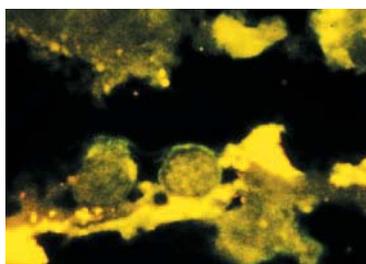


Clinical Diagnosis

UVEITIS ETIOLOGY VITAL TO BEST THERAPY APPROACH



DIAGNOSIS in a patient with uveitis can be challenging because the uveitides represent a large group of intraocular inflammatory diseases, but establishing the etiology is important to guide appropriate therapy. Narsing Rao, MD, stressed the importance of not missing infectious causes or an associated systemic disease and the need to obtain ocular fluid or even a tissue sample when uveitis remains unexplained and the disease is progressing with vision loss.

(See story on page 14 : Uveitis pearls)

Practice Management

8 EFFICIENCY PEARLS FOR PHYSICIANS IN PRIVATE PRACTICE

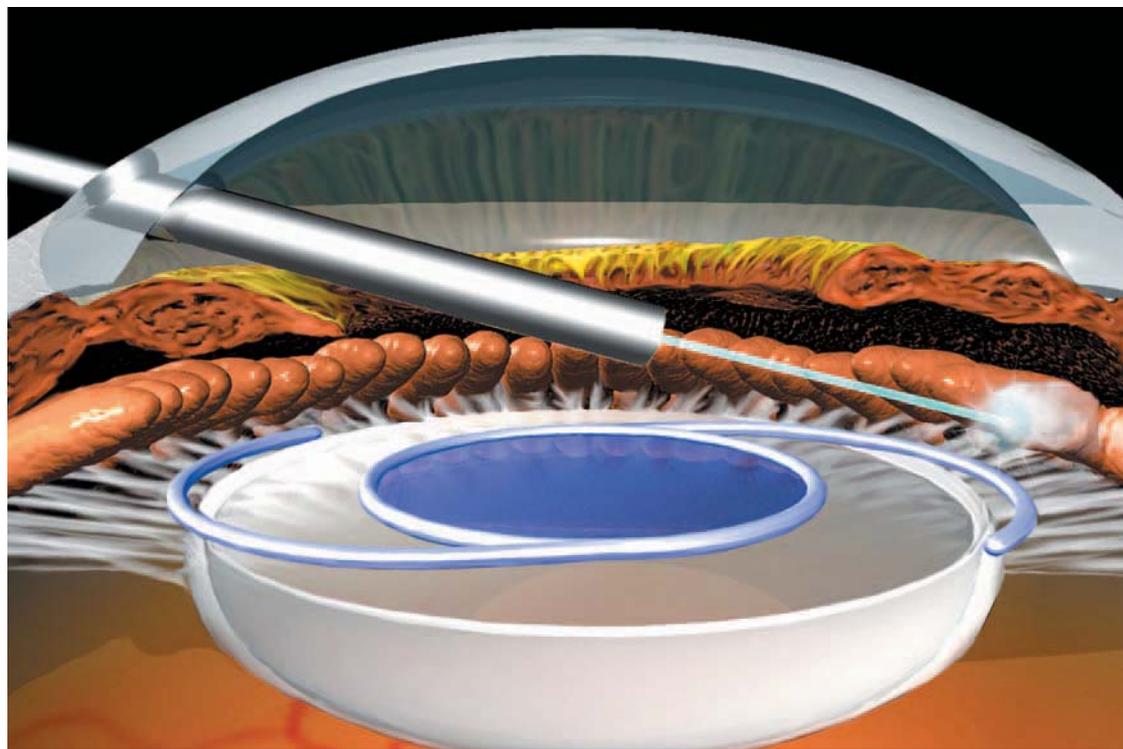
EFFICIENTLY RUN private practices are possible—but physicians may have to invest some time and self-reflection to get there. Ophthalmologists at private practices need to be financially prepared and boost practice efficiency to be successful in the future. With an ever-increasing demand for ophthalmologists, that does not mean running an ophthalmic practice is easy, said practice management consultant John Pinto. He identified key trends affecting ophthalmology and healthcare.

