Ophthalmology Update

Drusen and pigmentary changes from dry age-related macular degeneration. The Cole Eye Institute is participating in a national trial to prevent dry AMD from becoming wet. Story, Page 2.
New Study May Identify Way to Prevent Dry AMD from Becoming Wet

Two million people are diagnosed with age-related macular degeneration (AMD) each year and up to 20 percent progress to the exudative or wet form of the disease. Until now, the only tool clinicians have had to help prevent this progression has been high-dose antioxidant vitamin therapy.

However, a clinical trial at the Cleveland Clinic Cole Eye Institute and about 100 other sites worldwide is testing a new treatment that shows promise in reducing this risk — anecortave acetate. Cole Eye Institute ophthalmologist Peter K. Kaiser, M.D., is a member of the scientific advisory committee that helped design the trial that is expected to follow 2,500 patients for 4 years. The high number of participants and long duration of the study are necessary because dry AMD progresses so slowly, Dr. Kaiser explains.

“This is very exciting,” he says. “It is the largest study ever on preventing exudative AMD and could be a breakthrough in how we treat macular degeneration. By preventing patients from ever getting the wet form, we hope to reduce dramatically the number of patients going blind from this devastating disease.”

Although the target number of patients for the trial is large, full enrollment is expected to be reached quickly. “These are highly motivated patients,” Dr. Kaiser says. “There is nothing available for them now.”

To be included in the trial, patients must have diagnosed dry AMD in one eye and wet AMD in the fellow eye and have additional risk factors for converting from dry to wet, including having large, soft drusen and pigmentary changes with no geographic atrophy near the fovea. The vision in the dry-AMD eye must be 20/40 or better.

Patients will be randomly assigned to receive a posterior juxtascleral depot administration with a specially designed blunt tipped cannula every 6 months of anecortave acetate or placebo. Researchers will measure how many patients in each category develop choroidal neovascularization, and how many lose vision from it. Patients who do develop wet AMD will be treated with the current state-of-the-art therapy, Dr. Kaiser says.

“We are hopeful that anecortave acetate, manufactured by Alcon Laboratories and known as Retaane, allows us to ‘keep the horse in the barn,’ and stop patients with dry AMD from ever developing the exudative form of the disease,” Dr. Kaiser explains.

Retaane is an angiostatic cortisene that inhibits angiogenesis. It blocks signals from multiple growth factors because it acts downstream and independent of the initiating angiogenic stimuli and inhibits angiogenesis subsequent to the stimulation. Other investigational AMD therapies attempt to block only one growth factor such as vascular endothelial growth factor (VEGF), which still allows other growth factors, such as basic fibroblast growth factor (bFGF), to signal the endothelial cells and commence the angiogenesis process.

Angiostatic cortisenes are derived from a steroid and engineered to remove chemical groups responsible for unwanted glucocorticoid effects, such as the development of cataracts and elevated intraocular pressure, while preserving anti-neovascular potency.

Dr. Kaiser said anecortave acetate is well suited for a risk-reduction trial because it does not have dangerous side effects. The method of delivery does not lead to increased risk of endophthalmitis or retinal detachments that can occur when medications are injected directly into the eye. The need to administer it only twice a year, as opposed to up to 12 times per year with some other investigational inhibitors, further adds to the safety profile.

In studies of wet AMD, anecortave acetate was found to be significantly better than placebo for preserving vision, preventing severe vision loss and inhibiting the growth of all lesion types.

CME Objective

To explain the goals and processes of a new trial using anecortave acetate to treat the atrophic or dry form of age-related macular degeneration in hopes of preventing progression to the exudative or wet form. To apply the findings of the Age-Related Eye Disease Study and related research to clinical practice.
At 2 years, 73 percent of patients treated with anecortave acetate showed stable or improved vision, while only 47 percent of placebo-treated patients showed a similar vision outcome \((p = 0.035)\). In addition, only 6 percent of patients experienced severe vision loss after 2 years of receiving the treatment. At 12 months, 79 percent of patients treated with the drug had stable or improved vision, while only 53 percent of placebo-treated patients showed a similar vision outcome.

After more than 1,700 administrations of anecortave acetate, there have been no serious adverse events associated with the cannula, and no clinically relevant side effects have been identified.

The Food and Drug Administration has granted Alcon “Fast Track” designation for the study of anecortave acetate for dry AMD because it represents a significant unmet medical need for a serious sight-threatening condition.

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Antioxidant Therapy — What Do You Tell Your Patients?

