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Chats

What I Wish My Doctor Had Told Me About Glaucoma

July 12, 2023

1:00 PM EDT

Transcript of teleconference with Dr. Amy Zhang and Dr. Amy Mehta

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Please note: This Chat has been edited for clarity and brevity.

MS. DIANA CAMPBELL: Hello, and welcome to the BrightFocus Glaucoma Chat. My name is Diana Campbell, and I am pleased to welcome you to the Chat today. BrightFocus Glaucoma Chats are a monthly program in partnership with the American Glaucoma Society and are designed to provide people living with glaucoma, and the family and friends that support them, with information provided by glaucoma experts. The American Glaucoma Society counts the leading glaucoma specialists in the country in their membership, and we are looking forward to hearing them discuss many topics about glaucoma during this Chat series. Today's topic is, "What I Wish My Doctor Had Told Me About Glaucoma."

BrightFocus funds exceptional scientific research worldwide to defeat Alzheimer's disease, macular degeneration, and glaucoma and provides expert information on these heartbreaking diseases. You can find much more information on our website, www.BrightFocus.org.

Now, I'm pleased to introduce today's guests. Dr. Amy Zhang is an

assistant clinical professor of the glaucoma service at the University of Michigan Kellogg Eye Center. She was assistant clinical professor at Case Western University, where she was the Glaucoma Fellowship Director. Among her many interests are her work in minimally invasive glaucoma surgery and tonometry.

Dr. Amy Mehta is a fellowship-trained ophthalmologist specializing in the latest breakthroughs in glaucoma management and surgical techniques. She works in private practice in New York, as well as teaches at the prestigious New York Eye and Ear Infirmary. Dr. Zhang and Dr. Mehta, thanks for joining us today, and welcome to today's BrightFocus Glaucoma Chat.

DR. AMY MEHTA: Thank you for having us.

DR. AMY ZHANG: Thank you, Diana, for that wonderful introduction of us.

MS. DIANA CAMPBELL: Thank you so much to both of you for being here. As we discussed when we were talking earlier, for today's session, I'll be asking the questions to you both as if I were a patient and I had just received a diagnosis of glaucoma. With that, let's start with a question for Dr. Mehta that's on everybody's minds: Will I go blind from glaucoma?

DR. AMY MEHTA: Thanks, Diana. That's a very important question. I think when we see patients in the office that's pretty much what the bottom line is that anyone would care about, is, "Will I go blind from glaucoma?" And the answer to that is: Most likely not. We have a lot of diagnostic and treatment options now that can catch glaucoma in its earliest stages and begin treatment. With treatment, we can slow down the progression or even stop the progression of glaucoma. Of course, any damage that's already been done cannot be recovered, but moving forward, there are a lot of options to slow down the progression. So, to answer the question, most likely you won't, but it also depends on what functionality you're looking for in your everyday life.

MS. DIANA CAMPBELL: Sure, that makes a lot of sense. Dr. Zhang, what is the vision loss like? What do I look for?

DR. AMY ZHANG: Diana, that's a great question. I think what happens with glaucoma is that early vision loss in glaucoma tends to be fairly subtle. This is why it's so important to have regular eye exams. Glaucoma is a disease where the vision loss begins in the periphery, where the features of the periphery may not be as distinct or as clear. Most people with early glaucoma, though, may not notice any very obvious symptoms. Our testing that we do kind of would try to look for those features, and I think it is so important for those that have a family history of glaucoma to have a comprehensive eye exam. There is a different form of glaucoma where there may be more symptoms. So, in acute angle closure glaucoma, where the eye pressure can rise fairly quickly, there may be some symptoms of pain, halos around lights, or a headache. However, for the majority of the primary open angle glaucoma, there may not be any pain associated with vision loss. So, once again, having a regular eye exam where we could check for those features is super important.

MS. DIANA CAMPBELL: If I do happen to feel that pain you mentioned, what should I do?

DR. AMY ZHANG: If you actually experience these acute symptoms, for sure you should report to the emergency room if it's after hours, perhaps calling ahead of time to make sure that they have an ophthalmologist on call would also be important. Some of the more local emergency rooms may not have an eye doctor that's on call, so you want to make sure that you're going to a place that offers that tertiary care.

MS. DIANA CAMPBELL: Thank you. So, Dr. Mehta, why do I need treatment even though I feel fine?

DR. AMY MEHTA: So, this question kind of piggybacks on what Dr. Zhang just said. Glaucoma typically is a silent disease, meaning that you won't typically feel anything related to your condition. However, even with slight pressure rises in the eye, you can have continued progression of your disease, damage to your optic nerve, and peripheral vision loss without realizing it. The disease is a slow-progressing disease, so it can happen subtly over time without your knowledge, and by being on treatment, like eye drops or surgery, you will be able to maintain

or slow down the progression of this disease. So, even though you feel fine, you need to control the pressure in your eyes, which is why you still need treatment and follow-up with your doctor to make sure that your treatment is working the way it should be.

