

LIVING WITH GLAUCOMA

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MEDICATION-FIRST LINE OF DEFENSE EFFECTS AND SIDE EFFECTS

Over thirty-five years ago when I was first diagnosed with glaucoma an individualized approach did not exist for there was only one class of pressure-reducing drops – the miotics. Today, as Dr. Anna Maria Demetriades, Assistant Professor of Ophthalmology, Weill-Cornell Medical College who spoke with the Group on April 20 stated, it is possible to individualize treatment. That, of course, is a good thing, with five classes of medication now available, your doctor can select the medication that will do the most to control the effects of glaucoma in your eyes. Four classes of eye drops are commonly used and one class seldom used.

In medical treatment your ophthalmologist will usually begin with the most effective medication based on research, past experience with the use of this drop and, most important, your ability to tolerate the medicine. Before the introduction of the prostaglandins beta blockers took center stage even though some negative side effects existed, for the rate of pressure drop and protection was quite positive. Today, however, doctors will more than likely

prescribe the prostaglandins as the initial treatment.

Side effects are always a problem with any medication and the drops are no exception. Although they enter the system through the eyes, certainly less invasive than a pill or an injection, they, at times, do present difficulties for some patients. Most often, however, the difficulty lies with the preservative, not the medication itself. Fortunately, several medications can be purchased that are free of the preservative. The downside to using preservative-free medications is the one or two drop packaging boosts up the expense of the medication. This situation may require some negotiating with your insurance company, especially if the medication is not listed on the formulary issued by your insurance company. Your doctor can attest to your need for the medication and hasten the progress along.

Each class of medication usually has more than one form and different pharmaceutical companies will develop their own versions. While they all essentially use the base formula of a particular medication, there may be subtle changes whereby one formula may

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do more for you or produce fewer side effects than another. Here are the medications along with their common side effects.

PROSTAGLANDIN ANALOGS--Xalatan, Travatan, Travatan Z, Lumigan

Travatan Z is preserved with a more benign preservative and thus is less likely to cause side effects. All three prostaglandins are effective in reducing eye pressure. They work in two ways – on the trabecular meshwork and on the uvea-scleral system, thereby effectively drawing the excess fluid from the eye.

Prostaglandin analogs are now considered by many ophthalmologists as a first-line treatment. Common side effects may include blurred vision, eye redness, itching, burning, stinging, changes in iris color or eyelid skin pigmentation sometimes called “raccoon eyes”, increase in eyelash length and thickness. Slight recession of the eyeball is a recently identified side effect and this side effect may present a problem in future surgical treatment. The issue is whether the particular side effect is mild or intolerable, whether it occurs daily or infrequently and whether it can be treated or is an unavoidable side effect. For example to diminish the pigmentation of the skin around the eyes, it is wise to quickly wipe away any medication that remains on the skin. About 30 to 50

percent of the patients do have some side effects.

When first using a prostaglandin you may experience some discomfort such as irritation, burning, stinging, or itching. If it's tolerable, your doctor may encourage you to continue using it for at least several weeks. But, if the side effects persist, your doctor can prescribe a medication in a different classification. Usually, however, the symptoms decrease gradually, and most patients can tolerate prostaglandin analogs even with initial side effects. Iris color change is not acceptable for some patients with light-colored irises. Patients who have light-colored irises and for whom the medication is prescribed for only one eye will most certainly opt out of using the medication. One light eye and one brown eye is not acceptable. But eye color change occurs in only 1 to 4 percent of patients using prostaglandins and significant eye color change occurs in probably less than 1 percent of the patients. But be assured, before your friends or family members detect the eye color change, your alert doctor viewing your eye via the slit lamp examination will bring it to your attention. Women may like the eyelash changes provided that the new growth is an enhancement not an aberration for in some cases new eyelashes can grow every which-way. Now, as you've probably noted, there are commercial products on the market. As

of April, 2013, the Swedish Medical Products Agency's analyses of eyelash serums/eyelash growth products, have found as many as nine of the products contain prostaglandins, and some of the products do not state this information. The Agency warns against using these products.

