

DEMYSTIFYING GLAUCOMA SURGERY FOR PATIENTS



Strategies for achieving clear communication and setting appropriate expectations.

BY FRANK J. MOYA, MD

When presented with the concept of eye surgery, many patients automatically think of cataract extraction, despite the vast differences among procedures. They likely have friends or family members who had their cataracts removed and can now “see for miles.” For patients with glaucoma, however, and especially those for whom surgery is recommended, a genuine understanding of the disease and its treatment is imperative. In fact, studies have shown that the better patients comprehend glaucoma, the better their prognosis is.¹⁻⁴

In the Tube Versus Trabeculectomy (TVT) study, a significant number of surgical complications occurred after trabeculectomy and tube shunt surgery in both the early and late postoperative periods, and approximately one-third of patients experienced late complications.⁵ This article focuses on patient education surrounding filtering procedures and glaucoma drainage device implantation because these conversations can be particularly complex and patient expectations must be managed accordingly.

PREOPERATIVE CONVERSATIONS

Imagine if a patient were to ask what glaucoma is, and their ophthalmologist replied, “Open-angle glaucoma is a progressive chronic optic neuropathy in which IOP and other unknown factors contribute to

BREAKING DOWN THE DISEASE

Dr. Moya: “Your eye is like a sink with a faucet and a drain. If the drain is clogged and the faucet is running, what will happen?”

Patient: “It will overflow.”

Dr. Moya: “That’s right, but in the eye, there is no place for it to overflow. So, it builds up pressure like a balloon.”

Dr. Moya: “The eye is also like a TV camera with a lens, film, and cable that comes out the back. The cable of your eye is the optic nerve. If you cut the cable to your TV, what kind of picture would you get?”

Patient: “I wouldn’t see anything.”

Dr. Moya: “That’s right. Glaucoma cuts the cable of the eye, which leads to vision loss and damages your optic nerve. Now let’s look at your eye tests. These black areas on your visual field is where glaucoma has taken your sight. On this OCT image, we can see how glaucoma is affecting the cable of your eye. Here you can see a lot of red, and there is a lot of thinning of the nerve, which is a sign that glaucoma is cutting your eye’s cable and affecting the picture.”

damage and in which, in the absence of other identifiable causes, there is a characteristic acquired atrophy of the optic nerve and loss of retinal ganglion cells and their axons.” This textbook answer is unlikely to improve patients’ understanding.

I find that patients comprehend information on glaucoma and its management best when it is presented in simple language and with familiar analogies. A few comparisons that I commonly work into my preopera-

tive conversations with patients may be found above (see *Breaking Down the Disease*) and on pg 25 (see *Setting a Target IOP*).

SURGICAL EDUCATION

Effective communication surrounding all aspects of glaucoma surgery enables the surgeon to establish appropriate patient expectations and more easily manage complications should they occur. When presenting the concept

SETTING A TARGET IOP

Patient: "Why is my IOP now concerning?"

Dr. Moya: "In glaucoma, your optic nerve is like a boxer. Early in a fight, boxers can take a big hit, and it won't touch them. As the fight progresses and they sustain some damage, they can't tolerate the same pounding. At the end of the fight, a jab that wouldn't have touched them early on can knock them out. Similarly, pressures that your eyes tolerated when they were healthier may now cause blindness."

Patient: "Why is my target pressure so important?"

Dr. Moya: "Imagine you have a mortgage that is \$100 per month and you decide to pay \$90 per month. That's pretty good, right? But what will the bank do if you continue to do that? They will take away your house. Similarly, if we don't get your pressure down to where it needs to be, glaucoma can still take away your vision."

of incisional glaucoma surgery, I ask patients to think about their bathroom sink again (see *Addressing Incisional Glaucoma Surgery*).

I discuss all risks with the patient, including the possibility of vision loss, and then take the time to answer all their questions. Overall, it is important that patients understand that we glaucoma specialists are trying to do something that the body does not actually want to happen. When a bleb fails, it is often because the patient's body does its job and closes the hole. *Discussing Outcomes and Risks* provides examples of how I communicate this concept.

