Hadley Presents

Questions about Glaucoma

Presented by Ricky Enger

Ricky Enger: Welcome to Hadley Presents. I'm your host, Ricky Enger, inviting you to sit back, relax, and enjoy a conversation with the experts. In this episode, we explore frequently asked questions regarding glaucoma. And our guests are glaucoma specialist Dr. Jullia Rosdahl of the Duke Eye Center interviewed by Hadley Chief Program Officer Ed Haines. Welcome to the show, both of you.

Ed Haines: Thanks, Ricky.

Dr. Jullia Rosdahl: Thanks, Ricky. I'm really excited to be here.

Ricky Enger: I'm excited to have you, because glaucoma is one of those things that I actually don't know as much about as I should, even though my fiancé has glaucoma, and sometimes I ask him things and he tells me what he knows. But I think that I'm going to learn a lot more from our conversation today. Before we jump into that though, I want to know a little about each of you. Just tell the audience a bit about who you are and what you do. Let's start with you, Ed.

Ed Haines: Well, I'm Ed Haines. I'm the Chief Program Officer at Hadley. I've been with Hadley about 15 years, but I've spent the majority of my career in the field working with older adults with vision loss. So, I've had a lot of clients over the years with glaucoma, so I'm thrilled to be able to talk to Dr. Rosdahl today.

Ricky Enger: Fantastic. And Dr. Rosdahl, how about you? Tell us a bit about yourself and I'm always curious about how people choose the careers that they do. So, just tell us a bit about you and what made you decide to become a glaucoma specialist.

Dr. Jullia Rosdahl: Well, thank you. So, as you noted in the intro, I'm a glaucoma specialist at the Duke Eye Center in Durham, North Carolina. And in addition to seeing patients with glaucoma and prescribing eye drops and doing lasers and surgery, I also teach medical students and ophthalmology residents, and I'm involved in some research as well. I lead our Wellness Program at the Eye Center, and I serve on some national organizations including the National Eye Health Education Program, also called NEHEP, and that's part of the National Eye Institute. And that's actually where I learned about Hadley and the great work that you're doing for people with vision loss. So I think that's how I was able to connect and be a part of this program today.

You also asked about why I chose glaucoma as a specialty, and I really enjoy telling this story. When I was in medical school, I did a combined program where I earned both a PhD and an MD. And yes, my parents did wonder if I ever would finish school, but I eventually did. And in my PhD, I studied how the neurons in the eye, the retinal ganglion cells, how they developed and made connections in the brain. And that led me to the specialty of ophthalmology, and then the choice of glaucoma wasn't a choice at all at that point, because in glaucoma, the neurons that die and cause vision loss, those are the retinal ganglion cells. And so, now every day as a glaucoma specialist, my job is really to help people save their vision by saving those retinal ganglion cells.

Ricky Enger: That is very cool. I love hearing about how people got to where they are. It's always a fascinating story. So I'm looking forward to learning a bit more about glaucoma, so I'm going to sit back and just take in the knowledge from both of you. So, with that, I'm going to turn it over to Ed. I know you have some great questions, Ed.

Ed Haines: Well thanks, Ricky. Dr. Rosdahl, I wonder if we could just start with the basics. If you could just tell us, what is glaucoma? And what are maybe some of the common risk factors associated with glaucoma?

Dr. Jullia Rosdahl: So, glaucoma is actually a group of eye diseases, and what they have in common is that the optic nerve, which is the cable that connects the eye to the brain, it's when that optic nerve becomes thinned out because of those neurons, those retinal ganglion cells that I mentioned before, of those neurons dying. So when the nerve dies off like that, people lose vision and it usually affects their peripheral or side vision first, in glaucoma. The most common type of glaucoma in the United States is primary open-angle glaucoma, and one of the main problems that we have with glaucoma is that people have it and they don't know it, because the vision loss happens really slowly. So they don't even notice that it's starting.