MS. DIANA CAMPBELL: Okay. Yes, I was just going to ask, why do I have to keep coming back to see my doctor? How frequently should I be seeing my doctor?

DR. AMY ZHANG: So, I think Dr. Mehta already brought up some very important points, which are the importance of the regular eye exams for those that have symptoms of glaucoma, as well as why do you need to maintain those visits. And part of that is because during the regular visits, we assess for eye pressure, we're checking to see whether the treatment—if you're on treatment—is adequately working and controlling your eye pressure. In terms of the frequency of exams, it really depends on the stage of glaucoma. So, for glaucoma suspects or those that have just regular eye exams, probably once a year, although some with more concerning features or higher eye pressures, it may be more frequent. For our severe glaucoma patients, we do like to see them every couple of months—maybe 3 or 4, or maybe 1 or 2, depending on the severity. It also depends on how well controlled the eye pressure is and whether there's any progression on the testing that we do in the office.

MS. DIANA CAMPBELL: Okay. Dr. Mehta, what glaucoma treatment options do I have?

DR. AMY MEHTA: This is a great question. Glaucoma treatment options have advanced to create a large spectrum of treatment options, starting from least-invasive options of eye drops and even sometimes oral pills to in-office laser treatments, even recently to implantable medications in the eye that can slowly deliver medication to your eye instead of eye drops. And, of course, more aggressively surgical options that can be combined with cataract surgery for minimally invasive to more advanced surgical options that involve putting in either a medical device, like a new plumbing system that we call tube shunts to use your own eye tissue to create a filter in the eye. There are a large variety of options for treatments that have to be tailored specifically to each individual patient, and even

times individual eyes of those patients, depending on how much of a pressure reduction is needed and how much glaucoma has progressed in your eyes.

MS. DIANA CAMPBELL: Thank you. Regarding the drops, Dr. Zhang, how do I use my drops, and how do I store my drops?

DR. AMY ZHANG: That's a really, really important question. I think, first of all, when you're putting in your drops, make sure that you wash your hands beforehand, before opening the bottle, and you want to tilt your head back as much as possible. This may mean that it may be easier for you to put in your drops while laying down. And what you want to do is—using your non-dominant [hand]—to pull down on the lower eyelid of the eye that you're going to be applying the drop, and then using your dominant hand, putting that drop into the eye. And when you're doing that, try to provide some traction or some stability using your non-dominant hand to offer a way to rest your dominant hand as you're putting in the drop into the eye. Once you have put in the drop, make sure that you're keeping your eyes closed for at least a minute, if not 2 minutes. This will help, effectively, to allow the drop to get absorbed into the eye. Sometimes we also ask that you provide a little bit of pressure right around where your tear duct is to allow for less of that drop to be absorbed into the nose and for more of it on the eye surface itself.

In terms of storage for the drops, different eye drops have different parameters for storing. I would refer to the drug insert that comes with it. Some of our medications do require refrigeration, and there are certain temperature settings in which you need to be keeping your drops in. So, it's always important to remember not to leave your drops out in the car in extreme heat or cold. So, paying attention to the packaging inserts would help.

MS. DIANA CAMPBELL: Thank you. Dr. Mehta, how long can I wait between doses if necessary? Do I have to take drops exactly 12 hours apart? And we just received a question that says, "If I forget a dose, do I take a double dose?"

DR. AMY MEHTA: So, those are both great questions. Every medication

that is prescribed for glaucoma has a certain duration of which it's effective in the eye, and a lot of the medications are meant to be taken 12 hours apart for this reason. If you take the drop too soon, it could lessen the duration that the drop may work for the second time. That is why we recommend taking the twice-a-day drop, for example, at 8 in the morning and 8 in the evening. That's 12 hours apart. If you do forget a dose, taking it when you remember to take the dose is better than not taking the dose at all. However, putting in two drops at once is not really necessary. So, if you forget the 8 p.m. dose but remember at 10 p.m., for example, putting it in at 10 p.m. is better than just not doing anything at all.

MS. DIANA CAMPBELL: Sure, that makes sense. And another question for you, Dr. Mehta: Why is medication so important?

DR. AMY MEHTA: Like we've been mentioning, the most important thing—and the only thing that we can really treat at this moment for glaucoma—is the pressure in the eye. So, using your medication, which is meant to lower the pressure in the eye, is the most important way and the only effective way we can treat your condition. This is why medication is so important. We found that elevated eye pressure and fluctuation of eye pressure can create progression of your disease, and controlling the pressure in a stable way by taking your medication when prescribed is the best way that you can help to treat your own condition.

