Inside Retina

DR. SEE JOINS CALIFORNIA RETINA CONSULTANTS

Dr. Robert See joined California Retina Consultants last summer and has already established an active practice in our coastal, central valley, and high desert offices. Dr. See received his medical degree and internship training at the Medical College of Ohio, where he earned the Academic Scholarship Award. He then finished his residency in ophthalmology at the Robert Wood Johnson School of Medicine in New Jersey.

Dr. See completed fellowships in ocular immunology, pathology, and oncology at USC’s Doheny Eye Institute, where he worked alongside Dr. Narsing Rao, one of the leading researchers in ophthalmic pathology and uveitis. Following this experience, Dr. See completed a two-year vitreoretinal surgery fellowship at Duke University’s prestigious eye center.

CRC PARTNERS WITH FOUNDATION FOR FIGHTING BLINDNESS

The California Retina Research Foundation is joining forces with the Foundation for Fighting Blindness (FFB) to establish a local chapter on the Central Coast. Drs. Pieramici and Castellarin hosted an inaugural presentation in January 2007 at The Santa Barbara Cottage Hospital to educate patients and their families in the latest on the management of retinal diseases with special focus on inherited retinal degenerations. We hope that this partnership will help raise local awareness and garner financial support for ongoing research.

The Foundation Fighting Blindness is the largest source of non-governmental funding for retinal degenerative disease research in the world. The mission of the FFB is to drive the research that will provide preventions, treatments and cures for people affected by retinitis pigmentosa, macular degeneration, Usher syndrome, and the entire spectrum of retinal degenerative diseases.

AWARDS AND PRESENTATIONS AROUND THE WORLD

Dr. Avery receives an award at the combined American and European Retina Societies in Cannes, France for his film demonstrating a surgical technique for sutureless vitrectomy.

This year, California Retina Consultant physicians have presented their research at meetings in Capetown, San Juan, Bahamas, Rome, Miami, Boston, Portugal, Israel, Las Vegas, Ft. Lauderdale, Aspen, Vail, Salt Lake City, Vancouver and Hawaii.

INSIDE THIS ISSUE

Pioneering New Treatments for Age-Related Macular Degeneration 2
Research Roundup 4
Sixth Annual Educational Update Meeting 5
New Lancaster Office 5
International Fellows 5

Go to Dr. SEE-Continued on page 4
The need to keep abreast of current therapies, particularly those used to treat the neovascular or “wet” form of Age-Related Macular Degeneration (AMD), is crucial because the incidence of AMD related visual loss is reaching epidemic proportions. Thankfully, the fruits of years of research into new treatments for the advanced stages of AMD have now ripened.

California Retina Consultant physicians and researchers have been privileged to play a role in this emerging research that provides unprecedented success in treating patients with neovascular (Wet or Bleeding) AMD. Although neovascular AMD occurs in only 10% of all AMD cases, it accounts for 90% of cases in which there is severe vision loss. In the United States, there are an estimated 150,000 – 200,000 new cases of neovascular AMD each year, with numbers increasing as the population ages. In addition, there are currently millions of patients with earlier stages of AMD that are at risk for developing neovascular AMD.

The treatment for neovascular AMD has advanced considerably since the 1980s, when laser photocoagulation was first used, and remained the only treatment option for over a decade. Numerous other therapies were tried since the mid-1990s, yielding unsatisfactory results. These included submacular surgery, radiation therapy, and drug therapies such as Interferon.

In 1994 Robert Avery, founder of California Retina Consultants and co-founder of California Retina Research Foundation, implemented clinical trials in Santa Barbara and in collaboration with Lloyd Aiello of The Joslin Diabetes Center; published their results in the New England Journal of Medicine. Their research demonstrated the role of vascular endothelial growth factor (VEGF) in contributing to a variety of eye diseases. VEGF is one growth factor that likely stimulates the development and progression of neovascular AMD. Once the link was identified, doctors began developing and testing various treatments using anti-VEGF therapies and these showed considerable improvement over previously used modalities.