And once you lose vision from glaucoma, really any type of glaucoma, not just primary open-angle glaucoma, we can't get that vision back. So early detection and diagnosing glaucoma early is really important for saving sight. You asked about risk factors, so they include having a family history of glaucoma, so people in your family, brothers, sisters, aunts, uncles, grandparents and parents, older age is an important risk factor for glaucoma too. And actually, Black race and Hispanic ethnicity are risk factors, although a lot of white people can get glaucoma too. So don't think that you shouldn't get glaucoma testing or screening if you are white.

Ed Haines: What's the typical journey of a patient between the time they're diagnosed, and they actually see you as a glaucoma specialist? What's the average scenario that a patient experiences?

Dr. Jullia Rosdahl: So, I would say the scenario that we hope for is that people are going along in their regular lives, and they're getting regular complete eye exams with their local eye doctors, and that that local eye doctor recognizes some early sign. Maybe the eye pressure is a little elevated, or maybe the optic nerve looks a little suspicious, or a family history is noted. And that savvy local eye doctor either does some of the glaucoma testing themselves or refers them to someone like me as a glaucoma specialist. And then I see them. We do what we call a glaucoma evaluation, which is a pretty lengthy visit in-clinic, where they get a lot of special testing and an in-depth eye exam. And we ferret out whether they do have glaucoma, or just some risk factors that need to be followed.

So that's the scenario that we hope for, where the disease is diagnosed early before really any vision loss has occurred, and we can start treatment early and prevent vision loss. So we also get referrals for help in managing patients who've already sustained vision loss from glaucoma or already have advanced glaucoma. And sometimes the reasons that they come to us is because they need surgery, or they need some additional treatment that that local eye doctor is not able to provide. So there are lots of different ways that patients come to see a glaucoma specialist, but we always hope that they're coming early enough where we can save vision, and that frequently is the case. Actually, most people who are diagnosed with glaucoma and treated for glaucoma don't go blind from it.

Ed Haines: And that actually was going to be my next question. I was just going to ask, does glaucoma always result in some vision loss or blindness? Can people with the right kind of treatment prevent having any vision loss at all?

Dr. Jullia Rosdahl: Oh, that's a great question. So, it is possible for someone to have glaucoma and not lose any vision from it. The earliest stage of glaucoma is when there is just changes to their optic nerve but were not able to pick up any losses in their peripheral vision, even with automated, computerized visual field testing. That would be mild glaucoma, based on the American Academy of Ophthalmology Preferred Practice Patterns. But often, people even with mild to moderate glaucoma, where we can identify peripheral field defects with the computerized automated visual field testing, even in those patients, often we can pick up those areas of vision loss, but they are not noticing it. And so those patients too, with treatments started, they can really not have vision loss that's affecting their quality of life.

Ed Haines: And before we talk about treatments, is it possible that the vision loss resulting from glaucoma can ever be reversed or is it a permanent loss of vision?

Dr. Jullia Rosdahl: So it is a permanent loss of vision with the treatments that we have at this point. I am very hopeful that we will have treatments in the future that reverse vision loss from glaucoma, but at this point, that vision loss occurs from the death of those retinal ganglion cells. And we don't have ways yet to renew or replace or really recharge or regenerate those nerves at this time. So it is unfortunately a permanent loss of vision.

Ed Haines: And what are normally the kinds of treatments that you prescribe for folks with glaucoma?

Dr. Jullia Rosdahl: So the main treatment for glaucoma is to lower eye pressure. And we have a lot of different ways to do it. Typically, we'll start with eye drop medications or a laser treatment to the drain of the eye. And then, there are also surgical treatments that we typically reserve for cases where we cannot control the glaucoma with the drops or laser or where those treatments are just not effective or not possible. For example, a patient who has a lot of eye drop allergies, cannot tolerate any of the drops, then surgery may be considered for a more mild case as well.

Ed Haines: And I know with eye drops, I've worked with people that are not necessarily as conscientious about compliance as maybe they should be. So how important is it that a person follow through with your exact prescription and your instructions for medication.