MS. DIANA CAMPBELL: Okay. Dr. Zhang, how do I finance my medications and treatments? And are there generic forms available?

DR. AMY ZHANG: With regards to financing of medications, a lot of the pharmaceutical companies actually have their own individual websites about patient resources for financing the medications. This may involve a one- to two-page application process that may have to be started by your provider, so reaching out to your ophthalmologist about the fact that you're having a hard time with financing your medications would be helpful, and that way they can maybe assist you with the application process for this. Having said that, the pharmaceutical companies also offer savings card options. They have specific rules and regulations related to that, but certainly for some of the newer medications that do not have a

generic, that is one possibility to [help] them be more affordable. There are some other modalities. Within Medicare, there is a website that's actually linked through our Academy website, so the American Academy of Ophthalmology has a website called www.NeedyMeds.org. But this is a resource, as well, for those that need some assistance. These are nonprofit assistance programs that are offered. With regards to treatment modalities, the American Glaucoma Society offers a program called AGS Cares, where they have physicians that will do surgery for those that do not have the financial means of being able to have glaucoma surgery.

MS. DIANA CAMPBELL: Thank you. That's very helpful. Dr. Mehta, how about advancements in glaucoma treatment? How often are there advancements in the field?

DR. AMY MEHTA: Glaucoma is one of the most rapidly advancing treatment fields. We have medications that have been around for 30+ years, and we have new medications that were recently developed and placed on the market just 3 or 4 years ago. We have lasers that have been around for a long time and newer laser treatments and settings that have come out more recently. So, the field is continuously developing not only new treatment options but new ways of delivering them for patients. We have more sustained-release devices, which are devices or ways in which we can deliver eye medication to the patient's eyes without the patient having to administer it themselves. There are new surgical procedures that are less invasive than our traditional glaucoma surgeries that can be combined at the same time someone gets cataract surgery, which is a pretty standard surgery these days. So, the field is continuously advancing, and I think it's a very exciting time for our field to be able to provide these different treatment options to our patients.

MS. DIANA CAMPBELL: Thank you. And Dr. Zhang, how important are lifestyle changes? Are there things I could be doing regarding my diet or exercise or anything else that I should be paying more attention to?

DR. AMY ZHANG: Yes, I think that's a very common and important question that patients do tend to ask. One of the things is that body posture has been linked with higher intraocular eye pressures. And what I mean by that is that if you're reclined or inclined when you're

sleeping at about 30 degrees, that can actually raise your eye pressure about 3.2 millimeters of mercury. So, there is an acute increase in the eye pressure when your head is inclined at that 30 degrees posture. And also, to keep in mind, eye pressures do tend to increase during nighttime. What you want to make sure is that if you are elevating the head of the bed, that you're not actually endorsing neck flexion, meaning your neck is bent. This will actually cause a further increase in intraocular pressure. Laying on your side—on one side versus the other—can also increase the intraocular pressure, and laying face down on your face can also increase eye pressure. So, perhaps, keeping some of those things in mind when you're sleeping may be helpful for eye pressure control at nighttime.

There has been some association looking at stress and sort of the systemic effects, as well as the increase in blood pressure. Although those findings are not definitive in the sense that we don't have direct correlates, I think being active and just a healthy lifestyle certainly promotes better eye health, as well. So, there is no general guideline in terms of what exercises are best, with regards to glaucoma. I think some of the guidelines may be looking at aerobic—meaning exercises that increase your heart rate a little bit, but moderate, not high intensity—for about 30 minutes five times a week if possible. There are certain things like yoga, where if your inversion of your head—meaning if you're standing on your head for longer periods of time—that's probably not ideal for those that have glaucoma. Also, when you're swimming, you want to make sure the goggles that you use when you're swimming are not too tight because goggles that are too tight can also lead to increases in intraocular pressure, which we are concerned about when it comes to glaucoma.

There hasn't been a lot studied about which supplements really are best for glaucoma. There's some conflicting evidence. So, for now, I would just, once again, go back to just having a balanced diet and not worry about specific supplements, necessarily. I think the key is just thinking of: What can you do to overall reduce stress? There have been some studies looking at meditation as a way to reduce stress, and also has been shown to effectively lower intraocular pressure. For more of these lifestyle changes, it's a little bit harder to study in terms of randomized controlled trials, so we don't have as much evidence as we do with some of the

medications that we use for glaucoma.

