Kourous A. Rezaei, MD

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1. What novel therapeutic approaches or surgical techniques do you anticipate will improve the treatment of vitreoretinal diseases over the next few years?

There are many innovative and interesting developments taking place in our field that are reshaping its future. We are already experiencing the impact of biotechnology and diagnostic imaging. In the field of retina, innovative treatments will become more readily available because they can be applied directly to the target tissue, minimizing systemic exposure and side effects. Further, the target tissue can be directly visualized during and after treatment with office-based testing. There is also an extensive body of basic science research in ophthalmology, and specifically in retina, that is presented at every annual Association for Research in Vision and Ophthalmology meeting. The advances in basic science research are being translated into clinical treatments being tested in numerous clinical trials.

In the immediate future, there will be an increase in the number of intravitreal injections for conditions caused by diabetes and abnormal vitreomacular interface. Further down the road, slow-release devices will become available that will reduce the required number of intravitreal injections and patient visits. In my opinion, the next major milestone will be the development of treatments for dry age-related macular degeneration.

In regard to the future of retinal surgery, the medical induction of posterior vitreous detachment (PVD) will have a significant impact on vitreoretinal surgery. The big question is whether the medical induction of PVD will help to popularize the very small-gauge vitrectomy systems such as 27-gauge, and whether it will provide the safety net required for office-based vitrectomy. Improvements in illumination, instrumentation, and viewing systems combined with utilization of biopharmaceuticals may lead to minimally invasive and more targeted surgery that is safe, effective, and short in duration.

We are blessed to be retina specialists during these great times of innovation. I am thankful to all the scientists and innovators who are providing us with more and better options for treating our patients.

2. What is the value of video recording retinal surgical procedures?

To improve and advance our surgical techniques, it is crucial to watch and learn how other surgeons perform similar surgical procedures. During fellowship training we have the opportunity to watch our mentors operate; however, after fellowship it becomes almost impossible to travel around the world and observe other surgeons. Today, Internet technology and wireless mobile devices enable surgeons to watch surgical procedures performed by their colleagues online from any location in the world, eliminating the need to travel. Further, one can comment or direct questions to the surgeon who posted the procedure.

Technological advances have led to significant improvements in video recording of surgical procedures. Moving from analog to digital recording and toward high definition and 3-D recording are examples of these advances. High-quality recording of retinal procedures is generally challenging due to the limited field of view and intraocular illumination. However, the utilization of wide-angle viewing systems, the development of highly sensitive recording cameras, and improved intraoperative illumination have significantly increased the quality of the recordings.

One major obstacle in acquiring video recording devices for surgical procedures is their cost. Because these are teaching devices rather than diagnostic or treatment tools, it is difficult to acquire funding for them. Continued advances in technology will hopefully lead to a reduction in their cost, making them more readily available.

3. Tell us about Retinaws.

Retinaws is a video-oriented surgical course that discusses complex vitreoretinal surgery, rare surgical cases, and unique surgical techniques. Faculty from around the world present on how they perform certain tasks and describe why they execute them the way do. The course, which is offered free of charge, is recorded live and web-cast online at www.eyetube.net/retinaws.

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Viewers can correspond with the faculty by posting comments or suggestions online. I am very thankful to our generous faculty for donating their time to this course, to the various societies for supporting us, and to the companies who support the recording. I would also like to thank EYETUBE.NET for helping us bring this course to our online viewers.

4. What do you enjoy most being a retina physician?

Retina specialists have the privilege to help improve the quality of others' lives. I cannot imagine anything more rewarding than restoring a patient's sight. Many times we are able to examine, order tests, diagnose, and offer treatment to our patients within a single visit. This is not common in medicine. Our subspecialty has evolved tremendously in the past few decades with the development of new diagnostic tools, pharmaceutical interventions, and surgical instrumentation. To be at the cutting edge of what we do, we must follow the rapid pace of change, and this makes our specialty very interesting. I also enjoy collaborating with retina specialists from around the country and around the world. The more I collaborate, the more I realize how lucky I am to be a part of this select group of physicians.

5. As a retina specialist, who are your heroes?

My heroes are all of my colleagues who contribute to the advances in our field that help our patients. It is a collaborative effort by numerous individuals (many of whom are unknown to us) who spend tireless hours doing research in laboratories, enrolling patients in clinical trials, presenting new findings at meetings, teaching residents and fellows, and being creative. My gratitude goes to all of the retina specialists who serve at various societies, working hard behind the scenes to push for our cause, helping us to help our patients. ■

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