Dr. Jullia Rosdahl: Oh, I'm so glad that you brought up the topic of adherence to treatment regimens. It's really, really important that patients follow those eye drop treatment regimens. I like to say to my patients, "This eye drop is a very powerful way to lower eye pressure, but it does not work if it is sitting in the bottle. It needs to go into your eye." There are a lot of different types of eye drops that we prescribe, and so the regimens can vary quite a bit. And they also can be quite complex, and so I certainly understand when patients have trouble adhering to these regimens.

I would say the most simple one would be a once a day eye drop that you might use at bedtime. But sometimes, we have patients on three or even four eye drop medications. Some of them need to be dosed two or even three times per day, and it's quite a feat getting them all in at the right times. But it's really quite important. Those eye drops lower eye pressure for a certain amount of time after they're instilled, and then that eye pressure will go back up once that eye drop medication has worn off. So that next dose is timed to really maintain that lower eye pressure. And we think that maintaining a lower eye pressure and really keeping it low without those kind of big fluctuations can really help protect the optic nerve, help preserve that sight.

Ed Haines: I think I've had someone tell me that there's some lifestyle changes that maybe people need to be aware of too. I think someone told me inverted yoga positions, for instance. Are people advised against those kinds of activities? Do you recommend lifestyle changes to go with medication, or is that dependent on the individual?

Dr. Jullia Rosdahl: I would say that most patients probably don't need any particularly extreme lifestyle modifications. However, if I do have a patient who is progressing despite a regimen that we think really should be adequate, or a patient who's really motivated to do every single possible thing they can think of to prevent their disease, then we do talk about lifestyle modifications. And the things that I talk about with patients include that yoga concern that you brought up. We do think that prolonged head down postures like doing headstands, that that can increase the pressure in the eye just from that elevated venous pressure. Tight neck ties as well, and interestingly, prolonged wind instrument playing, where you're blowing against a reed, and again, kind of increased pressure in your head from those prolonged periods of kind of holding your breath and breathing against that wind instrument. We think that those might potentially result in some potential progression of glaucoma. I would say that I don't like to tell people not to do yoga, however, because I think that it's a really good way to relax, recharge, and good for your health. So it's really those prolonged, head down postures.

There are a couple other lifestyle modifications too, to consider. One of them is to eat a diet with a lot of leafy green vegetables with antioxidants. We think that might help the optic nerve in glaucoma. Healthy lifestyle in general with a heart-healthy diet, with lots of vegetables, fruits, whole grains, and lean proteins, getting some exercise, getting enough sleep, having healthy relationships with loved ones, those are things that are good for your overall health and so they're going to be good for your eyes. And then there's one that's kind of interesting around sleeping with a wedge-type pillow, having your head elevated around 30 degrees, that's something that's been shown to decrease progression in really advanced glaucoma in some studies as well. So that's something else that I'll bring up for a patient who might be progressing, just by what we think is adequate pressure control.

Ed Haines: Now, if people are adhering to their treatment and taking all their drops the way they should, does glaucoma ever just stop? Does it go away, or do they have to get treated for this condition for the rest of their lives?

Dr. Jullia Rosdahl: That is a really common question, Ed, I'm glad that you asked that. Glaucoma is a lifelong condition. Once you have it, we have lots of good treatments, but we really don't have a cure. And so typically, patients do have it for the rest of their lives. However, treatments change. Responses to treatments change as well. And so, it is something that has to be monitored for the patient's life. Often though, it is controlled and people do not go blind.

Ed Haines: If I'm diagnosed with glaucoma, do I have to start being concerned about my kids or potential grandkids? Is genetic counseling involved with this? When would my children, for instance, need to start being tested for glaucoma if I've been diagnosed?

Dr. Jullia Rosdahl: Well, glaucoma does run in families, and so it's a really good idea if you are diagnosed with glaucoma that you let blood relatives know about that diagnosis. And they don't necessarily need to run out and see a glaucoma specialist right away, but they should have complete eye exams on a regular basis and when they see their eye doctor, they should tell them about that family history of glaucoma. And if the doctor sees anything of concern, more testing is needed like a visual field test or a computerized picture of the optic nerve, then they might need to see a glaucoma specialist. So I would say if you have children and you are diagnosed with glaucoma, then I’d recommend that they have a complete dilated eye exam with a local eye doctor if they haven't had one recently, and to let the doctor know about your diagnosis.