In June 2005 the doctors of California Retina Consultants commenced the off-label use of Bevacizumab (Avastin, Genentech, Inc.). They were encouraged by results of intravitreal Ranibizumab (Lucentis) in patients enrolled in ongoing clinical trials, thereby inspiring the consideration of Avastin, a molecule similar in design and function to Lucentis, but one that was more readily available since it had been previously approved by the FDA for use in cancer patients. The use of Avastin had first been reported by Dr. Philip Rosenfeld at The Bascom Palmer Eye Institute in Miami. Dr. Rosenfeld’s group suggested that Avastin yielded promising results when used systemically and intravitreally in patients with Neovascular AMD. California Retina Consultant doctors were the first ophthalmic group in the nation, following Bascom Palmer, to use the drug in this fashion. Over 500 patients participated in local trials, providing our doctors with some of the most comprehensive research on the subject. We thank these patients for their willingness and courage to participate in this work at a time when the outcomes were uncertain. As a result of their efforts, the vision of tens of thousands of patients worldwide may have been saved.

The success with Avastin for treating AMD inspired the California Retina Research doctors to implement trials of Avastin in patients experiencing visual complications resulting from a variety of eye diseases in which VEGF was thought to play a role, such as diabetic retinopathy and retinal vein occlusions.

The physicians at the California Retina Research Foundation have collaborated on this work with physicians around the world and locally with researchers at the University of California Santa Barbara Neuroscience Research Institute. In the last two years, the California Retina Consultants have shared their knowledge of anti-VEGF therapy at scientific meetings in six different continents including meetings in Cannes, Capetown, San Juan, Bahamas, Rome, Miami, Boston, Portugal, Israel, Las Vegas, Ft. Lauderdale, Aspen, Vail, Salt Lake City, Vancouver and Hawaii. Meetings in Sydney, Tokyo and London are scheduled for later this year. In addition to presenting their findings, CRC was the first to publish a comprehensive series of articles demonstrating the efficacy of Avastin in patients with AMD and Diabetic Retinopathy. In fact, Medicare required these articles and a toxicology study, of which we were also a part, before it would cover the use of Avastin.

National media, including Forbes, the Wall Street Journal and the Miami Herald have cited California Retina’s contributions and presented some of our very own local cases.

Both Lucentis and Avastin were designed and manufactured by Genentech, a San Francisco Bay Area Company. Lucentis was designed for intraocular use while Avastin was originally designed for systemic use in the treatment of cancer.
Lucentis is FDA approved for intraocular use in AMD and the safety and efficacy of this drug has been demonstrated in phase III multi-center clinical trials (the gold standard in clinical research). Avastin, on the other hand, has not undergone such testing, but it has been the clinical impression of many retinal specialists and researchers that the two drugs work similarly in AMD patients. These drugs are not a one-time-use miracle drug and are not a cure for the disease. In fact, some patients may require monthly injections for years.

The use of Avastin and Lucentis in Neovascular AMD is revolutionary, ushering in a paradigm shift in the treatment of patients afflicted with severe proliferative retinal diseases. Whereas just two years ago we were happy to slow down the vision loss in patients with neovascular AMD, we now expect to halt the progression, and in about half of the cases we anticipate visual improvement. Neovascular AMD is estimated to develop in almost 1 million Americans older than the age of 55 years by 2009, and as the population of older persons in the United States continues to increase, the potential of these therapies to prevent vision loss is extremely significant.

The most obvious difference in these medications is the cost. Lucentis costs over $2000 per injection, whereas Avastin costs between $50 to $100 per injection. While Medicare covers 80% of the cost of these treatments, some patients must pay the rest themselves. Those with less health coverage may find it unaffordable, although Genentech does provide free or reduced cost drugs for certain eligible patients.

The Lucentis vs. Avastin showdown has stood the pharmaceutical world on end, but now the federal government hopes to settle the dispute by funding a head-to-head comparison of the two biotechnology drugs, the first such trial by the National Institutes of Health. California Retina Consultants are currently planning to participate in the CATT trial comparing Avastin and Lucentis.

