GLAUCOMA

Honesty is the best policy, for physician and patient.

BY ARSHAM SHEYBANI, MD

Glaucoma is one of the most common diseases of the eye and one of the most confusing for patients. Patients have heard of the disease, but many do not know what it is or what kind of damage it can do to their eyes. The disease has an insidious course, in some cases permanently damaging peripheral vision before the patient is even aware that he or she has an eye disease. It is estimated that nearly 59 million people worldwide will have primary open-angle glaucoma by 2020;[1] it is likely that half of them will not even know they have it.[2,3]

I specialize in glaucoma and surgery of the anterior segment, and I work in a tertiary center at a major academic hospital. Therefore, my practice is different from that of most general ophthalmologists who see glaucoma patients as part of a larger patient mix. For the most part, the patients I see have been referred for a consultation for surgery or for diagnosis and management.

Therefore, for some of the patients I see, glaucoma is a new concept. It falls to me to explain to patients what glaucoma is and how it can affect their vision. I am on the front line, so to speak, introducing patients to the disease and setting the path for their treatment and management. As such, I tend to spend quite a bit of time in these consultation visits trying to give patients a solid background and understanding of the disease.

Even though the majority of the patients I see have had glaucoma for years and are now being referred for surgery, for the sake of thoroughness, I assume that the disease has never been fully explained to them—and, even if it has, there is no harm in repeating the information to help them retain it better. I try to use layman's language and put these sometimes difficult concepts into words that patients can understand.

In this article, I summarize what I tell patients about glaucoma in the course of a consultation and, in the accompanying sidebar, list the top five questions I hear from patients and how I answer them. My answers can then be compared to the list of answers that patients could potentially find within the first page of a Google search of the same questions.

SETTING THE SCENE

When I enter the examination room to see a new patient, as soon as I sit down, I ask what he or she thinks this visit is about. I have the referring notes in front of me, so I know what brought the patient in. I say right off the bat that we are here to evaluate him or her for glaucoma.

As I examine the eye, I tell patients that I will be evaluating the pressure inside their eyes. Glaucoma, I say, is caused in part by the pressure in your eye being higher than what your eye can tolerate. Everyone's pressure performs differently and affects the eye differently; therefore, some people tolerate more pressure than others. Some may walk around without glaucomatous damage with a pressure of 24 (I leave out the millimeters of mercury), while others lose vision with a pressure of 15. If we live long enough, I say, we will all go blind from a process similar to glaucoma because as we age our nerves degenerate. Glaucoma speeds that process.

I explain that the only thing we can modulate or change to minimize damage from glaucoma is this eye pressure. By lowering it with drugs, laser, or surgery, we may be able to prevent or delay the onset of vision loss.

I tell patients that glaucoma primarily affects the optic nerve—the cable that connects your eye to your brain. So you can have a perfectly normal eye, but if that cable is damaged you do not send a good signal to the brain, and that is how you lose vision. For the most part, I say, glaucomatous loss starts in the peripheral or side vision, which is why you might not notice those changes initially. This is why we do the visual field test, so that we can detect those changes before you do. The reason we want to detect those changes early is because, once that vision is lost, we cannot get it back. Glaucoma management is all about prevention.

It is important to give this explanation of the reason for the visual field test because patients tend to dislike the test. This lays it out for them: There is no perfect number for pressure. We are looking for the pressure that *your* eye can tolerate. If your visual fields are getting worse at a pressure of 18, then we know it needs to be lower.

As I proceed through the exam, checking pressure and looking at the angle, I start explaining that, in the big scheme

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QUESTION NO. 1: WILL I GO BLIND?

Dr. Sheybani: There is no real way to predict vision loss, but a lot depends on you. We know that patients do better when they take the medications that they are prescribed and they show up for their appointments. These are the best two ways to make sure you are doing everything that you need to do to keep the condition at bay: Take your medicine, and show up for visits.

Google hit No. 1: When faced with a new diagnosis of glaucoma, there is one question that is foremost in every patient's mind: "Will I go blind?" Fortunately for most patients, the answer is no. Blindness does occur from glaucoma, but it is a relatively rare occurrence. There are around 120,000 cases of blindness in the United States and 2.3 million cases of glaucoma. This represents about 5% of glaucoma patients. However, sight impairment is more common and occurs in around 10% of patients. Loss of vision can occur even with the best treatment. Despite that sobering fact, correct treatment and follow-up will stabilize the vast majority of patients with glaucoma. A major factor in the treatment of your glaucoma is you. By correctly using your eye drops and being consistent in their use, a favorable outcome will be more likely.[1]

1. http://www.glaucoma.org/treatment/understand-your-glaucoma-diagnosis.php

QUESTION NO. 2: WILL THIS PROCEDURE CURE ME?

