Eye on Retinal Emergencies: Floaters, Flashes, Tears, and Retinal Detachment Transcript

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Introduction to Macular Holes

If you see macular hole is basically a discontinuity in your retinal tissue at the macula. So as I previously told that macula is the central part of the retina which is responsible for your pine vision.

So if there is a discontinuity in your retina at the macula, it is known as macular hole. now this macular hole is very different from the peripheral holes which are being formed peripheral holes are basically atrophic degenerative holes this thing is more of an age-related change it happens because of posterior vitreous detachment and sometimes there's this anterior posterior traction and a tangential traction on the retina which causes is the retinal layers to split apart at the macula and it causes macular holes.

Now these patients can have a progressive decrease in vision. Usually they do not have a sudden onset loss of vision. They have a gradual loss of vision.

They can have symptoms like metamorphopsia. By metamorphopsia, I mean that if they look at a straight line, it might appear a little wavy. They can have scotomas.

They can have a black central scotoma in their visual field. They can have micropsias or metamorphopsia or macropsias. That is, they can have difficulty in reading.

The letters might appear more crowded or they might appear more spaced apart. So these are some of the visual symptoms which can happen because of a macular hole.

Welcome to the IQ Podcast. I'm Dr. Rani Banik, here to help you boost your IQ with powerful insights that connect your eyes, your brain and your whole body wellness.

Podcast Guest Introduction and Retina Background

This episode was recorded during the Eye Health Summit where the world's leading experts shared breakthrough insights in vision and holistic eye care.

Welcome back to the Eye Health Summit. My name is Dr. Rani Banek. I'm your host and today I'm so honored to have with me my guest, Dr. Ashish Markan. Dr.

Markan is an assistant professor at All India Institute of Medical Sciences in New Delhi, India, and he's taken care of countless patients, helping them preserve and protect their vision when they have retinal issues.

Thank you so much for joining us, Dr. Markan, for the iHealth Summit. Thank you so much, Dr. Rani. That is my pleasure to be a part of your show and hope that we're able to discuss some good points related to retinal emergencies.

And that will be beneficial for all the viewers out there. Absolutely. Thank you again for taking the time to chat with us. I always love to ask my guests, what was it about the area that you specialize in that drew you to the field?

So what was it about retina that made you decide to become a retina specialist? Basically, I started my journey in ophthalmology in 2014. So when we were junior residents, I used to go to the OTs and I used to see my seniors operating.

So when I used to go to the retinal OTs, that was very fascinating, looking at how intricately they used to do retinal

surgeries, how long duration surgeries they used to do, and that actually fascinated me a lot.

Apart from that, retina is the only tissue in the eye where you can actually look and you can tell that what systemic problems the patient might be facing.

I can look into the retina, I can tell the patient is hypertensive or diabetic or has some other systemic problems. So all of these things fascinated me a lot and that is why I just decided that I will do retinal surgeries in future.

Well, thank you for sharing your story. I'm sure your patients are grateful to have you as their doctor. And I know you do a lot of education online and we'll talk about that as well.

I know you have a very large following on social media like Instagram. We really learn so much from you. But today, let's focus on a particular area of retina, which is in the area of symptoms like flashes and floaters.

Now, many people experience floaters. I think there was one study that found that over 75% of normal individuals have floaters. What are floaters and how may they change during life?

And what are some of the warning signs that people may have when it comes to their floater symptoms?

What Floaters Are and Warning Signs

So first of all, talking about what floaters are. So floaters are something that tiny black or wavy lines which somebody can see out in the visual field.

What you have to understand is that most of these floaters are non pathological. That means they're usually age related. They happen because of the degeneration in your vitro.

which can happen with age. So when patients come to us with floaters, we always tell them that this can be an age-related degeneration and not every floater has to be treated.

That is something everyone should be aware about. Yeah, there are a few warning signs which we have to look at if there are plenty of floaters. associated with flashes or they are associated with a certain loss of vision, that means that you might have some retinal problem, you might have a retinal emergency like a retinal tear or a retinal detachment and then you need to go visit a retinal specialist as soon as possible.

Dr. Markham, what I'm hearing you say is floaters are common. In most cases, they're benign. However, if there's a change in the floaters, for example, if you see many more floaters one day or if they're associated with tiny flashing lights, then you should go and get your eyes checked.

