300 to 2,750 cells/mm² in the corneal donor buttons. Cell counts were measured again at both 12 and 24 months. The quantity of endothelial cells lost in the first year ranged between 1,350 and 2,100 cells/mm², with a median loss of 35.94 percent. The group found that at 24 months after surgery all transplants were clear, and patients had an improved visual acuity. "What we can conclude from this study is that the keratoplasty performed with the Femtec femtosecond laser is as safe as normal keratoplasty regarding endothelial cell loss. The exciting aspect of this new procedure is that the size and shape of the surgical incision can be customized to meet the surgical needs of a patient, which cannot be done with standard keratoplasty," said Dr. Holzer.

—Leslie Burling-Phillips

Of the five authors, four report no related financial interest. One had not reported either way at press time.

■ **Poster #66** will be presented Sunday from 2 to 3:30 p.m. in Hall D. The presenters also will be at their poster for one additional hour indicated on a mock clock by the poster board.

GLAUCOMA**Using OCT to Understand Atrophied Optic Discs**

When an optic disc atrophy without cupping presents in an eye with normal intraocular pressure and the visual field examination shows an altitudinal defect, there may be two possibilities: normal-tension glaucoma or anterior ischemic optic neuropathy (AION).

The ability to differentiate the cause is important, said Orna Geyer, MD, head of ophthalmology at Carmel Medical Center in Haifa, Israel, since "normal-tension glaucoma, but not anterior ischemic optic neuropathy, should be treated medically to prevent progression of the optic disc damage and preserve vision."

Geyer and colleagues looked for a method that would allow them to make the correct diagnosis and found that optical coherence tomography could distinguish between glaucoma and AION optic discs.

Using a Stratus OCT, the researchers compared retinal nerve fiber layer thickness in average, affected and unaffected quadrants of 18 eyes with glaucoma, and 11 eyes with AION, all having altitudinal visual field defect. Retinal nerve fiber layer thicknesses were similar in average and affected quadrants. But in the unaffected quadrant, the retinal nerve fiber layer was thinner in glaucoma (74.08 ± 6.93µm) than in AION (103.9 ± 8.5µm, P < 0.001).

—Miriam Karmel

The authors report no related financial interest. ■ **Poster #96** will be presented Sunday from 12:30 to 2 p.m. in Hall D. The presenters also will be at their poster for one additional hour indicated on a mock clock by the poster board.

NEURO-OPHTHALMOLOGY**Spontaneous Venous Pulsations May Be Diagnostic Tool**

Spontaneous venous pulsations are rarely present in patients with papilledema. However, interestingly, they are absent in some normal individuals, as well. Donnelly and Subramanian suspected a relationship between the incidence of spontaneous venous pulsations and intraocular pulse pressure. To test this hypothesis, the intraocular pulse pressures of 42 patients were measured with the Pascal Dynamic Contour Tonometer (Ziemer Ophthalmology).

The results showed that 88.6 percent of the patients had spontaneous venous pulsations detected in one or both eyes. However, in those with intraocular pulse pressure greater than 1.2 mmHg, this increased to 100 percent of patients with spontaneous venous pulsations. These findings lead the authors to conclude that a significant correlation does indeed exist between the amplitude of intraocular pulse pressure and the presence of spontaneous venous pulsations. This may help discriminate papilledema from other disc anomalies.

—Lori Baker Schena

The authors report no related financial interest.

■ **Poster #127** will be presented Sunday from 11 a.m. to 12:30 p.m. in Hall D. The presenters also will be at their poster for one

additional hour indicated on a mock clock by the poster board.

ORBIT, LACRIMAL, PLASTIC SURGERY**Novel Technique for Medial Upper Eyelid Defects After Xanthelasma Excision**

Patients with large upper eyelid xanthelasma often seek treatment to improve their appearance, and that can be a challenge. Surgical excision results in large defects that cannot be closed directly without causing upper eyelid malposition. The authors, Then and Malhotra, reviewed seven patients who underwent a technique called superiorly hinged blepharoplasty flap.

"We have found the superiorly hinged blepharoplasty flap to be an excellent alternative to other treatments, such as skin grafting, which can result in color and texture mismatch. This flap uses the natural laxity of skin in the lateral upper eyelid to cover defects in the medial upper eyelid. It is simple to perform, and, for patients with dermatochalasis, a blepharoplasty can be performed at the same time to augment the overall aesthetic outcome for the patient. We have achieved excellent aesthetic results, without functional compromise, of the eyelid with this technique," said Siew-Yin A. Then, MBBS, oculoplastic fellow of the corneoplastic unit, Queen Victoria Hospital, East Grinstead, England.

—Leslie Burling-Phillips

■ **Poster #147** will be presented Sunday from 2 to 3:30 p.m. in Hall D. The presenters also will be at their poster for one additional hour indicated on a mock clock by the poster board.

Ophthalmic Trivia Quiz: Test Your Acuity

Ever wonder what animal has the largest eye, or what profession has the highest risk of cataracts? Take this trivia quiz and discover a few curiosities from our ophthalmic world. You can find the answers on page 21 of tomorrow's *Academy News*.