When high-dose antioxidant and vitamin therapy was validated by the Age-Related Eye Disease Study (AREDS) several years ago, it made headlines around the world. Today, patients have a great deal of questions about how to apply these findings to their daily lives.

Peter K. Kaiser, M.D., a retina specialist at the Cole Eye Institute, says these are the guidelines he uses in counseling his patients:

- Not all macular degeneration patients need to be taking high-dose antioxidant therapy. We know that such a regimen helps patients with Category 3 and 4 disease, but we do not know for certain whether it helps those with Category 1 or 2 disease. Therefore, he does not recommend patients with early categories of AMD undertake this high-dose therapy, but instead should eat a balanced diet with green leafy vegetables and fruits and take a multivitamin.

- Smokers should not be taking the high-dose beta carotene used in the AREDS study because it can increase the risk of lung cancer.

- Encourage smokers to stop now. Smoking increases the risk of developing macular degeneration, and causes a host of other well-documented health problems. “For ophthalmologists, this is an important chance to make a positive impact on their patients’ overall health,” Dr. Kaiser says.

- Some experts have suggested that lutein and zeaxanthine should also be part of an antioxidant regimen, but there is not enough scientific evidence available to justify either supporting or discouraging patients from taking them at any specific dose. Potential interactions with other supplements or medications are also unknown, Dr. Kaiser believes. He instead suggests that patients consume these nutrients through uncooked fruits and dark green, leafy vegetables. Supplementation with these antioxidants can be undertaken if the patient desires.

- All patients should be encouraged to utilize UV protection when outdoors. It definitely helps prevent cataract formation and may also help with macular degeneration, he says.
JUVENILE IDIOPATHIC ARTHRITIS (JIA) IS OFTEN ASSOCIATED WITH UVEITIS OR OCULAR INFLAMMATORY DISEASE. FIFTY PERCENT OF CASES OCCUR IN PATIENTS WITH THE PAUCIARTICULAR-ONSET FORM OF JIA, WHICH AFFECTS GIRLS FIVE TIMES MORE OFTEN THAN BOYS. TWENTY PERCENT OF SUCH PATIENTS DEVELOP CHRONIC BILATERAL ANTERIOR UVEITIS.

Inflammation can only be detected by slit-lamp examination of patients at risk. Because peak onset is around age 2 and 75 percent of patients are asymptomatic, many present with a cataract at their first eye exam. Treatment may require long-term topical corticosteroids and steroid-sparing agents such as methotrexate. Unfortunately, 40 to 60 percent of patients with chronic uveitis develop cataracts secondary to chronic inflammation and corticosteroid use.

It has been common practice to leave patients aphakic and use contact lenses for visual rehabilitation because cataract surgery without intraocular lens (IOL) implantation has been associated with severe complications in JIA patients when preoperative and postoperative intraocular inflammation are poorly controlled. However, contact lenses are associated with other complications, such as bacterial keratitis and poor compliance due to difficult handling. Moreover, patients with JIA can have corneal calcium deposition (band keratopathy) (Figure 1) that makes tolerance and fitting of contacts very difficult.

Several colleagues and I reviewed the Cleveland Clinic’s experience with cataract extraction and IOL implantation in children with JIA and found long-term control of intraocular inflammation to be essential for a favorable outcome in pediatric uveitis. Our results were published in the American Journal of Ophthalmology.

Our study involved five cases of children with JIA-associated uveitis who underwent cataract surgery and posterior-chamber IOL implantation, with or without trabeculectomy to reduce IOP from glaucoma. The patients (one male and four female) were 7 to 12 years of age; one had bilateral cataracts. Cataract extraction with posterior-chamber IOL implantation was performed on six eyes; trabeculectomy was performed as well on three eyes for co-existing glaucoma.

Four children received systemic methotrexate for an average of 1.25 years before surgery. Two, including the bilaterally affected child, received additional systemic immunosuppressive or anti-inflammatory therapy. All were treated with frequent topical corticosteroids for a median of 2 weeks preoperatively and 8.5 weeks postoperatively.

The average postoperative follow-up was 43.5 months. All children achieved a visual acuity of 20/40 at their last visit, with a median improvement of seven lines on the Snellen acuity chart. Our patients had fewer complications than previously reported, including lack of posterior synechiae, although one patient required an additional surgical procedure to remove an opacified capsule.

IOL implantation reduces the risk of amblyopia and corneal infections, and circumvents compliance problems associated with contact lens use in children. We believe that long-term control of intraocular inflammation with systemic immunosuppressive therapy, supplemented by aggressive perioperative topical and/or systemic corticosteroids, is critical to surgical success in children with JIA (Figure 2).
Algorithmic Approach Directs Rational Treatment of Dry Eye

Further, postmenopausal women are known to suffer from tear deficiency.