Ed Haines: Are there any kinds of just sort of misapprehensions and false knowledge out there about glaucoma and treatment that you see that patients come to you with that you'd like to dispel?

Dr. Jullia Rosdahl: Well, the most important one I think is one that we've touched on already, that fear of blindness. When people first get the diagnosis, they think that, "Oh my gosh, I will be going blind." But like we discussed, most people who are treated for glaucoma don't go blind. So the message should really be one of hope.

The biggest misapprehension about glaucoma treatment I would say is about the effects of treatment. Most people expect that glaucoma eye drops will make their eyes feel better or help them to see better, but that really isn't the case. Eye drops for glaucoma help to lower the eye pressure to prevent future vision loss, so they help keep your vision but they don't make vision better. And they can have some side effects. Most of them are manageable. People do great on their drops, but there can be some stinging or redness and sometimes, we do need to even stop or change drops because of side effects. So that misapprehension about the effects of treatment, that's one that I'd like people to know about too.

Ed Haines: And once folks start seeing you as their glaucoma specialist, do they still need to see their local optometrist or their local ophthalmologist as well? Or do you kind of handle their primary eye care from that point forward?

Dr. Jullia Rosdahl: So, optometrist and the comprehensive ophthalmologists are really important partners for us. I would say some of my patients do just see me for their eye care, and kind of transfer things over to me. Many of them have other eye problems like dry eye, or glasses, a need for contacts. And those are things that the optometrist or that comprehensive doctor is helping with, and so they'll still see them for those reasons. And some patients have to travel quite a distance to see me, so we'll partner with that local eye doctor. For example, they'll get their eye pressure checks every three or four months locally and then come to see me once a year for the visual field testing, the optic nerve imaging, and the dilated exam as long as everything's been stable at those interim visits with their local doctor.

Ed Haines: Oh, that makes perfect sense. And this is a question I was interested in asking you. I've worked in the past with a lot of people with age-related macular degeneration, and the dry type particularly now that they've been told, "Well, there's just really nothing that can be done." And I'll visit them, I'll notice for instance on their chart that they also have glaucoma. And I'll say, "Have you seen a glaucoma specialist?" And they commonly tell me, "Well, I know nothing can be done about my vision, so why should I bother?" What would you say to patients like that?

Dr. Jullia Rosdahl: So, I often have patients who have both macular degeneration and glaucoma, and I partner with my retina colleagues to care for those patients. And I think these are some of the patients where glaucoma care is really so important. Patients with macular degeneration typically have losses in their central vision, but their peripheral vision might still be intact and be helping them with mobility and seeing to do a lot of the things that they need to do to live their lives. And so, the glaucoma care is really essential to help them preserve that functional, peripheral vision that's allowing them to live the lives that they want to live, like they are. And so, that glaucoma care is really essential.

Ed Haines: Okay, great advice. I know it's scary how common that is, and how much I've heard that though. Are there any treatments on the horizon for glaucoma that show promise, that might be more effective than what you're using now?

Dr. Jullia Rosdahl: Well, there is a lot happening in glaucoma treatment right now. It's been a really exciting time for us in the last couple of years. We had two new medications approved for glaucoma treatment, and the two mechanisms of action are new as well, so they're quite additive to the eye drops that we currently have. They are considered second line, however, so they're not necessarily better than what we have. But they can be added in a really powerful way to help us with our patients. And in 2020, just in this past year, a new way of delivering glaucoma medications was approved by the FDA. And it's an implant that we can inject right into the front part of the eye. It's tiny, tinier than the letter I on a dime. And then that medication sits in the front of the eye and elutes over a period of four to six months before wearing off. So that's a really exciting development in medications.