Dr. Sheybani: This is not a cure. We are trying to keep your glaucoma damage at bay.

Google hit No. 7: Many people will need to continue using medicine for glaucoma after successful surgery. But you may be able to cut down on the number of drops or amount of medicines you use for glaucoma after surgery. Some types of surgery, such as iridectomy, last for life. But if complications develop or glaucoma gets worse, additional surgery or treatment may be needed.[1]

1. http://www.webmd.com/eye-health/questions-to-ask-about-glaucoma-surgery

QUESTION NO. 3: MY VISION IS FINE. WHY DO I NEED TO USE THIS MEDICINE?

Dr. Sheybani: Glaucoma is the sneak thief of sight. You think your vision is fine, but glaucoma is stealing away the edges of your visual field. Eventually it will take all your peripheral vision and leave you with tunnel vision, and you can even go blind. To stop it from going further, or at least to slow it down, you need to take this medicine as prescribed.

Google hit No. 4: The vision we use every day to read, drive, or watch TV is our central vision. Glaucoma doesn't affect the central vision until it is very advanced. Glaucoma usually destroys the peripheral vision before it affects central vision. Because we're not aware of our peripheral vision, a person who has lost most of his or her peripheral vision from glaucoma may not even know there is a serious problem with his or her eyes. Except in rare cases, a person who has glaucoma with high eye pressure usually feels fine. That is because the pressure has risen very slowly in the eye. Chances are, the way your eyes feel has nothing to do with how high the pressure is in your eye. When people complain that their eyes are irritated, or feel a "pressure" in their eye, or their eyes "just don't feel right," it is usually caused by something else besides the eye pressure.[1]

1. http://www.glaucomaspecialistsanfrancisco.com/qa.html

QUESTION NO. 4: THE MEDICINE DOESN'T DO ANYTHING. DO I NEED TO USE IT?

Dr. Sheybani: Yes, you do. You need to use it as prescribed (every day or twice a day, depending on the type of medication). You may think it is not doing anything, but it is helping to prevent damage to your vision. It is very important to use it faithfully.

Google hit No. 2: Prescription eye drops for glaucoma help maintain the pressure in your eye at a healthy level and are an important part of the treatment routine for many

people. Always check with your doctor if you are having difficulty. Remember:

- Follow your doctor's orders.
- Be sure your doctor knows about any other drugs you may be taking (including over-the-counter items like vitamins, aspirin, and herbal supplements) and about any allergies you may have.
- Wash your hands before putting in your eye drops.
- Be careful not to let the tip of the dropper touch any part of your eye.
- Make sure the dropper stays clean.
- If you are putting in more than one drop or more than one type of eye drop, wait 5 minutes before putting the next drop in. This will keep the first drop from being washed out by the second before it has had time to work.[1]

1. http://www.glaucoma.org/treatment/eyedrop-tips.php

QUESTION NO. 5: THESE MEDICINES ARE TOO EXPENSIVE (OR THE REGIMEN IS TOO COMPLEX AND I CAN'T KEEP UP WITH IT). IS THERE SOMETHING ELSE I CAN TRY?

Dr. Sheybani: Thank you for being honest with me about your situation. If adherence to your medical regimen is an issue for you, we can talk about proceeding to laser or surgery. If the procedure is successful, you may be able to eliminate taking medicines or take fewer of them.

Google hit No. 6: Some alternative medicine approaches may help your overall health but none are effective glaucoma remedies. Talk with your doctor about their possible benefits and risks.

- *Herbal remedies.* A number of herbal supplements, such as bilberry and ginkgo, have been advertised as glaucoma remedies. But further study is needed to prove their effectiveness. Don't use herbal supplements in place of proven therapies.
- *Relaxation techniques.* Stress may trigger an attack of acute angle-closure glaucoma. If you're at risk of this condition, find healthy ways to cope with stress. Meditation and other techniques may help.
- *Marijuana.* Research shows that marijuana lowers eye pressure in people with glaucoma, but only for 3 to 4 hours. Other, standard treatments are more effective. The American Academy of Ophthalmology doesn't recommend marijuana for treating glaucoma.[1]

1. http://www.mayoclinic.org/diseases-conditions/glaucoma/basics/alternative-medicine/con-20024042

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of things, there are two forms of glaucoma that you may have heard about: open-angle and closed-angle. The angle is where the drainage system of the eye resides. It has nothing to do with your tearing. This is another point to emphasize because, when we start talking about drainage of fluid, patients usually think we are talking about the external tear drainage system.