(See story on page 41 : Private practice)



TREATING DRY EYE IN GLAUCOMA

Attention to ocular surface essential when caring for patients with long-term disease management



IN VIEW: Endoscopic cyclophotocoagulation (ECP) is routinely added to phacoemulsification for the treatment of mild to moderate glaucoma for long term IOP decrease and reduction or elimination of patient medications.

(Image courtesy of Beaver-Visitec International)

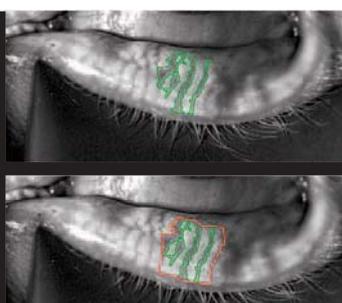
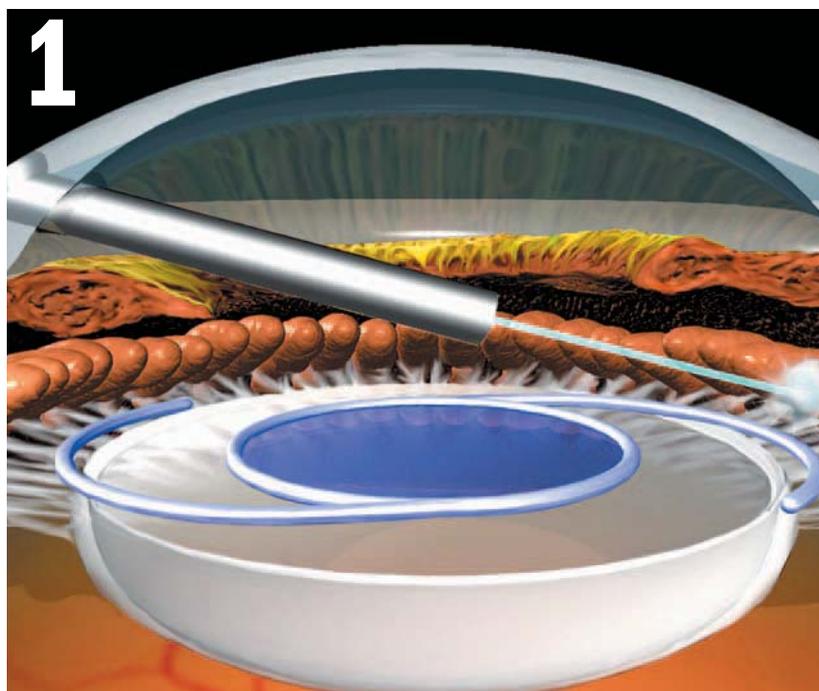
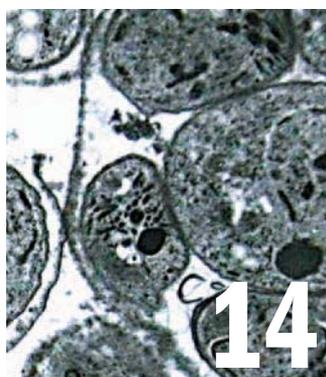
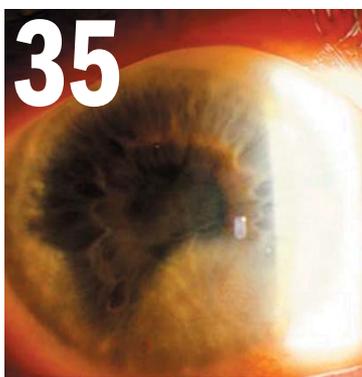
By Dharmendra (Dave) Patel, MD;
Special to Ophthalmology Times

WHETHER from lifestyle changes or just paying more attention, clinicians know that the incidence of ocular surface disease is increasing. Current estimates are more than 16 million U.S. adults are diagnosed with dry eye disease (DED), and although age is a risk factor, the incidence is still notable among those aged 18 to 34 years.¹

However, a prospective evaluation of cataract surgery patients found that more than 75% of these patients had symptoms of dry eye when evaluated, although only 13% had complained about symptoms ahead of time.²

In glaucoma patients, a major German population study found the incidence of dry eye to be more than 50%.³ This is attributed in large part to the preservatives used in anti-hypertensive medications. Benzalkonium chloride (BAK), the most com-

(Continues on page 20 : Ocular surface)



Surgery

12 LASIK SAFE FOR RE-TREATMENT AFTER SMILE

Thin-flap LASIK has less chance of causing inflammation, haze compared with surface ablation.

