Transcript Details
This is a transcript of a continuing medical education (CME) activity. Additional media formats for the activity and full activity details (including sponsor and supporter, disclosures, and instructions for claiming credit) are available by visiting:
https://reachmd.com/national-eye-institute/nei-blindness-prevention-initiative/seeing-eye-to-eye-case-series-on-treatment-strategies-for-diabetic-retinopathy-pdr-dme/10906/

Released: 09/15/2019
Valid until: 12/31/2020
Time needed to complete: 15 minutes

ReachMD
www.reachmd.com
info@reachmd.com
(866) 423-7849

Seeing Eye to Eye: Case Series on Treatment Strategies for Diabetic Retinopathy-PDR/DME

Announcer: This activity is provided in partnership with the National Eye Institute, of the National Institutes of Health, of the US Department of Health and Human Services. The National Eye Health Education Program of the NEI is acknowledged for its important contributions to this initiative.

Dr. Solomon: As the management of diabetic retinopathy and diabetic macular edema continues to evolve, we are still learning a lot about how to care for these patients, which is important when considering the treatment part of our ASSERT-D strategy. So, what can we do right now to better manage and individualize treatment for patients with these two eye conditions? Welcome to CME on ReachMD. I'm Dr. Sharon Solomon, calling in from Baltimore, Maryland.

Dr. Wykoff: Thanks, and I'm Charlie Wykoff here, in Houston, Texas. Great to be here with you, Sharon.

Dr. Solomon: Together we'll be reviewing some cases and best practices for the management of diabetic retinopathy and diabetic macular edema. So, Charlie, perhaps you can start us off with a review of how the management of diabetic macular edema has evolved over the last decade.

Dr. Wykoff: Yeah, absolutely happy to. You know, we've come a long way in the management of DME when you look back from the 1990s to where we are today. Certainly, traditionally we had laser-based therapies, which certainly played their role and maybe in certain populations still do today, but we're very much in the pharmaceutical era today where we have multiple pharmaceutical agents that can improve eyes with diabetic macular edema. So, overall clinically, there's sort of three types of eyes with DME. There's center-involved DME with visual acuity loss, and in that population, there's an overwhelming amount of data suggesting that repeated intravitreal injections of one of two class of pharmaceutical agents, either anti-VEGF agents or corticosteroids, can improve visual functions long term for those patients. The other two populations are center-involved DME with preserved visual acuity or non-center-involved DME.

Dr. Wykoff: Sharon, I think we're certainly fortunate in the field to have a lot of prospective data looking at eyes with center-involved DME with visual loss. In particular, DRCR Protocol T is discussed extensively. Would you mind giving us a brief summary of that protocol and what you think the important findings are?

Dr. Solomon: Imagine that we have a study that looked at, among the incredible treatments that we have for diabetic macular edema, which of these is the best to use and for which patient. So, what a wonderful problem for us to have to figure out, and this clinical trial, I think, answered it well. So, what we learn from Protocol T is that eyes that have vision of 20/50 or better actually do well regardless of which intravitreal anti-VEGF therapy they receive, whether it's bevacizumab, ranibizumab, or aflibercept, and in eyes where vision is worse than 20/50, eyes seem to respond best if they were started with intravitreal aflibercept. I have to say that's the protocol that I do follow in my practice.

Dr. Solomon: So, Charlie, speaking of treating diabetic macular edema, there's new data from Protocol V of the Diabetic Retinopathy Clinical Research Network where we talk about eyes that have good vision, 20/25 vision, but they do have center-involved macular edema. What do you think the treatment management should be with those eyes?