And when you go to see an eye doctor if you're experiencing any of these symptoms, what types of tests may the eye doctor do in the office to help to diagnose what's really going on in the back of the eye?

So one important test which needs to be done is a dilated fundus examination. So by dilated fundus examination, we mean that we just need to put a dilating drop in your eye and then we do an indirect ophthalmoscopy to check your retinal status.

Basically, we see the periphery of your retina and see whether you have developed any retinal break or a retinal tear. That is the least thing which a retina specialist has to do.

After that, there are various other imaging which can be done, but a dilated fundus examination is a must in case you develop a recent onset of flotus or flashes.

Now, a related question is if someone needs to go see an eye doctor, should they immediately go to see a retina doctor, retina specialist, or can they go see their general ophthalmologist or their optometrist if they're experiencing any of these symptoms?

I would suggest that they should directly go to a retina specialist because sometimes a delay in your treatment can cause you a permanent vision loss.

So you see if you have a retinal detachment which has involved your central area and you have developed a sudden vision loss, there is no point you go to an optometrist first, then they refer you to a GP and then you go to a retina specialist that might delay your treatment.

So if you know that you have develop the recent onset floaters or flashes or there is a sudden onset loss of vision. It is always advised that if possible, directly go to a retina specialist because that is his domain.

He'll be able to treat you as early as possible. That's very good advice, but also I would just add, let's say you're in an area where there is no retina specialist available, at least get checked and then get the process going so that you can go get referred to a retina specialist as soon as possible.

Oftentimes it's easier for one doctor to make the phone call and get you the appointment than for you trying to get the appointment on your own. Unfortunately, sometimes it's not as fast that way.

I just wanted to say that maybe in America or in United States, getting an appointment for a retina specialist might be very difficult. But in a country like India, you can directly walk into a retina specialist, get yourself checked.

So here in our country, it is not so much of a problem getting an appointment for a retina specialist. Oh, that is wonderful to hear because it's not so easy here in the United States.

You're absolutely correct. Let me ask you, Dr. Markin, can you explain how do floaters, how do they relate to retinal tears or detachment? What is the process?

What's going on in the back of the eye that links these two things together? Floaters and flashes with a retinal tear or detachment? Eye is an optically clear structure.

Examining Floaters and Retinal Tear Risk

So there's a gel in the eye which is known as vitreous gel and it is optically clear. So if something starts happening in this gel and it digs transparency or there are some opacities which are being formed in the vitreous gel, that will be presented as flotus.

So if there's an age-related degeneration in the vitreous gel, that will cause flutus. If there's a tear, there's a large tear in your retina, so there are these cells which are known as retinal pigment epithelium cells.

These cells, they tend to migrate and they enter into the vitreous gel. Once they are inside the vitreous gel, they'll cast some shadows on your retina and they'll be seen as flutus.

Similarly, if there is bleed in your vitreous cavity, there's a diabetic patient who has developed some vitreous hemorrhage or there's some bleed. Now these RBCs or the red blood cells, they again come into the vitreous cavity, they'll cast some shadows.

and that will again present as flotus. Similarly, if there is some inflammation in the eye, there is some uveitic condition. These WBCs or the white blood cells, they might come into the vitreous cavity and again they can cast shadows and can cause flotus.

So anything in the vitreous cavity which can cast shadows onto your retinal surface will cause flotus. Thank you for that detailed explanation, Dr. Markin.

It's really important for patients to realize that, yes, there's age-related floaters, but there are other potentially pathologic conditions that can also lead to floaters.

As Dr. Markin mentioned, bleeding in the back of the eye, perhaps from diabetes or from trauma or other reasons, and also inflammation in the form of uveitis can cause floaters as well.

So how do you know if the particular patient's floaters are from potentially a retinal tear or something else? How do you know? A patient would never get to know that what is the cause of the floaters.

A doctor has to check it. So if they are associated because of retinal tears, they might be associated with flashes also. So if a patient has a sudden shower of floaters.

There are like thousand floaters have come in. Also, there are flashes which have been developing and patient has this quadratic loss of vision or patient has some black curtain being falling in one part of the eye or one part of the vision.

