

News in Review

COMMENTARY AND PERSPECTIVES

Many Variables Affect Vision Satisfaction

When a patient's visual acuity is 20/20—or close—it's tempting to assume that his or her vision is satisfactory, said Mahmood El-Gasim, MD. After finding that many

patients had excellent visual acuity in the clinic but still complained of poor vision, he and colleagues at Johns Hopkins University decided to study whether other variables might affect a patient's self-rated vision status.

The study. In a longitudinal population-based cohort study, the researchers looked at 2,467 individuals, aged 65 to 84, who were enrolled in the Salisbury Eye Evaluation (SEE) Study.¹ Rating their vision status from 0 to 10 (with 0 being blindness and 10 being excellent vision), the patients also completed the Activities of Daily Vision Scale (ADVS)

questionnaire—including night driving, near vision, and distance vision subscales—and underwent testing of visual acuity, contrast sensitivity, stereoacuity, and visual fields.

In the study, better visual acuity was most likely to elicit better self-reported vision status. In addition, good contrast sensitivity was critical to patients' visual satisfaction, said Dr. El-Gasim, now a resident at the New York Eye and Ear Infirmary in New York City. "These findings were consistent with previous studies," he said. "But we also found that other variables,



SATISFACTION. A study of senior citizens showed that satisfaction with vision involves factors other than 20/20 visual acuity, with near vision being especially important.

such as stereoacuity and visual fields, were important determinants of self-rated vision status, which no one had thoroughly studied before."

In addition, visual function—as represented by ADVS—was an important factor when patients rated the quality of their vision. The researchers found that difficulties on the distance vision and near vision ADVS subscales were significantly associated with patients' satisfaction with

vision. Better performance on the near vision subscale was most likely to result in a report of good vision versus poor vision. "Consistent with other studies, ability to function well at near vision tasks is really important for an older population," said Dr. El-Gasim.

Application of findings. Dr. El-Gasim noted that individuals may value different types of vision based upon their specific activities of daily living, as well as their expectations and

lifetime experiences. “For our population, being able to perform near vision tasks was particularly important,” he said.

Dr. El-Gasim hopes the study will immediately help inform clinicians’ practices. If a patient is seeing 20/20 but reports unsatisfactory

vision, other tests may help uncover the root of the problem. —Annie Stuart

1 El-Gasim M et al. *Invest Oph-*

thalmol Vis Sci. 2013 June 27. [Epub ahead of print].

Dr. El-Gasim reports no related financial interests.

Uveitis Update

Uveitis Improves in Mid and Late Pregnancy

A study examining the effect of pregnancy on the course of uveitis found that uveitis activity decreases during pregnancy and then returns to prepregnancy levels following delivery.¹

“Pregnancy makes uveitis better, but only temporarily,” said Lyndell L.P. Lim, MD, a consultant ophthalmologist at the Royal Victorian Eye and Ear Hospital, Melbourne, Australia.

The impetus for the study was an encounter Dr. Lim had with a chronic uveitis patient who wanted to know how pregnancy might affect her disease. Some diseases, such as lupus, may worsen during pregnancy, while others, such as rheumatoid arthritis, improve. But little was known about the influence of pregnancy on noninfectious uveitis, Dr. Lim said. “After searching the literature and not finding much there, I decided to review the experience of our patients.”

The study involved 47 uveitis patients who became pregnant while receiving care. It compared uveitis flare-up rates during pregnancy to flare-ups during nonpregnant periods. Av-

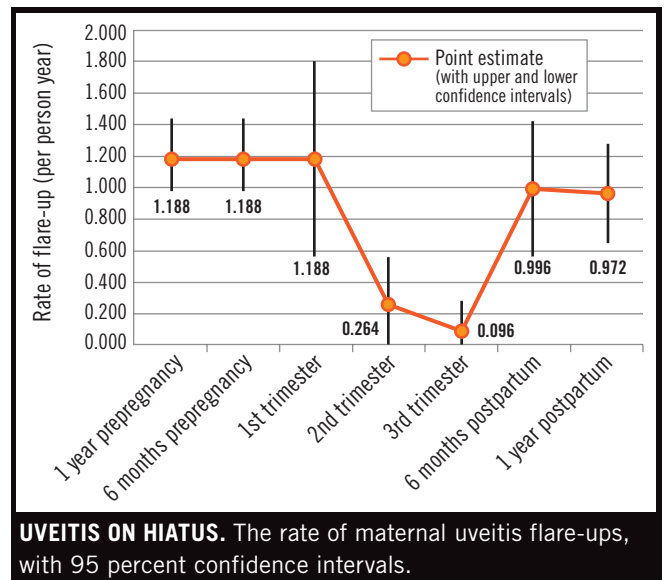
erage follow-up was 30.3 months.