Research does not stop here. Current investigations focus on improvements in the drug's efficacy and enhancement in dosing and delivery. We have certainly cleared one major hurdle, but the race is far from over.
AMD and proliferative diabetic retinopathy. Growth) can be beneficial as is the case in neovascular where eliminating neovascularization (new blood vessel commonplace in medicine, particularly in oncology, be possible. Combination therapeutic approaches are mechanism, a positive and lasting synergistic effect may injections, each attacking the AMD from a slightly different such as Photodynamic Therapy (PDT) and Anti-VEGF in comes with fewer treatments. By combining therapies neovascular AMD patients that may result in better out gun to investigate a combination therapy approach for patients and Medicare. In other ongoing trials, we have be clinical, political, and financial implications for pa trials of new treatments for AMD and Diabtic Retinopathy. Of particular interest to many will beety of clinical trials of new treatments for AMD and Dia...ms of 2006, as tabulated by ScienceDirect. For neovascular AMD we will be taking part in the NIH sponsored trial (CATT) comparing Avastin and Lucentis with various dosing regimes. This landmark study should have clinical, political, and financial implications for pa...ve patients Medicare. In other ongoing trials, we have beg...n to investigate a combination therapy approach for neovascular AMD patients that may result in better out...s such as Photodynamic Therapy (PDT) and Anti-VEGF in jects, each attacking the AMD from a slightly different mechanism, a positive and lasting synergistic effect may be possible. Combination therapeutic approaches are commonplace in medicine, particularly in oncology, where eliminating neovascularization (new blood vessel growth) can be beneficial as is the case in neovascular AMD and proliferative diabetic retinopathy.
NEW OFFICE OPENS IN LANCASTER

California Retina Consultants is proud to announce the opening of their sixth office in Lancaster, California. Opening an office in Lancaster provides local access for many patients who have been traveling to one of our other offices for their care. It also offers the Lancaster/Palmdale eye care professionals with an additional choice and increased availability for local retinal referrals. Patients seen in this office will be provided the customary excellence in clinical care and access to one of our many ongoing clinical research studies. The doctors are currently accepting patients at this full service office, located at 1505 West Avenue J Street, Suite 303. Call (661) 951-9519 to arrange a consultation.

SIXTH ANNUAL EDUCATIONAL MEETING SET FOR OCTOBER

California Retina Consultants will host over 100 ophthalmologists, optometrists and other eye-care professionals at their sixth annual educational meeting, to be held on Saturday, October 13, 2007 at the Fess Parker Doubletree Resort. This annual meeting provides healthcare specialists with the latest advances in the clinical management of common retinal diseases. Every year this meeting has grown, attracting clinicians from all over California and the surrounding Western States. The purpose of the meeting is to update doctors on the latest treatments and ongoing research in the care of severe vitreoretinal diseases. Didactic lectures, cases presentations, and panel discussions allow for audience participation and a lively exchange of ideas.

CRC HOSTS INTERNATIONAL FELLOWS IN VITREORETINAL SURGERY

In an effort to expand the clinical training and education of ophthalmologists around the world, the doctors of California Retina Consultants have recently opened their doors to two international fellows: Dr. Dennis Nkanga from Nigeria and Dr. Enkhbold from Mongolia. Dr. Nkanga spent time in the clinics and the Cottage Eye Center operating theaters learning to care for patients with diabetic related eye disease. Nigeria is a country of over 130 million people and like the U.S. has a high incidence of diabetes and diabetic related eye blindness. Unlike the U.S. in which lasers and laser treatments are readily available, Dr. Nkanga tells us that in his country there is only one single laser to treat all the diabetic patients. Without this treatment most patients go onto blindness, often within months. This is very preventable with proper treatment. The main purpose of Dr. Nkanga’s visit was to learn to diagnose and treat diabetic eye diseases and to acquire a laser to take with him back to Nigeria. Through the efforts of the California Retina Research Foundation and SEE International, these goals were obtained. The generosity of individuals supporting the CRRF makes these international collaborations possible. Dr. Nkanga has now established a diabetic clinic and is busy preventing blindness for countless individuals.
Diabetic Retinopathy continues to be a major concentration of our research. We plan to continue our collaboration with the Diabetic Retinopathy Clinical Research Network (DRCR network), a National Institutes of Health (NIH) sponsored consortium of retina centers around the country investigating novel treatments for vision related complications of diabetes. To date, the network is enrolling patients into the eleventh trial.

Much more is planned for the upcoming years. If you would like more details please contact one of our study coordinators at (805) 963-1648. We give thanks to all those individuals, patients, employees, colleagues, and donors who continue to support our research endeavors.