That signifies that there might be a retinal tear and an associated retinal detachment. For a patient who had a dilated examination is done, we can easily tell what is the actual cause of these floaters.

Thank you. Thank you for clarifying that. And is it that in some patients the vitreous pulls on the retina as it's deteriorating and then that causes the tear?

Is that what's happening on a mechanical basis? Yeah, so what happens is actually the vitreous is a gel. But with age, this vitreous tends to liquefy.

So once the vitreous liquefaction starts, it sometimes causes a contraction on the retinal surface. So once this gel, it rubs against the retinal surface, it can cause flashes.

But if there is very strong attachment between this vitreous gel and the retina, so while the gel pulls on the retina, it can cause a tear. And this is known as a retinal tear.

retinal break, which is being formed, which ultimately can lead to a retinal detachment. Let's say you have a patient who comes in, they've had new onset flashes, floaters, and you diagnose a retinal tear.

What do you do next? As a retina specialist, what are some options for managing this patient before they develop a retinal detachment? So let's say it's still very early on that you've been able to diagnose the tear and it has not yet progressed to a detachment.

Yeah, so if I do a dilated examination and I see there's a tear, patient has associated floaters and flashes and there's a horseshoe tear. Basically, there's a tear with attraction.

Such tears need to be treated immediately. By treatment, I mean that we need to do a laser barrage. So we do a laser barrage around these tears. We create a barrage around the tear and we basically seal that area.

Yeah, it is a photo coagulative laser which creates some scars around the tear so that the detachment does not happen. Sometimes I explain this to my patients with an analogy.

I say, let's say you have wallpaper on in a room and the wallpaper slowly started to come off and it's at risk for completely tearing off the wall. What we do is we tack it to the wall with this laser.

So it's almost like putting staples or tacks in the wallpaper so it doesn't detach, so it doesn't fall. And the similar process is what Dr. Markin is explaining with this laser that's used for retinal tears.

How successful is that laser usually for preventing further tearing or detachment of the retina?

Treating Retinal Tears and Detachments

So you see in about 80 to 90 percent of the cases, if the laser is done adequately all around the tier, it is very

unlikely that it will progress to a retinal detachment.

We do not tell our patients that it is a 100% safe, 100% effective procedure, but yeah, the efficacy of a laser barrage around the tears is roughly 80 to 90%. So if I do a laser barrage of 10 patients, out of them, eight to nine patients are unlikely to develop a retinal detachment if it is done adequately around the tear.

It only needs to be done one time, the laser, or do you have to sometimes repeat the laser? Yeah, sometimes the laser need to be repeated because sometimes there's some fluid, there's some subretinal fluid which has tend to develop around the break or around the tear and the laser reaction is not possible.

So as the fluid sometimes absorb on its own, then we can do or we can augment the laser. Laser augmentation is sometimes required in many in some of these patients.

Okay, that's good to know. Now, let's say that unfortunately the patient has had symptoms, flashes, floaters, and there's been a delay before they've gotten to see the retina doctor and they've already developed a retinal detachment from their tear that progressed into a retinal detachment.

What are some options at this point for patients to help to recover their vision? So you see, if the retinal detachment has already developed and the patient has not, the retinal detachment has not involved the central area, which is known as the macula, which I mean that the macula is still on.

So in those cases, there are a number of options we can try. We can put a gas bubble in the eye, which is known as pneumatic retinopathy, depending upon the location of the break.

We can do scleral buckling surgery or there is some invasive procedure, a more invasive procedure which is known as Spars-Penna-Bitrectomy. Whenever there is a retinal detachment where the macula is still on, the central area is not involved, I personally would treat it as a retinal emergency.

We do not want the retinal detachment to progress and involve the macula. So such cases need to be treated and what treatment has to be given will depend upon the type of detachment, the location of detachment and and the profile of the patient.

So it depends on a number of factors, but what surgery has to be done will be decided by a retina specialist. So the options you gave were sometimes you put a gas bubble inside the eye.

Sometimes you do a vitrectomy where you remove the jelly and you replace it with either gas or silicone oil. And sometimes you have to do a surgery called a scleral buckle.

Are those the options basically, those three options? Yeah, those are the three most commonly done surgeries in a routine clinical practice. Got it. And I know it's difficult to generalize because each patient is unique, but let's say someone has this one of these surgeries for retinal detachment.