The majority of patients had either HLA-B27–positive uveitis (23 percent) or idiopathic disease (45 percent). Other etiologies were collapsed into a single “other” group. The majority (64 percent) had chronic persistent uveitis, typically in the anterior segment (60 percent).

The study found that during the first trimester, uveitis activity was similar to activity before pregnancy. But by the second trimester, flare-up rates were significantly lower than in the first trimester and remained at that lower level for the duration of the pregnancy. Within six months after delivery, flare-ups rebounded significantly from the average rates in the gestational period. They remained at that level at one year postpartum.

The authors note that the findings were not surprising; the hormonal and immunologic changes in pregnancy that ensure the maternal immune system tolerates the fetus also influence the course of maternal autoimmune diseases.

One surprise, however, was the high percentage



—40 percent—of subjects whose uveitis remained inactive one year postpartum, Dr. Lim said. Though average rates of overall disease activity returned to prepregnancy levels after delivery, a significant proportion of patients actually remained “in remission,” with no further recorded episodes of flare-ups in the postpartum period, she said. “Unfortunately, the numbers of patients are small overall, so we weren’t able to further investigate this group for reasons why their uveitis stayed quiescent in comparison to the rest of the group.”

Dr. Lim said the study leaves some unanswered questions, such as whether different forms of uveitis behave differently during pregnancy and which types of uveitis are more likely to remain quiescent after pregnancy.

In the meantime, the findings are useful for managing uveitis during and after pregnancy. Dr. Lim said she is more likely to cease or reduce treatment during pregnancy, particularly for patients on systemic medication. She also warns all patients that their disease may flare up after delivery, so she recommends a follow-up visit approximately six weeks postpartum.

Finally, she can offer the kind of information her inquiring patient would have wanted to hear. “I can now tell patients that, in general, their uveitis is likely to get better during their pregnancy, which is reassuring for them.” —Miriam Karmel

1 Chiam NP et al. *Br J Ophthalmol.* 2013 July 25. [Epub ahead of print].

Dr. Lim reports no related financial interests.

Systemic Issues

Diabetes Brings Risk of Failed Trabeculectomy

Diabetes, even without the complication of retinopathy, appears to be a risk factor for failed trabeculectomy with mitomycin C (MMC). Although this is not a major risk factor, surgeons should consider it, said Simon K. Law, MD, PharmD, health sciences clinical professor, Jules Stein Eye Institute, University of California, Los Angeles.

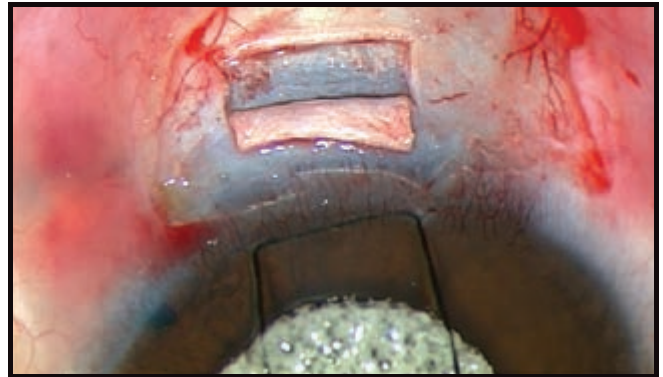
In a retrospective case-control study, Dr. Law and colleagues compared the outcomes of primary trabeculectomy with MMC in two groups of patients with primary open-angle glaucoma: patients with diabetes but no retinopathy (41 eyes)

and patients without diabetes (81 eyes), who served as controls.¹ The long-term trabeculectomy survival rate for diabetic patients was 63.0 months compared with 74.6 months for controls.

The control group had lower mean postoperative IOP at all follow-up visits, up to seven years. Controls also took fewer glaucoma medications than the diabetic patients at all visit intervals.

“This study reminds us that diabetes is a systemic disease, and patients with diabetes, even without any ocular sign of the disease, may respond differently to treatment,” Dr. Law said.

Dr. Law decided to con-



TAKE CARE WITH TRAB. The study author modifies his trabeculectomy procedure for diabetic patients.

duct the study after several diabetic patients asked, “Is it more risky for me to have surgery?” Although diabetes is associated with higher risk in nonocular surgeries, the literature hadn’t answered this question.