It is important for patients to understand that the results of glaucoma surgery are not guaranteed. If a patient is not familiar with sports, a flu or COVID-19 analogy can be effective in this situation. (Why do some people not get sick, some get very sick, and some die from the same virus? We are all different!)

Ophthalmologists must set

ADDRESSING INCISIONAL GLAUCOMA SURGERY

Dr. Moya: "Picture your bathroom sink. There is a small drain near the top. What is that for?"

Patient: "If the drain is clogged, water can still drain out."

Dr. Moya: "Exactly—and that is what we are going to try to do. Your drain is not working anymore, so we are going to try to bypass it. With surgery, I will make a cut in the skin of the eye, peel it back, make a trap door in the white part of the eye, create an opening underneath that trap door, and put some stitches in so that the fluid doesn't flow too quickly. Then I will sew the skin back up so that it forms a blister of fluid, bypassing your clogged drain and lowering your pressure."

DISCUSSING OUTCOMES AND RISKS

Dr. Moya: "What happens when you cut yourself?"

Patient: "I bleed, scab, and form a scar."

Dr. Moya: "Right. And, say you take an earring out of your ear. What will happen to that hole?"

Patient: "It will close up."

Dr. Moya: "That is what your eye will try to do, too. We are trying to make your body let a hole stay open so that your pressure stays down. It will be a rollercoaster ride for the next few months, with good days and bad days. Your eye might do what it is designed to and form a scar, so we might need to do a few injections or cut some stitches in that trap door we talked about. With a tube, we might need to pull the rip cord. Sometimes glaucoma surgery works too well, and the pressure drops too low, so we need to put some protective jellies in the eye or sew down the trap door to increase the pressure."

Patient: "Why can't you be sure that surgery will work?"

Dr. Moya: "Did you ever play sports or watch sports on TV? I'm sure you have seen an athlete blow out their knee. Of the athletes who experience that injury, some never play again, some return to the game less skilled than before, and some come back just as strong. Why do you think that happens?"

Patient: "Because people heal differently."

Dr. Moya: "That's right. Patients' eyes can respond differently to surgery, and that is why we need to see you often after the procedure to make sure that your eye is healing correctly. I will be with you the whole way."

SETTING EXPECTATIONS FOR POSTOPERATIVE VISION AND COMPLICATIONS

Patient: "Will my vision return after surgery?"

Dr. Moya: "The barn door is open, and the horses are leaving the barn. With this surgery, we are trying to close the barn door. I can't bring your vision back, but I will do my best to preserve what is left. This procedure can be complicated; in fact, sometimes patients lose a bit of sight from the surgery itself, but the hope is that we can keep them seeing for a longer period of time."

Patient: "Why do complications happen?"

Dr. Moya: "Do you remember watching the show *Mutual of Omaha's Wild Kingdom*, or have you ever watched the Discovery Channel? Remember how the zebras in Africa eat all the grass, and if the herd wants to survive, it must migrate to greener pastures? But when the zebras migrate, they must cross a river. In the river are crocodiles, so for a few of the zebras, it may not work out. If I were to take 100 patients, the vast majority will do well with surgery, but some may encounter issues. We are in this together, we will do our best, and I will be there if anything should happen."

appropriate expectations for patients, both regarding their vision after surgery and the unpredictability of complications (see *Setting Expectations for Postoperative Vision and Complications*).

CONCLUSION

When discussing glaucoma and surgery with patients, use simple language and visuals (videos or pictures) when possible. It is important to have

patients relay information back to you to verify their understanding. If a patient is unsure about surgery, suggest that they get a second opinion. Patients do better when they are on board with a treatment; if they understand what you are doing and why, they are more likely to adhere to therapy and achieve a better outcome.

Be honest and open about possible outcomes in the process of surgery,

especially complications. I find that the time spent preoperatively explaining potential complications saves me time postoperatively because, should something happen, we discussed it before surgery. Patients need to know that additional surgery may be required in the future, because surgery does not always work. Sometimes surgery works too well, hypotony-related complications occur, and the IOP must be increased.

Above all, patients benefit from knowing that you are there for them. Emphasize that you are a team, because when you perform surgery on an eye, it is your responsibility. You and the patient are therefore in it together. If patients know that you are doing your best for them, they will work hard to do their best, too. ■

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■ Financial disclosure: None