How successful is it usually? So you see, it will again depend upon the type of surgery we perform. But if I give a blanket percentage, I would say about 80 to 90% of these patients would not require a resurgery.

But we always consider patients that about 5 to 10% of the patients might require a second surgery. By that I mean that they might again need a re-intervention in the form of putting a gas bubble again in the eye, or doing a vitrectomy, putting silicone oil again, because some of these detachments might be chronic and they might not settle with a single surgery.

So far, Dr. Markan, you have really illuminated us so much on the topics of flashes, floaters, retinal tears, and certain types of retinal detachments.

We're going to take a very short break to hear from one of our sponsors, and then we'll be right back with more on our interview with Dr. Markan on the Eye Health Summit.

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Fortify. Empowering your vision. Welcome back to the iHealth Summit. We're speaking with Dr. Ashish Markan, a retina specialist in India, about retinal emergencies.

Dr. Markan, just before the break, we were talking about retinal detachments, and you mentioned that some of those procedures are very effective if you have a macula on retinal detachment.

Now let's talk about the other side of this. What if the macula has already detached? What do you do then for these patients? Is it anything different and do they have a different prognosis than the other patients?

So you see the macula is the central part of your eye, the central part of the retina from where you have the sharp vision. So if your macula gets involved, the visual prognosis automatically decreases.

So if you delay your surgery in cases of macula off detachment, it is possible that you might not have a complete visual recovery. So what I tell my patients is that if your macula is off, the golden period is about one to two weeks.

So if these patients are being operated within a week or in two weeks time, there is still a chance that 90% of them will still have a good visual recovery.

But if you delay your treatment in cases of macula off detachments, you might not have a complete visual recovery. What surgery is done? Surgery is almost similar.

Either we do a pneumatic retinopoxy, or we do a scleral buckling, or we do a par-spina vitrectomy.

Macula-Off Detachment Prognosis

The surgery is same, the management is same, but what will vary is the outcome of surgery. So if it is a macula off detachment, I would say that you should get it rectified or you should get the surgery as soon as possible, maybe within a week's time or in two weeks time.

And let's say the surgery has been delayed about two weeks. Is it less likely that patient will recover their central vision if it's been that that span of time?

If you delay your surgery more than two weeks, I would not say that you will not have a good visual recovery. You might have good visual recovery. So you see the recovery, the visual recovery will depend upon a number of factors, not just whether your macula is on or off, but also how much of your retinal cells have degenerated within that period of time.

And also it will also depend upon your natural body defense mechanisms or your natural recovery. So some of these patients we have seen that even if we operate them after two weeks, still they have a good visual recovery.

That means the retinal cells have not degenerated as we expect to degenerate them within a week's time or in two weeks time. But yeah, the golden rule still remains one to two weeks.

And if you delay it, you should not worry much that you might not have a good visual recovery. Still, if luck favors you, you still could have a good visual outcomes.

Thank you for that reassurance because I know some people, it's a frightening experience to lose vision, especially from a retinal detachment. And it's good to hear that there is still hope and there's still reason to go ahead and undergo repair rather than to just wait.

Now, Dr. Markin, I wanted to move on to a slightly different but related topic. We've been talking about retinal tears and detachments. Let's talk a little bit about macular holes.

What is a macular hole? Is it a tear? How does it affect vision? What are some risk factors for macular hole? So you see macular hole is basically a discontinuity in your retinal tissue at the macula.

So as I previously told that macula is the central part of the retina, which is responsible for your pine vision. So if there's a discontinuity in your retina at the macula, It is known as macular hole.

Now this macular hole is very different from the peripheral holes which are being formed. Peripheral holes are basically atrophic degenerative holes. This thing is more of an age-related change.

It happens because of posterior vitreous detachment and sometimes there's this anterior posterior traction and a tangential traction on the retina which causes is the retinal layers to split apart at the macula and it causes macular holes.

Now these patients can have a progressive decrease in vision. Usually they do not have a sudden onset loss of vision. They have a gradual loss of vision.

They can have symptoms like metamorphopsia. By metamorphopsia, I mean that if they look at a straight line, it might appear little wavy. They can have scotomas.