Special Report

24 PHASE IIb TRIAL FROM REPROXALAP FOCUSES ON DRY EYE TREATMENT

Aldehyde trap inhibitor demonstrated better results than vehicle.

Practice Management

41 8 WAYS PRIVATE-PRACTICE MDS CAN BE SUCCESSFUL

Make these moves today to ensure stability, stay ahead of future challenges with these tips from John Pinto.

Also In This Issue

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Letter to the Editor

Setting the record straight on the 'puff' test

I CHUCKLED AT the "Optic Relief" cartoon in the Sept. 15 issue depicting a patient praying in front of a non-contact (puff) tonometer (NCT) and the doctor saying, "It's really not that bad" (<https://bit.ly/2RTchWx>, Page 38).

But after reflecting on this bit of humor, I thought it a shame that this sentiment persists to this day. Having studied tonometry extensively, I understand that the original "NCTs" from the early 70s had a very hard (and loud) air pulse and, as such, many patients found the test to be unpleasant. However, technology has evolved dramatically over the past 40 years.

We have the Ocular Response Analyzer in our practice, which utilizes an air pulse in its measurement. But this is not the same old puff tonometer from yesteryear. This device provides an IOP measurement that has been

shown to be more accurate than other methods of tonometry, including Goldmann.

Perhaps, more importantly, it also provides a measurement called corneal hysteresis (CH), a biomechanical property of the cornea. There are 700 publications on this in the peer-reviewed literature and, among other findings, it has been shown that CH is strongly associated with development of glaucoma and future glaucoma progression. Well-designed longitudinal studies have shown that CH is more sensitive and specific for predicting glaucoma progression than other standard of care parameters.

The test is well tolerated by patients and, in fact, we have learned that many patients prefer the puff once they understand that it is an alternative method of obtaining an IOP versus Goldmann or other methods, which several of

my patients aren't very fond of either. My colleagues who are not aware of this technology are almost always surprised to hear about the extensive amount of support in the literature for the utility of its measurements.

As a bonus, since the device is non-contact, we spend less time sterilizing prisms and there are no costly disposables to worry about.

I find this device to be useful in our glaucoma decision making and hope that stigmas from the past will not prevent modern clinicians from embracing this important technology.

—Inder Paul Singh, MD

The Eye Centers of Racine and Kenosha, WI

Letters to the Editor may be submitted to Sheryl.Stevenson@ubm.com.

Letters may be edited for clarity and length.

OCULAR SURFACE

(Continued from page 1)

mon preservative in topical glaucoma drops, decreases the density of goblet cells in the conjunctival epithelium, destabilizing the tear film and compromising its ability to provide protection and trophic factors to the cornea.⁴

It then increases concentrations of inflammatory markers, alters tear film quality and tear breakup time (TBUT in a dose-dependent manner. It has been suggested that each additional eye-drop containing BAK is associated with a two-times greater chance of showing abnormal results on a lissamine green staining test.⁵

While it may be tempting to dismiss the “discomfort” of dry eye disease as of lesser significance than loss of sight from glaucoma, ignoring it may be of great detriment to our patients.

First, dry eye disorders have been significantly correlated with decreased compliance to medical treatment of glaucoma.⁶

Second, long-term use of topical glaucoma drops increases the risk of failure of later incisional glaucoma surgery.⁷

GETTING RID OF THE BAK

Considering glaucoma is a chronic disease that will have to be treatment for the duration of

the patient’s life, it is essential to think ahead when prescribing drops.

For me, the long view of drops always means decreasing the preservative load on the eye. Fortunately, we have both BAK-free options and fixed-combination drops that allow a patient to get the needed active agent without the negative side-effects of the preservative. SofZia-preserved drops show less keratopathy and conjunctival hyperemia compared to drops with BAK, but still have negative effects on the cornea and demonstrate little improvement in patient comfort.^{8,9}

take-home

► **Dharmendra (Dave) Patel, MD, explains why managing glaucoma includes managing the ocular surface.**

Studies show that patients who are switched to BAK-free preparations show improvements in TBUT and decreased use of lubricants, suggesting an improvement in symptoms of DED as well.¹⁰

Current non-preserved options include Timoptic in Ocu-dose (Bausch + Lomb), Zioptan (Akorn Pharmaceuticals), Cosopt PF (Akorn Pharmaceuticals), and Simple Drops combinations formulations (Imprimis Pharmaceuticals). The Simple Drops compounded formulations not only have the benefit of being preservative free, they also improve compliance by providing multiple IOP-lowering agents in a single drop. Given that at least 40% of patients in the Ocular Hypertension Treatment Study needed two or more medications to reach target IOP, a fixed-combination drop presents significant advantages.