Before analyzing the data, Dr. Law tended to treat diabetic patients with no evidence of retinopathy the same as nondiabetic patients. Now, he increases the use of adjunctive MMC in patients with diabetes. To minimize complica-

tions, he supplements the routine dose and duration of MMC application with a subconjunctival injection of the same concentration of MMC diluted with lidocaine 2 percent with epinephrine solution in a 1:1 proportion. “Mitomycin needs to be handled with great care,” he said. —Miriam Karmel

1 Law SK et al. *Br J Ophthalmol.* 2013;97(5):561-566.

Dr. Law reports no related financial interests.

Glaucoma Report

ED—Beta-Blocker Link Appears to Be Debunked

A team of Canadian researchers has found an association between glaucoma and erectile dysfunction (ED).¹ They did not, however, find a connection between specific glaucoma drugs and ED, though systemic and topical beta-blockers have long been thought to be associated with that condition.

“Men with glaucoma are

more likely to get erectile dysfunction,” said Nawaaz A. Nathoo, MD, an ophthalmology resident at the University of British Columbia. “However, it’s not because of topical beta-blockers.”

The nested case-control study involved 1,380 patients with ED, each matched with 10 controls (n = 13,800), all from a British Columbia database. The

use of topical beta-blockers in the 30 days prior to a diagnosis of ED did not have a significant association with the diagnosis.

This finding corroborates recent studies that attributed any association between ED and beta-blockers to a placebo effect (when an adverse effect is observed but is not caused by a drug’s action); the American Heart Association picked up on six of those trials and issued a statement in 2012 that the benefits of beta-blockers far outweigh any potential risk of ED.

The study authors cannot account for the glaucoma-ED connection, though one

theory suggests that both conditions may share common risk factors, such as cardiovascular and metabolic disorders.

For now, said Dr. Nathoo, “Clinicians can use beta-blockers freely in their arsenal of glaucoma drops without fear of causing ED.”

—Miriam Karmel

1 Nathoo NA et al. *J Glaucoma.* 2013 July 17. [Epub ahead of print].

Dr. Nathoo reports no related financial interests.

EXTRA MORE ONLINE. For a story on refractive surgery, go to www.eyenet.org.

Refractive Surgery Update

Easing LASIK Discomfort

A single drop of dilute brimonidine prior to LASIK increases patient comfort and reduces the occurrence of subconjunctival hemorrhage and injection. That's the conclusion of a randomized, double-masked prospective clinical trial involving 180 patients (360 eyes) who underwent bilateral LASIK after receiving one drop of 0.025 percent brimonidine, naphazoline/pheniramine, or placebo (artificial tears).¹ Patients were evaluated for subconjunctival hemorrhage, injection, and flap dislocation at one hour and one day postoperatively.

Daniel S. Durrie, MD, clinical professor of ophthalmology at the University of Kansas, said that full-strength brimonidine was abandoned several years ago after it was associated with a higher incidence of flap slippage after LASIK. But after working with his institution's compounding pharmacy, Dr. Durrie tested several dilutions of brimonidine before arriving at a one-quarter strength dilution that could be delivered in a single drop 30 minutes before surgery. He has used

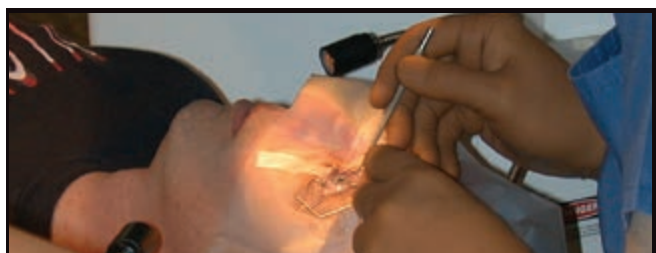
dilute brimonidine for nearly 10 years.

Dr. Durrie and colleagues decided to conduct the study to determine whether there was any evidence to support using dilute brimonidine. "As expected, we found that the vasoconstrictor and the dilute brimonidine made the eyes much quieter and resulted in fewer conjunctival hemorrhages," he said. At both one hour and one day after surgery, brimonidine was significantly more effective than naphazoline/pheniramine. "But probably the biggest surprise was how much more comfortable patients in the treatment groups were compared to those in the placebo group."

Dr. Durrie added that three brimonidine eyes and one naphazoline/pheniramine eye required refloating for minor flap-edge wrinkling. But, he said, "They were not major flap slips like we used to see in the past." —Marianne Doran

1 Pasquali TA et al. *J Refract Surg*. 2013;29(7):469-475.

Dr. Durrie is a consultant for Abbott Medical Optics and Alcon.



ONE DROP. Dilute brimonidine before LASIK improved patient comfort after surgery.