The ocular evaluation focuses on identifying various clues to an underlying cause, such as the presence of meibomian gland dysfunction, or causes of evaporative loss, including blink disorders or lagophthalmos. In addition, the workup includes a variety of objective tests, such as a Schirmer’s test to evaluate the amount of aqueous tear production, measurement of tear break-up time to determine tear film stability and thus tear quality, and inspection of the tear meniscus, which provides clues on both tear quality and quantity. However, rose bengal staining of the cornea and conjunctiva is perhaps most important for guiding management because it is the most sensitive at characterizing disease severity, Dr. Jeng says.

“While it is important to review the symptoms and assess tear quality and quantity, staining with vital dyes is important because the patient’s complaints may not equate with the results of the testing for the quality and quantity of tears,” he notes. “With the staining, we see that some patients are highly symptomatic, but have few clinical findings, whereas others may have only minor complaints but have florid changes due to dry eye.”

Treatment for mild cases of dry eye is with artificial tears (preferably preservative-free) four to six times daily with or without lubricating ointment at bedtime. If inadequate relief is derived from this therapy, punctal plugging or cyclosporine 0.05% ophthalmic emulsion (Restasis) is indicated. In patients suffering from insufficient tear production but who have good tear quality, punctal plugging in addition to the regular application of artificial tears is often successful in treating remaining symptoms. Punctal occlusion is performed with permanent plugs, usually beginning with the lower puncta followed by assessment of the patient’s therapeutic response with attention to problems with epiphora prior to plugging the upper punctae.

In patients with an inflammatory cause of dry eye, however, cyclosporine is the treatment of choice, and its recent introduction has been a welcome advance for managing that segment of the dry eye population, Dr. Jeng says.

“Inflammation in dry eye affects the lacrimal glands with resultant decreases in the quality and quantity of tears. Cyclosporine targets the inflammation so that the eye produces more quality tears, which are always better than artificial tears. Some ophthalmologists also believe the use of cyclosporine early in the disease process may halt disease progression and the subsequent development of chronic dry eye,” he says.

Patients must be warned not to be discouraged, however, because it may take up to 4 to 6 weeks for cyclosporine to take full effect. Because of this delay, treatment with preservative-free artificial tears should be used concomitantly with cyclosporine.
Post-Enucleation Chemotherapy Important in High-Risk Retinoblastoma

By Arun D. Singh, M.D.

RETINOBLASTOMA IS AN UNCOMMON PEDIATRIC OCULAR MALIGNANT TUMOR THAT CAN BE FATAL. RETINOBLASTOMA-RELATED MORTALITY COULD BE DUE TO ONE OF THREE DISTINCT CAUSES: METASTASIS; TRI-LATERAL RETINOBLASTOMA; AND SECOND MALIGNANT NEOPLASMS.1, 4 METASTATIC DISEASE AT THE TIME OF RETINOBLASTOMA DIAGNOSIS IS VERY RARE. THEREFORE, STAGING PROCEDURES SUCH AS BONE SCANS, LUMBAR PUNCTURE AND BONE MARROW ASPIRATIONS AT INITIAL PRESENTATION ARE GENERALLY NOT RECOMMENDED.5 METASTASIS IN RETINOBLASTOMA USUALLY OCCURS WITHIN ONE YEAR OF DIAGNOSIS OF THE RETINOBLASTOMA. IF THERE IS NO METASTATIC DISEASE WITHIN 5 YEARS OF RETINOBLASTOMA DIAGNOSIS, THE CHILD IS USUALLY CONSIDERED CURED.1

We recently treated a patient with advanced retinoblastoma that demonstrated histopathologic high risk factors for metastasis. In addition to enucleation, the patient received six cycles of chemotherapy of vincristine, etoposide and carboplatin to reduce the risk of metastasis.

Case report

A 3-year-old boy presented with pain and redness of the left eye for one week. About a month earlier, the parents had noticed a whitish discoloration of the pupil. Patient and family history were noncontributory. On examination, the left eye showed diffuse conjunctival congestion and leukocoria (Figure 1). The cornea was hazy and there was iris neovascularization with secondary glaucoma. The right eye showed a small whitish tumor in the nasal periphery. Ultrasonographic examination revealed a calcific intraocular mass, suggestive of a retinoblastoma (Figure 2). This was confirmed by a computed tomogram (Figure 3). Following detailed counseling about various therapeutic options, enucleation of the left eye and triple freeze thaw cryotherapy of the right eye were performed.