Another means of reducing medications

is to perform a minimally invasive surgical procedure.

Selective laser trabeculoplasty (SLT) is a familiar tool in our armamentarium, and we now have many other options including iStent (Glaukos Corp.), iStent inject (Glaukos Corp.), Kahook Dual Blade (New World Medical), and others.

Endoscopic cyclophotocoagulation (ECP) with the EndoOptiks E2 laser and endoscope system (Beaver-Visitec International) is another minimally invasive option that I have used with great success.

ECP is one of the few procedures that addresses aqueous production and secretion, can be performed either as a stand-alone procedure or in conjunction with cataract surgery, and generally produces a decrease in IOP between 20% and 40%.¹¹

CARING FOR OCULAR SURFACE

While ophthalmologists currently have many tools to reduce the medication burden and preservative load on the eye, this may not be enough. DED risk factors tell us that even without BAK, ocular surface disease is common in the same population as glaucoma.¹

It is essential to actively diagnose and treat DED in glaucoma patients. Diagnosis includes the SPEED questionnaire for every patient, and tear osmolarity testing (Tear Lab) and lipid layer and blink pattern analysis (Tear-Science) in those patients that merit further investigation.

Online platform launches as education resource for dry eye disease

A SUBSCRIPTION-BASED education website (*DryEyeAccess.com*) that helps ophthalmology and optometry practices understand how to identify, diagnose, and treat patients with dry eye disease is now available.

The website is built on content developed for Dry Eye University, a leading education program that has trained more than 1,000 eye-care practices from around the world in dry eye disease management. Dry Eye University was created by clinicians and staff at Bowden Eye & Associates in Jacksonville, FL, and has held multiple programs each year since 2014.

The website was established for the eye-care community with funding by the eye-care industry to be a comprehensive education resource supporting a unified approach to all things dry eye, according to a prepared statement.

The platform consists of more than 25 clinical learning modules, white papers, case studies, diagnostic and therapeutic product overviews, implementation protocols, and information that includes everything from staff training to financing. Future modules will extend beyond clinical information to present education, insights, and resources that address the business challenges and patient education needs that are unique to the syndrome.

“Dry eye disease is multifactorial, and demands the right protocols, products, and people in your practice to be successful,” said Patti Barkey, a founder of *DryEyeAccess.com*, chief executive officer of Bowden Eye & Associates, and an ASOA board member. “*DryEyeAccess.com* will help members create a path forward that works for the practice and helps eye-care

patients who are suffering with this chronic, progressive condition.”

DryEyeAccess.com is supported by four distinct advisory boards, representing multiple stakeholders in eye care: an ophthalmology board, an optometry board, an administrator board, and a board composed of leaders from different eye-care companies. The input from these expert panels will help to guide content and direction of the platform.

Richard Adler, MD, one of the first ophthalmologists to align with the educational website said, “The merger of eye-care providers, administrators, and industry to help guide this initiative is unique and exciting and should help to ensure that *DryEyeAccess.com* meets the needs of all those connected to dry eye, especially patients.” ■

The inflammatory cycle has been well documented in DED, and we now have the immunomodulators of cyclosporine (Restasis, Allergan), lifitigrast (Xiidra, Shire), and cyclosporine (Klarity-C, Imprimis Pharmaceuticals) to arrest the inflammatory pathway.

Managing DED is based on the DEWS recommendations and is targeted to the level of disease.

For patients with mild DED, therapy usually involves preservative-free lubricants and lid hygiene.

In moderate stages of disease, adding cyclosporine or lifitigrast is necessary. Any DED treatment has to be balanced with reduction of BAK burden from glaucoma medications. Fixed combinations and preservative-free glaucoma medications are essential for this group of DED sufferers.

In severe DED patients, surgical treatment for glaucoma is necessary to eliminate the toxicity from topical medications.

Given the detrimental effects of DED, and the many tools ophthalmologists currently have to address it, it is simply becoming inexcusable not to consider the ocular surface of our glaucoma patients. ■

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Dr. Patel has no financial interests.

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