BETA BLOCKERS--Timolol, Timoptic, Timoptic XE, Betaxolol, Betoptic, Betoptic S, Levobunolol, Betagan

The beta blockers are now the second line medication. They include: Timolol, Timoptic, Timoptic XE, Betaxolol, Betoptic, Betoptic S, Levobunolol, Betagan. For some people these medications are not easy to tolerate for they can cause low blood pressure, reduced pulse rate, fatigue and shortness of breath. Interestingly, although these are all systemic side effects, they are ocularly well tolerated. Nevertheless, side effects of itching and burning may occur, but over time, they may become better tolerated. The physical manifestations are another problem, and it is wise when the above physical symptoms manifest to let your ophthalmologist know especially if you already suffer from such conditions as asthma, lung, heart, cardiac arrhythmia, or ischemic heart disease, a stent, surgery for myocardial infarction or the like. If you are clear of these conditions, beta blockers may work well for you. But if running is your thing, you

may find it difficult to get up speed while on a beta blocker.

ALPHA AGONISTS--Alphagan, Alphagan P (brimonidine)

Non-selective alpha agonists are effective pressure lowering drops, but they are rife with side effects most commonly tiredness or weakness.

Alphagan is the generally prescribed alpha agonist. The allergic reactions include eye redness, itching, burning, stinging, dry mouth and nose. To mitigate these allergic reactions, Alphagan P containing a more benign preservative may be preferable. Because instilling multiple drops in the eyes throughout the day and the need to increase patient compliance, drug companies are combining various medications, and it is now possible to use Combigan that combines Alphagan P plus Timolol. Unfortunately, side effects of the alpha agonists increase with time and more than 30% of the clients using these drops suffer not only the ocular side effects but also systemic effects of fatigue, headache, drowsiness, dry mouth and nose.

CARBONIC ANHYDRASE INHIBITORS--Azopt, Trusopt. Carbonic Anhydrase Inhibitors in oral form (Methazolamide, Neptazane, Acetazolamide, Diamox, Diamox Sequels are not advised for long term use because they cause memory problems, depression, weight loss,

ringing in the ears and other systemic side effects including dryness of the mouth and thirst when too much potassium is lost. Side effects include unusual tiredness or weakness. Less common is blood in the urine, depression, lower back pain, urinating pain, sudden decrease in amount of urine. You may experience increased sensitivity to sunlight, loss of taste and/or smell and nervousness.

Taking the medicine systemically may produce loss of potassium and may require potassium supplementation. Take heart, however, while you may experience side effects when first prescribed, patients have reported that they diminish or disappear with time.

PARASYMPATHOMIMETIC DRUGS—Carbochol, Pilocarpine. These usually constrict the pupil and may cause brow pain that usually diminishes with time. Both of these drugs come in a number of strengths that make it possible to titrate to the strength that does the most good. When you first use them, head-aches are frequent but they diminish over time. These also cause a slew of side effects such as active uveal inflammation, cardiac irregularities, induced myopia, visual blurring. It is wise to avoid areas where insecticide has been sprayed since this may potentiate the effect. If previous history of retinal detachment, then avoid.

Phospholene iodide is another drug in the family, it is a miotic and patients using it are subject to the above side effects.

COMBINATION DROPS—Combigan (Alphagan P and Timolol). Ganfort (brimonidine and timolol), Cosopt (dorzolamide and timolol). Simbrinza brimonidine tartrate (Alphagan) and brinzolamide (Asopt)

PUNCTAL OCCLUSION: Why do it? Primarily punctal occlusion prevents excess medication from entering your blood stream through the nasal passages. The less of the medication in your bloodstream, the fewer the side effects. It's that simple. Some doctors suggest one minute; others suggest 3-5 minutes. How do you do it? Simply press lightly on the tear duct in the up-per corner of your eye on the side of your nose. You can feel a tiny bump. If you have trouble doing it, ask the technician in your doctor's office for help.