1. What baseball Hall of Famer suffered partial blindness due to diabetic retinopathy? (Hint: He broke the sport's color line in 1947.)
2. What is the only language invented by an ophthalmologist? What is the doctor's name?
3. What current head of state is an ophthalmologist?
4. What profession is believed to have the highest risk of cataracts in the general population?
5. Name three famous painters whose vision suffered from eye disease during their careers.
6. True or false: A form of cataract surgery was being performed as early as Ancient Roman times?
7. What is a *Demodex folliculorum*, and where in the eye can it be found?
8. Name three nonhuman species that have full-color vision.
9. What animal has the most complex eyes in the animal kingdom?
10. How many eyes do most spiders have?
11. Which animal has the largest eyeball among living animals?

BEST POSTERS

REFRACTIVE SURGERY

Temporal Cones in Keratoconic Eyes

Ertan and Colin analyzed temporal cone frequency in 482 keratoconic eyes. In Group I, which included 83 eyes of individuals aged 20 and younger, Pentacam detected temporal cones in 22 percent of eyes. Temporal cones were detected in 6.9 percent of eyes in Group II (362 eyes of individuals between 21 and 40). In Group III (37 eyes of individuals over age 41), Pentacam examination detected temporal cones in 11.1 percent of eyes.

Classically, keratoconus is diagnosed by evaluating superoinferior asymmetry on topographic view. The authors conclude that cones can be located temporally, especially in younger individuals, which is unusual for keratoconus. "Inferosuperior asymmetry on anterior curvature maps does not mean anything without detailed evaluation of elevation and pachymetry maps for refractive surgery," said Aylin Ertan, MD, director of refractive surgery at Kudret Eye Hospital, Ankara, Turkey. "There may be patients with normal

inferosuperior values on anterior curvature topographic map with temporal elevation and apex displacement toward the temporal side on pachymetry map, which may be detected using Pentacam. This is especially important in younger patients with forme fruste temporal keratoconus."

—Lori Baker Schena

The authors report no related financial interest.

■ Poster #165 will be presented Sunday from 12:30 to 2 p.m. in Hall D. The presenters also will be at their poster for one addi-

tional hour indicated on a mock clock by the poster board.

RETINA

Diabetic Macular Edema With Intravitreal Bevacizumab or Triamcinolone Acetonide

Dr. Pelayes, a professor of ophthalmology at Buenos Aires University, compared intravitreal triamcinolone with intravitreal bevacizumab, "to support evidence of their efficiency in macular disease."

In a nonrandomized, retrospective study by Pelayes and colleagues, 317 DME patients received 1.25 mg or 2.5 mg of bevacizumab; 395 patients received 4 mg or 20 mg of triamcinolone. Both treatments resulted in improvement of 2 ± 3 Snellen lines. But the triamcinolone group experienced more adverse ocular events, including increased intraocular pressure among 30 percent of the patients.

"Both medications are effective in treating DME," said Dr. Pelayes, but the differences and complications of each drug must be emphasized with patients. Drug cost is another consideration.

—Miriam Karmel

Of the eight authors, six report no related financial interest. Two had not reported either way at press time.

■ Poster #195 will be presented Sunday from 2 to 3:30 p.m. in Hall D. The presenters also will be at their poster for one additional hour indicated on a mock clock by the poster board.

UVEITIS

Epidemiology of Childhood Uveitis

"Pediatric uveitis accounts for only a small number of patients, but it has a severe course and may lead to vision loss. Most studies have been restricted by size and geographic region, which may not be an accurate reflection of the bigger picture," said Nida Sen, MD, MHSc, a resident at George Washington University. To gain a better perspective of the etiologies and prognosis of patients with pediatric uveitis, the National Eye Institute conducted a retrospective analysis of data obtained from 527 patients who were followed for a period of one to 10 years at three centers.

Sen and colleagues found that "idiopathic uveitis and juvenile idiopathic arthritis-related uveitis were the two most frequently occurring diagnoses. While the median age of diagnosis was 9.1, the median age of presentation to a uveitis specialist was 11.2—a lag of about two years. Further, 13 percent of the patients evaluated had 20/200 vision at the five year follow-up. Although patients received treatment, both complications and poor visual outcomes tended to persist over time and patients with posterior and panuveitis were at a greater risk for vision loss," said Dr. Sen.

—Leslie Burling-Phillips

■ Poster #111 will be presented Sunday from 12:30 to 2 p.m. in Hall D. The presenters also will be at their poster for one additional hour indicated on a mock clock by the poster board.



EUROPEAN GLAUCOMA SOCIETY

8th EGS CONGRESS
Berlin, June 1st - 6th, 2008




Deadline for abstract submission: January 7th, 2008

- Early registration deadline:
February 15th, 2008
- Registration last deadline:
May 12th, 2008
- Registration and abstract submission forms available on line soon!

SCIENTIFIC PROGRAM
Teaching Courses for Residents
Update Courses for the General Ophthalmologist
Specialist Debates and Symposia
and much more.....

GET READY!!!
SAVE THE DATE!!!

TECHNICAL EXHIBITS

For further details
see the EGS website
www.egs.org

ATTRACTIVE SOCIAL PROGRAM

CONGRESS ORGANISER
O.I.C. Srl
Organizzazione Internazionale Congressi
Viale G. Matteotti, 7
50121 Florence, Italy
Phone ++39-055-50351
Fax ++39-055-5001912/570227
E-mail: egs2008@oic.it

PRESIDENT
Roger A. Hitchings, United Kingdom

LOCAL ORGANISER
Franz Grehn, Germany

CONGRESS VENUE
Maritim Hotel Berlin
Ecke Stauffenbergstrasse/
Sigmundstrasse
D-10785 Berlin, Germany