Dr. Wykoff: Yeah, great question. You know, I think for the center-involved DME eyes with visual acuity loss, there's great data from DRCR Protocol I, from RIDE, RISE, VISTA, and VIVID, Protocol T, many prospective phase 3 style trials sort of validating that repeated intravitreal anti-VEGF injections or steroids optimize long term visual and anatomic outcomes, but then you highlight a really important population of patients, these patients with good vision with center-involved DME, and now these patients overall were not eligible for the phase 3 trials that validated our pharmaceutical agents, and so the DRCR Network has performed an excellent trial looking at this population of patients in which those eyes were randomized either to initial observation, initial focal macular laser, or initial intravitreal anti-VEGF therapy, and it was interesting. At the end of two years, there was sort of a comparable rate of visual acuity decline in all three of those populations, suggesting that, on average, at least for eyes with mild DME and good vision, an initial period of observation or laser or anti-VEGF therapy could be supported by this data, and it suggests that maybe in some of these eyes we don't need to rush in to direct intravitreal therapeutics.

Dr. Solomon: Absolutely, Charlie, but let's consider those patients who have both proliferative diabetic retinopathy and diabetic macular edema. For instance, I have a patient right here who's a 73-year-old woman, type 2 diabetes, poorly controlled hemoglobin A1c, who's had panretinal laser photocoagulation of both eyes, yet she still has active areas of retinal neovascularization. How would you manage a proliferative diabetic retinopathy patient like this?

Dr. Wykoff: The two options here are additional laser and/or pharmaceutical agents, and they can be used in combination. You know, I think they've already had full PRP or excellent PRP, it sounds like, and so at this point, this is where I would really engage with the pharmaceutical agents. I think that beginning a series of intravitreal injections to try to optimize their DME status and improve their visual function will certainly simultaneously make the proliferative disease be quiescent. Now, at least that's a temporary effect. We've certainly learned from Protocol S with long term follow-up that, in fact, the majority of eyes with proliferative disease who are managed with anti-VEGF monotherapy continue to need regular treatments through the years three through five, a critical point that this is not a disease that we think we can cure in most eyes with anti-VEGF monotherapy, but we can certainly stabilize it as long as those eyes are continued to be followed long term.

Dr. Solomon: I couldn't agree more, and I think it's been a tremendous addition to our armamentarium of treatment, that we can now knock out a combination of diabetic macular edema and proliferative diabetic retinopathy with one agent, but I think we have to remember about those patients who have poor follow-up because of other comorbidities and who would not necessarily show up monthly or every other month for their anti-VEGF treatment. So, as you mentioned, I think it's still important to keep our panretinal laser as a back-up therapy for those patients who aren't achieving remission with anti-VEGF therapy or who have poor follow-up.

Dr. Solomon: So, Charlie, what do you tell your patients that you're managing about some of the side effects of either treatment? How do you help them to decide whether or not they should proceed with panretinal laser photocoagulation or with anti-VEGF treatment?

Dr. Wykoff: So, in most cases for my patients with proliferative disease, I'm actually recommending combination therapy. I recommend some PRP, not heavy PRP, especially in the earlier PDR eyes, more anteriorly directed, trying to sort of prevent bad outcomes if there's an issue with noncompliance, and then also using anti-VEGF therapy to try to get the benefits within the posterior pole.

Dr. Solomon: So, patients are pretty savvy, too, and I think that, as you suggest, we can only help them to interpret the clinical trials and to decide what therapy is best for them.

Dr. Wykoff: Yeah, you know, I think you bring up a great point about the risks of these interventions. Certainly, and I have this conversation all the time with patients, everything we do has a risk-benefit ratio, whether it's driving to the store or whether it's giving an intravitreal injection on the eye, and I think it's really important to have those conversations with patients,

Dr. Solomon: For those just tuning in, this is CME on ReachMD. I'm Dr. Sharon Solomon, and today I'm speaking with Dr. Ch arlie Wykoff about best practices for managing patients with diabetic retinopathy and diabetic macular edema. So, continuing right along with our discussion, Charlie, can you tell us about your second patient case?