And then there has also been a lot of focus on developing safer surgeries for glaucoma and advances in what are called minimally invasive glaucoma surgeries, or MIGS. However, they really do seem best for people with mild to moderate glaucoma who also have a cataract that's ready for cataract surgery and want to be on fewer eye drops. So we still really need safer alternatives for our patients with more advanced glaucoma, who really need those lower pressures. The MIGS surgeries aren't quite there for us for those patients yet. And we still need those nerve-regenerative therapies to bring vision back for our patients. But we have a lot of scientists and researchers around the world who are working hard to develop those treatments for our patients. But unfortunately, we're still waiting for those.

Ed Haines: Well Dr. Rosdahl, you've talked about treatments and I just wanted to ask you one quick question that's come up with folks that I've worked with in the past, particularly folks who may not have the insurance or the money to pay for eye drops, et cetera, and that's medical marijuana. And how efficacious is medical marijuana in treating glaucoma, and should people depend on that as opposed to actually seeking out treatments from a glaucoma specialist?

Dr. Jullia Rosdahl: Ed, I'm glad you asked that because I think a lot of patients might be afraid to ask that question. But it is a really important question, because I really would ask that patients not use marijuana for treatment of glaucoma, because it has not been shown to be effective or safe for treating glaucoma and preventing vision loss. There's certainly anecdotal accounts of pressure lowering and potentially different parts of marijuana, different components that might eventually be part of an approved treatment for glaucoma, but not at this time.

So it really isn't a good way to prevent vision loss. I hope though that we will have marijuana-based eye drops in the future, because I think that is really going to boost adherence for glaucoma treatment in the future. But at this point, medical marijuana is not an approved treatment for glaucoma. Eye drops, laser surgery, those are the things that we know work. If patients are struggling with the cost of their glaucoma care, there are actually a lot of great programs that a lot of the drug companies offer to help patients get the medications that they need. And so I encourage those folks to ask their doctor about different programs that these pharmaceutical companies have available for patients who can't afford them.

Ed Haines: Well, that's terrific information, because I know that is a concern. So, thanks very much and I'm glad I asked the question.

Ricky Enger: Yeah, that's great knowledge to have, as is all of this. I've actually learned quite a bit, even with some limited knowledge of glaucoma, I've certainly added to that today. So I certainly appreciate the opportunity to sit back and listen as you all discussed this. As we're wrapping up here, just want to ask, are there places that you would recommend? Either of you, either Ed or Dr. Rosdahl, places that patients can go if they want to read a bit more about glaucoma, whether it's treatment or perhaps if they're looking for a glaucoma specialist, places that they can go just to do some of their own research?

Dr. Jullia Rosdahl: So, the websites that I recommend for learning about glaucoma include the American Academy of Ophthalmology Patient Education website that is called EyeSmart.org, E-Y-E-S-M-A-R-T.org. It is a great resource for patients. The National Eye Institute also has a lot of great information about glaucoma and some of the more scientific advancements that are going on right now and if you're looking for a glaucoma specialist, of course the best way is going to be to ask your local eye doctor for a recommendation for someone that they work well with and that they know. But if you're online and you're looking for someone, the American Glaucoma Society, or AGS, we maintain a list of fellowship-trained glaucoma specialists in the United States and patients can go on that site and search by zip code to look for a fellowship-trained glaucoma specialist.

Ricky Enger: Fantastic. And we'll have all of those resources in our show notes. I want to thank you both so much for spending a little time with us today. I'm so glad, and I am very appreciative of the information that you've shared.

Ed Haines: Oh, you're welcome. It was a pleasure.

Dr. Jullia Rosdahl: It's been my pleasure, Ricky and Ed. Thank you so much.

Ricky Enger: Thank you. Got something to say? Share your thoughts about this episode of Hadley Presents, or make suggestions for future episodes. We'd love to hear from you. Send us an email at Podcast@Hadley.edu. That's P-O-D-C-A-S-T@Hadley.edu, or leave us a message at 847-784-2870. Thanks for listening.