They can have a black central scotoma in their visual field. They can have micropsias or metamorphopsia or macropsias.

Macular Hole Symptoms and Staging

That is, they can have a difficulty in reading. The letters might appear more crowded or they might appear more spaced apart. So these are some of the visual symptoms which can happen because of a macular hole.

But macular hole symptoms are not suddenly onset. They are usually progressive. They develop gradually. And so these patients sometimes tend to miss these symptoms because macular hole is present in one eye, other eye is absolutely normal.

They might not even realize that they have a macular hole. And they might, once they go on a routine checkup, then they might get to know that they have a very long standing macular hole in their eye.

So thank you, Dr. Markin, for so eloquently explaining the differences between a macular hole and also a peripheral retinal tear. The two are very different in terms of location, timing, how they affect vision.

But can you now share with the audience, what are some treatment options for macular holes? Do they need to be treated, or can you observe them? What is your typical recommendation for macular holes?

So you see macular hole surgeries are elective surgeries. They are not an emergency surgeries. So if somebody tells you or a physician or a retina specialist tells you that you have a macular hole, you should not panic.

So it is not something to panic about and then you feel that you need to get these surgeries immediately. There is a vision cutoff. Usually we operate in patients who have vision 6-9 or less than that.

And also if the patient is symptomatic. Not every macular hole has to be treated. Some of these macular holes have been shown to spontaneously close. Like you see stage 2 macular holes, they close spontaneously.

Some of them have been shown to close spontaneously. Whereas stage 3 stage four macular holes have a very poor closure spontaneously, and they actually require a surgery.

And with surgery, we expect their vision to improve significantly. Basically, Dr. Markin explained that there are different stages. So it's important for you to go see your retina specialist, ask which stage you're at, how much does it impact your vision, and then make a decision on whether you monitor the macular hole or if your vision is declining and it's affecting your quality of life, then maybe consider surgical repair of the macular hole.

But it's not a one size fits all. It really depends on each individual patient. Dr. Markin, I wanted to, in our last few minutes together on this interview, I wanted to ask you, I oftentimes get this question from patients, what can they do from a prevention standpoint to prevent against things like retinal tear or retinal detachment, especially, let's say, if someone is a high myope, what can they do for prevention?

Are there any foods or supplements or other modalities that you recommend for prevention? So this is one of the most common question which is asked to me in my clinic is what they could have done or what they can do to prevent a retinal detachment.

I would say that like you cannot prevent aging. Aging has to happen. So because of aging the degenerative changes in your eye bound to happen. And now it is your bad luck I would say that if somebody develops a retinal detachment.

But yes, if you get an annual checkup and on annual examination, on a routine eye examination, we see that there are some peripheral retinal degenerations like there are lattice degenerations or there are some atrophic holes.

Those degenerations can be treated and by treating them, we expect that The risk of retinal detachment can reduce, but there is no superfood. If you ask me one superfood which can prevent retinal detachment, I would say that there is no such superfood.

So the only thing you can do is that you can go visit your ophthalmologist or a retina specialist and get an annual eye examination. That is the best thing you can do to yourself.

Oh, thank you for explaining that so well. I oftentimes tell my patients, yes, again, there is no superfood, but still eat a healthy diet and make sure you're getting plenty of macular carotenoids in your diet to help protect against other retinal issues.

Macular Hole Treatment and Prevention

The other thing I oftentimes talk to my patients about is, let's say they're a high myope and they participate in certain activities like certain types of sports.

Do you typically tell your patients who are high myopes to wear any kind of protective eyewear if they're playing sports or doing other types of activities that may put their vision at risk for trauma?

Yeah, definitely. That is one point. If patients are high myopic or we see that they have these peripheral retinal degenerations, it is absolutely must that they must use protective gears while indulging in any physical activities, even at the work or in sports activities where they are bound to develop some trauma, an accidental trauma.

So they should use protective eye weirs that prevent a direct impact of trauma to the eye. And then they might not end up in very serious condition like retinal detachment.

Absolutely. And especially for children, I always tell parents, even though we think of children being less at risk for certain eye issues, especially if they're playing any high impact sports, to really be very careful and wear protective

eyewear.