INSTILLING YOUR EYE DROP. Less is not more. One drop will do it. If you happen to be in the hospital and the nurse wants to instill two drops (a commonly mistaken concept), educate him or her. One drop is all the eye can hold. More and the fluid will roll down your cheek, an unnecessary and unwelcome occurrence. Believe it or not, less than 10% of the drop is needed to produce the desired effect. If excess medication occurs,

quickly wipe it off, especially the prostaglandins. If your eyes become irritated at instillation of the drop and remain so several hours later, you might be experiencing dry eye rather than an allergic reaction. Your eye pressure is greatest in the morning, so be sure to instill your most potent drop (the one you use once a day) the first thing upon awakening.

THE RED EYE –What a bore it is.

Unfortunately, it is a common side effect from nearly all classes of eye drops, not only for glaucoma, but for all eye diseases. It's the preservative in the eye drop. It's toxic to the surface of the eye. Your vision is unaffected by red eye but it may be a sign of dry eye, a situation that can be helped by over-the-counter drops. Dry eye is also a by-product of Sjogren's Disease, a systemic disorder.

GENERICs: Are they equal to the brands? It may be a matter of individual differences. With some patients they do as well on generics as well as brands, but with others, there may be only one or two points difference but that may affect vision loss, and with some generics made outside the U.S., the quality may not be up to standard. Before using a generic, check with your doctor to be sure you will be using one that meets U.S. standards. This is important for generic medications do not need to go through the rigorous testing required of brand name drugs. The generic manufacturer, however, must submit a formula investigation to the

FDA. Nevertheless, doctors do not know whether the drug is really effective to the human eye even if the formula is the same. It is possible that a little bit of contamination or chemical structure was changed of which the doctor is unaware. Doctors have found, however, that when some patients using a brand eye drop changed to generic form, the pressure did rise.

Although most glaucoma patients are on eye drops forever, one form of glaucoma, pigmentary dispersion glaucoma may more or less resolve as the individual ages. It may be possible then to lessen or even do away with glaucoma drops, but, of course, the patient will still need to be followed. This situation occurs because the iris no longer rubs against the structures of the eye, causing the release of pigment. But this syndrome occurs rarely and people with pigmentary dispersion glaucoma still need to take medication.

Using eye drops is time sensitive. Twice a day means every 12 hours, 3 times every 8 hours. A little fudging is okay-- 7 hours, 9 hours. Don't panic if you miss one eye drop. Just go on with your schedule.

The combination drops that contain beta blockers, all of them except the newest kid on the block (Simbrinza) need to be used twice a day 12 hours apart.

Low-pressure glaucoma is now considered a misnomer. Statistically normal pressure ranges between 10 and 21. Doctors now treat glaucoma whatever the pressure with the same medications. Some issues, however, need to be addressed with normal-pressure or low-pressure glaucoma. Sleep apnea, low blood pressure, migraines, cold hands and feet all can be related to low-pressure glaucoma. Doctors do know that there may be other factors also related to low-pressure glaucoma that still may be revealed.

DRY EYES. This problem occurs regularly with users of drops and also with age. In addition to using a good lubricant eye drop, there are other things that will help, such as washing your eyes with baby shampoo, applying warm compresses over the eyelids for about 5 minutes. This will melt the crust on your eyelashes, the clotting substance in the glands and eyelid margin. As soon as you complete the warm compress, wash your eyelashes and eyelid margin with baby shampoo for about one minute. Then rinse off. Then use your glaucoma eye drop. During the day, when the eyes feel dry, use lubricating eye drops. Wash your eyelids twice, morning and night for thirty seconds. Use a sterile cloth.

We want to thank Dr. Demetriades for her enlightening discussion on glaucoma medication. No

matter how often we hear about the medications and our daily use of them, we still need to discuss this vital first line of defense. We also want to remark on Dr. Demetriades warm delivery of this information. Although glaucoma is a difficult subject to pursue, Dr. Demetriades' obvious caring for and listening to her patients was evident and we thank her for such concerns.

Please note: The contents of this newsletter are for informational purposes only. The Content is not intended to be a substitute for professional medical advice, diagnosis or treatment. Always seek the advice of your physician or other qualified health provider with any questions you may have regarding a medical condition.

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