Once I finish the gonioscopy, I will tell the patient that either it looks like your angles are open, or that it looks like your angles are closed. Then, as I proceed to examine the optic nerve, I will remind the patient of what I said about the cable that connects the eye to the brain. Depending on what I see, I may say, "What I'm doing now is looking at that optic nerve, and yours shows damage that looks like glaucoma." Or, "Your optic nerve does not show damage or does not look quite like glaucoma right now."

If there is vision loss but the nerve does not show damage, I explain that pressure is not always the issue, and there may be other possible causes. Sometimes we may have to consider doing a brain scan and to ask whether the patient has previously had severe blood loss, an injury to the eye, or even prior eye surgery that could change the appearance of the optic nerve.

ADHERENCE TO THERAPY

In most cases, when a patient is newly diagnosed with glaucoma, the first-line therapy is a topical antiglaucomatous medication. It is important to emphasize to patients that, even though they do not see an effect from taking their medication, glaucoma therapy is about prevention. If they do not take the medicine faithfully, they will be at risk for losing visual field over time.

Adherence is the toughest battle for the glaucoma specialist because there are so many factors motivating against it. The medications cost money; they are difficult to put in, especially for older patients or patients with comorbidities; they may sting on application; they have no discernible effect or sometimes temporarily worsen the patient's vision. Involving patients in their own care—getting them to understand that they are the guardians of their vision, and that sticking to their medication regimen is the only thing preventing their disease from progressing—is vital to maintaining their compliance. This is a lesson that must be reinforced whenever possible, whether the patient is new or established.

INFORMED CONSENT

If structural and functional damage progresses despite topical medications, the next steps in glaucoma management are generally laser trabeculoplasty and then surgery. The content of informed consent depends on the surgical procedure. We have printed material that patients must read and sign, but I also talk to them to reinforce certain points in the informed consent.

I always mention the risk of sudden vision loss or excessively low pressures, no matter what procedure is being considered. I also tell them that vision can be blurred after

surgery. Normally, depending on the procedure, visual stability will not be reached until the patient is 6 to 8 weeks off the postoperative steroid medication regimen.

I tell patients that we may have to manipulate the surgery in the office postoperatively, or they may require further procedures. I always emphasize that glaucoma is a lifelong disease. We are not curing the disease with surgery; we are just trying to slow it down.

Especially for younger patients, it is important to explain that this may not be the only glaucoma procedure they will need over the course of their lives.

HONESTY

The key to the doctor-patient relationship in glaucoma care is honesty. I want patients to be honest with me. Likewise, I must be honest with them about their prognosis and about the importance of the role they must play in their own care.

I want any barriers between me and my patients to be broken down. I tell them right off the bat that there will be no judgment and that they should be honest. "Don't just take your medicine the day of the exam so your pressure will be low during our visit. Be honest with me, and let me know if there is an issue with cost or tolerance. Otherwise, how can I know that you need help?"

I also tell patients to be skeptical about what they read on the internet. I explain that, for the most part, if you read something in a blog, it is going to be either a miracle story or the worst of the worst, and usually it will be skewed toward the latter. The person with the average experience is not going to post about it.

I do think that the internet can be a valuable tool, but, as with all things, patients must exercise care and judgment. I do not mind patients reading about their condition. In fact, if a procedure is scheduled, I write down what we plan to do on a piece of paper and suggest that patients go look it up themselves. But I tell them not to believe marketing claims and to take what people post on blogs with a grain of salt. ■

1. Quigley HA, Broman AT. The number of people with glaucoma worldwide in 2010 and 2020. *Br J Ophthalmol.* 2006;90(3):262-267.
2. Glaucoma Foundation website. January is glaucoma awareness month. http://www.glaucoma.org/news/glaucoma-awareness-month.php. Accessed May 24, 2017.
3. The Eye Diseases Prevalence Research Group. Prevalence of open-angle glaucoma among adults in the United States. *Arch Ophthalmol.* 2004;122(4):532-538.

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