Dr. Markin, I also wanted to ask you, I know you practice in India where there are other types of treatments, whether it be Ayurvedic treatment, homeopathic treatment.

What has been your experience with any kind of Ayurvedic treatment or homeopathic treatment for retinal issues? Have you found anything to be helpful or we just don't know yet?

The science isn't there yet. So see, I personally do not believe in Ayurveda or Homopathy, but I would like to tell this through your channel that in India, Ayurvedic and Homopathy plays a very important role amongst the common people.

They like to first experiment with their eyes rather than just going to a retina specialist or going to an eye surgeon and getting their surgeries done.

If you talk about various other ideas, diseases like cataracts and glaucoma. There are a number of eye drops which are being proclaimed by Ayurvedas or homeopathic that it might treat it.

But I personally have I have never seen anybody getting cured or getting the cataracts being getting reversed or the retinal detachment being repaired or the optic atrophies being repaired with any Ayurvedic medicines.

Thank you for sharing your perspective. My take on it is is I tell my patients similarly, like there is no science to prove that they help, but I'm not going to tell my patients to stop it.

If they really want to try an Ayurvedic treatment or homeopathy or traditional Chinese medicine, herbal treatments, acupuncture, please go ahead. But don't forego your regular eye care to do those things.

Do them together. Don't only choose one and not do the other. Do them together so you get the best of both worlds. You can get the best of these complementary therapies, but you're also not risking your vision by not going to see your eye doctor.

That's my recommendation. That is a take home message for the patients that if you want to try some Ayurvedic or a homeopathic medicine, you can do it at your own risk.

That is what I tell my patients. Yes. So, Dr. Markin, one last question before I let you go today. Is there any common myth or misconception about retinal health that patients often come to you with and you just say, no, that's not true, and you want to dispel this myth today on the iHealth Summit for our audience?

Related to retinal detachment, I would say some of these patients, they feel that eye drops can cure the retinal detachment. So I have seen many patients, they use eye drops for a very long period of time, thinking that the retinal detachment might be corrected.

So you have to understand the retinal detachment is an anatomical disease or an anatomical problem which has happened. it requires a surgical treatment for the retina to go back to its place.

So eye drop in any case would not help your retinal detachment to go back to its normal place and help you recover your vision. So that is one thing which I have seen patients using eye drops thinking that the retinal detachment might get corrected spontaneously, which is very unlikely to happen.

Thank you for sharing that. I never actually thought about it that way that some people may be delaying their care because they're trying other types of therapies like drops.

But definitely, if you want to try drops, please go ahead.

Myths, Complementary Care, and Closing Remarks

But don't forego your traditional retinal care and substitute it with something that we know that, yes, it may help your dry eye, may help you feel more comfortable, but it's not going to fix the anatomic issue that's developed in the back of your eye due to aging, unfortunately, in many cases.

Dr. Markin, thank you so much for an enlightening conversation about retinal health and retinal emergencies. We've learned so much from you today and really we appreciate your knowledge and your insights and your clinical experience.

If anyone wanted to reach out to you, perhaps learn more or perhaps follow you on social media, how can they find you? Yeah, I run an Instagram channel by the name Your Retina Doctor.

So you can follow me there. You can DM me about your retina related queries and I'll be happy to help you guys. Wonderful. So we will put that link below under the interview, and I highly recommend everyone follow Dr.

Markin on his Instagram because it's quite entertaining, not just educational, but very entertaining as well. Again, thank you so much for joining us for the iHealth Summit, Dr.

Markin, and I wish you continued success in your retina career. I know you have a new position as assistant professor at AIM, so congratulations on that, and all the best to you and to your patients.

Thank you, Dr. Banik. That was my pleasure to be part of your summit. And hopefully, I would have been able to justify the queries you put forward, too.

And I think that would help your audience. That would help everybody around who have been connected with you. Absolutely. And again, thank you for participating and thank you all for joining us for the iHealth Summit.

We will see you all during the next interview, so please stay tuned. Thank you for tuning in to the IQ Podcast. I hope you enjoyed today's episode and learned something new to help you boost your IQ.

Leave us a review and share the podcast with your family and friends. Stay connected with me for more eye-opening insights on iHealth, nutrition and lifestyle.

Until next time, keep your vision clear and your IQ sharp.