MS. DIANA CAMPBELL: Great. Those are a lot of good recommendations. We have a couple questions about drops. And so, I'm not sure how to distinguish between which of you should answer, but I'll just go ahead and ask them, and hopefully we can—the three of us—just have a nice conversation. There are two in particular about side effects that different drops might cause, one of which being nightmares, with the follow-up of, "Is there a better time to take the medication?" And another person is concerned about alopecia.

DR. AMY MEHTA: So, a lot of the glaucoma medications—eye medications, and just medications in general—can have side effects. The most common side effects for the glaucoma eye drops include irritation, surface irritation, redness, and dryness to the surface because of some of the preservatives in the bottles of eye drops. Unfortunately, that's not something that has an easy fix if you're taking multiple eye drop medications at the same time. However, more serious side effects that could be affecting your quality of life, such as nightmares or alopecia, should be brought up to your doctor so that they can address if there are alternative eye drops or other treatment options that can be offered to reduce this burden.

MS. DIANA CAMPBELL: Thank you. In one of the other questions, we briefly mentioned cataracts. We've got another listener, Bob, who is asking, "How safe is cataract surgery for glaucoma patients?"

DR. AMY ZHANG: I think that cataract surgery overall is fairly safe for most patients. I think for our glaucoma patients, it once again depends on the degree of glaucoma. A lot of our newer procedures actually involve minimally invasive [surgery] that can be done at the time of your cataract surgery. So, figuring out what the degree of glaucoma is and where the eye pressure control is prior to having surgery is also important, and also to see: What are some of the goals of cataract surgery? Not only to help improve vision, but is there an opportunity to perhaps lower the eye drop burden by doing a minimally invasive procedure. Perhaps you can decrease the number of drops that you're on.

MS. DIANA CAMPBELL: Okay, thank you. Next couple of questions are about eye pressure, and I'll kind of combine them. One person on the line is wondering: Her pressures still range 14–16 even though she's in treatment and feels as though that might be too high. We have another person who's on the other end and said, "Why is eye pressure as low as 6 in some glaucoma patients?" And then, I guess, the final one was just, "What makes eye pressure stay high?" So, it's kind of related to that first part of the question. So, what causes the fluctuations? And I think this one person is finding it hard to trust that their pressure's low enough with treatment. And then on the other end, is low pressure bad, too?

DR. AMY MEHTA: I think these are all really good questions. They all kind of have a similar answer, in my opinion, because every glaucoma patient—and, in fact, every eye of every glaucoma patient—has to be treated differently. You know, what's normal for a normal patient without glaucoma is not the same as what's normal for maybe Patient W's right eye. So, you have to talk to your doctor about what their target is. You know, what is the range of pressure my pressure should really be under? For some people, that is 14–16, and for some people that's closer to 12, and for some patients even anything under 18 could be normal. So, it kind of depends on your degree of glaucoma and what, in fact, prompted your glaucoma. Was it primary open angle glaucoma? Was it something that was caused by other medications that you might be taking? Is it because of inflammation in the eye? There are a number of different reasons to have high pressure, and your discussion with your doctor can be tailored around what the expectation is for the target in your eye.

MS. DIANA CAMPBELL: Thank you. It truly is case specific. Every person—and even every eye—can be different. So, I guess the lesson is not to compare yourself with your friends that have glaucoma. Everybody's different, and as long as the communication is good with the doctor and they understand why the treatment approach is what it is, then they should be okay. We're essentially out of time today, so I just want to say thanks so much for the information you've shared with us. To close out today, Dr. Zhang and Dr. Mehta, thanks so much for your time and for providing us with so much important information. Before we conclude, are there any final remarks you'd like to share with the audience?

DR. AMY ZHANG: I think the one thing I would say is to make sure that you're having your regular eye screening. So, for any of you that have relatives that have glaucoma or if you have glaucoma and you have children or siblings, please reach out to them to make sure that they're getting at least an eye exam—a complete eye exam with dilation—for them to be checked.

MS. DIANA CAMPBELL: Again, thanks so much for joining us, and this concludes the BrightFocus Chat about glaucoma.

Useful Resources and Key Terms

BrightFocus Foundation: (800) 437-2423 or visit us at [BrightFocus.org](https://www.brightfocus.org).

Available resources include—

- [BrightFocus Foundation Live Chats and Chat Archive](#)
- [Glaucoma research funded by BrightFocus Foundation](#)
- [Overview of Glaucoma](#)
- [Treatments for Glaucoma](#)
- [Resources for Glaucoma](#)
- [Expert Advice for Glaucoma](#)

Types of pressure tests mentioned during the Chat include—

- [American Academy of Ophthalmology medication assistance website](#)
- [American Glaucoma Society AGS Cares program](#)