Dr. Wykoff: Yeah, absolutely, happy to, Sharon. So, this is a 43-year-old female with type 2 diabetes with excellent central visual acuity, but as you can see on the imaging, there's extensive neovascularization. There's neovascularization of the disc, there's neovascularization elsewhere, and there's vitreous hemorrhage. They clearly have high-risk proliferative diabetic retinopathy but without any significant tractional component and without any center-involved DME, and so the question here would be, how do you manage this? Is this an anti-VEGF therapy eye? Is this a PRP eye? What do you want to do? And the conversation that I had at length with this patient was exactly that, you know, putting forward the risks and benefit of each approach, and the patient really chose for a pharmaceutical approach upfront. So, we gave this patient then four intravitreal anti-VEGF injections over the course of six months, and you can see here now, the angiogram really shows resolution of the neovascularization. This angiogram is six weeks after the last anti-VEGF injection, and so the question came up at this point, well, what do we do now?

Dr. Solomon: I think this is a great illustration of what we've been talking about.

Dr. Wykoff: Yeah, I handle things exactly like you described, Sharon. I think that's an elegant description. You know, some of these eyes, it is remarkable. You can give them these shots, and they can go quiescent for a long period of time, but as you rightly point out, in Protocol S, again to emphasize what we said before, a majority of these patients through at least five years will continue to need repeated intravitreal anti-VEGF therapeutics to maintain quiescence of their proliferative disease. So, in most eyes through five years, we're not curing them, a critical sort of point to remember clinically, and then in this case, I actually put this case in to be provocative, right? They had this amazing outcome through six months, and then they were noncompliant, where the patient unfortunately didn't come back despite multiple letters and calls and attempts to reach them, and then when they did come back two and a half years later, they had developed a terrible outcome with a complex tractional retinal detachment due to recurrence of their proliferative disease and progression to a complex retinal detachment needing surgical intervention. So, this is certainly something, Sharon, that, you know, you and I and anyone in this field wants to avoid, and so the question is, how do we optimize outcomes long term,

Dr. Solomon: I think, in medicine, people think of learnt long term follow-up only for physicians who are internists or pediatricians. As retina specialists, we've become the internists of ophthalmology because we have patients who have a disease that's the consequence of a systemic illness for which there's no cure. So, what I tend to emphasize to my patients is that, just what I said. First of all, they are suffering from a systemic disease. It's not just an eye disease like age-related macular degeneration, but the way that they manage their general health, their exercise, their diligence in taking their diabetes medications, all affects the eventual outcome with their vision. So, I try to link the visit, first by asking about the patient's hemoglobin A1c status. Surprising, a lot of patients don't even know what the hemoglobin A1c is or that their physician is checking it every few months. So, I try to educate the patient on a very basic sense as to what the diabetes is, and then secondly, I emphasize to patients that with the incredible armamentarium of therapies that we have, especially with the intravitreal class of anti-VEGF agents, we may be able to get patients into a remission that will allow him to maintain good vision, but, and I hate using the analogy of cancer, but I do tell my patients it's sort of like having a cancer. Some patients get treated, and they get into remission, and they achieve remission, and they stay there,Other patients, as you know, seem to fall into a pattern where they get treated every other month, every third month, and the edema keeps coming back. So, I try to emphasize to patients at the outset that we have a therapy that will very likely help you to maintain vision, if not to improve vision, but it's going to require frequent follow-up.

Dr. Wykoff: Very well said.

Dr. Solomon: So, before closing today, Charlie, what are some key points that our colleagues should really take into consideration when managing their patients with proliferative diabetic retinopathy and diabetic macular edema?

Dr. Wykoff: So, it's critical that patients and caregivers understand and continuously communicate with each other that this is a chronic disease, and even if it's stable today, it may not be stable next month or the month after that, and vice versa. Just cause it's active now doesn't mean we can't get patients to a stable place, and the overwhelming amount of data that I think that exists in the field suggests that if we appropriately manage these patients and catch them early in the disease process, in many cases we can achieve excellent long term outcomes, with the key being longterm chronic disease needs close follow-up.

Dr. Solomon: Well, that brings us to the end of our discussion today, Charlie, but thank you so much for joining me and for sharing all of your medical insights with us.

Dr. Wykoff: Thanks, Sharon. Always a privilege to work with you.