Transcript Details
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Advances in Retina Care: Imaging Innovation and Durable Therapeutics

Announcer:
Welcome to *Eye on Ocular Health* on ReachMD. On this episode, Dr. Prethy Rao will discuss imaging and treatment advances in vitreoretinal care. She's an adult and pediatric retina specialist at Retina and Vitreous of Texas in Houston. Here's Dr. Rao now.

Dr. Rao:
I think it's an exciting time to be a retina specialist. There's so much innovation and research that's being done now. It's just an exciting time to be in our field. Our predecessors and giants in the field who came before us and are still with us did an amazing job with defining certain vitreoretinal conditions, both medical and surgical. And now, in the landscape of retina, we're refining the definitions. How can we define these conditions like macular degeneration, diabetes, and even pediatric retina conditions on a more nuanced level? From that standpoint, the tools that we have now are more updated in terms of imaging. So how can we use our imaging tools to help define the disease on a more nuanced level? I think that's how our field is changing a little bit.

The other direction it's going in is in terms of treatment. We've had an explosion of anti-VEGF therapy in the last 15 years, and now we're taking a step up. We know it works well, but now we're kind of shifting into the paradigm of durability and different mechanisms—how do things work, and can they last? That's anywhere from new mechanisms of drugs to now gene therapy and cell-based therapy. And how do we get rid of a disease with a one-time treatment?

It's so exciting to be in this field right now because every day, it's changing. With the imaging piece, we are able to define disease better, but how can we use this imaging or automated imaging to diagnose people remotely or predict disease? A lot of the tools we have now, such as OCT and OCTA ultra-widefield imaging, allow us to better identify disease and severity earlier.

There's several studies now; I'm going to use diabetes as an example. In diabetic retinopathy, we know that when we're doing an exam with what we think is the gold standard, we're actually underdiagnosing the degree of diabetic retinopathy. So these imaging tools, such as ultra-wide field imaging, color fundus photography, and ultra-wide field angiography are able to identify patients who have more severe disease pathologies, and we can better treat them earlier. I think that is what our imaging tools have been able to do.

The other thing that is exciting in the OCT and OCTA world is we're able to better identify specific types of disease entities, such as geographic atrophy. We're able to identify ellipsoid layer. We have identifying definitions and tools such as iRORA and cRORA that are able to identify geographic atrophy on a more nuanced level. We're able to follow these patients in our clinics a little bit easier by providing quantitative methods for identification.

In terms of OCTA, which is another exciting tool that has come up, we're able to now not only identify the end result of a pathology such as wet macular degeneration, where we think end pathology is subretinal fluid or hemorrhage; now, we're able to take a step back and look at the etiology and CNV lesion size configuration. And now, are we able to use that to identify and treat patients earlier? So that's a new advancement I think is exciting in the field happening today.

Announcer:
That was Dr. Prethy Rao sharing insights on the latest advancements in vitreoretinal care. To access this and other episodes inour series, visit *Eye on Ocular Health* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!