Histopathologic examination confirmed the presence of a necrotic retinoblastoma, filling almost the whole globe, and iris neovascularization (Figure 4). There was massive choroidal involvement (Figure 5) and the tumor extended into the retrolaminar part of the optic nerve, though the cut end of the nerve was uninvolved (Figure 6). Four weeks later, six cycles of vincristine, etoposide and carboplatin every three to four weeks were initiated. The child experienced transient neutropenia but otherwise tolerated the chemotherapy well.

Comments

Clinical prognostic factors indicative of poor prognosis are a delay in diagnosis and inadvertent intraocular surgery.4 Tumor size, tumor growth pattern (endophytic or exophytic) and tumor differentiation do not significantly influence the systemic prognosis. The Reese-Ellsworth stage of retinoblastoma indicates the prognosis for globe conservation rather than the risk for metastatic disease. Several studies have evaluated histopathologic prognostic factors including choroidal, optic nerve and extrascleral extension.5, 7-9 Choroidal involvement by the retinoblastoma is a risk for metastasis, especially if it is associated with any degree of optic nerve involvement.5 Mortality increases with increasing extent of optic nerve involvement.10 However, it is generally agreed that prelaminar involvement of the optic nerve does not increase the risk of metastasis.11

The impact of laminar involvement on metastasis is debatable. Retrolaminar involvement is a poor prognostic factor and optic nerve involvement by retinoblastoma cells up to the line of transection predicts the worst prognosis.12 Presence of a large retinoblastoma with secondary glaucoma and vitreous hemorrhage is predictive of optic nerve involvement and an attempt should be made to salvage a long stump of optic nerve (about 10 to 15 mm long) so as to transect the optic nerve beyond the extent of involvement.6

With improvements in diagnosis and management of retinoblastoma over the past several decades, metastatic retinoblastoma is observed less frequently in the United States12 and other developed nations.13-14 Existing limited data suggest that post-enucleation adjuvant chemotherapy is safe and effective in significantly reducing the occurrence of metastasis in patients with retinoblastoma manifesting histopathologic high-risk characteristics.15-18

A large, randomized international prospective study is being planned to identify a subset of high-risk characteristics in the presence of which post-enucleation chemotherapy may be most beneficial.
References


Programs in Ophthalmic Education 2004–2005

PHYSICIANS ARE CORDIALLY INVITED TO ATTEND THE FOLLOWING OPHTHALMIC CONTINUING MEDICAL EDUCATION COURSES AT THE CLEVELAND CLINIC COLE EYE INSTITUTE. ALL COURSES EXCEPT THE APRIL RETINA SUMMIT ARE HELD IN THE JAMES P. STORER CONFERENCE CENTER ON THE FIRST FLOOR OF THE COLE EYE INSTITUTE, UNLESS OTHERWISE NOTED.

For more information, contact Jane Sardelle, program coordinator, at 216/444-2010 or 800/223-2273, ext. 42010, or sardelj@ccf.org. View the entire 2004–2005 course catalog at http://www.clevelandclinic.org/eye/physician_info or go to the Cleveland Clinic web site at www.clevelandclinicmeded.com.

Saturday, September 11, 2004

COSMETIC OCULOPLASTIC SURGERY UPDATE FOR THE COMPREHENSIVE OPHTHALMOLOGIST

Course Director
Julian D. Perry, M.D.
Ophthalmic Plastic and Orbital Surgery
Cole Eye Institute

Guest Faculty
Gerald J. Harris, M.D., F.A.C.S.
Professor of Ophthalmology
Head, Orbital and Ophthalmic Plastic Surgery
The Eye Institute
Medical College of Wisconsin
Milwaukee, WI

David M. Reifler, M.D.
Ophthalmic Plastic and Reconstructive Surgery
Michigan State University
College of Human Medicine
President, American Society of Ophthalmic Plastic and Reconstructive Surgery
Grand Rapids, MI

Content & Objectives
In order to continue to deliver high-quality care, the comprehensive ophthalmologist must understand and apply recent advances in oculoplastic surgery. This one-day course is designed specifically for the comprehensive ophthalmologist with an interest in cosmetic oculoplastic surgery. Slide and video presentations will review basic concepts as well as recent innovations in surgical instrumentation and techniques for oculoplastic surgery, as performed by the comprehensive ophthalmologist. This course is designed to instruct the comprehensive ophthalmologist how to better identify and treat cosmetic oculoplastic conditions to obtain better results.

At the conclusion of this course, participants should be able to:
• Apply recent advances in cosmetic oculoplastic surgery.
• Analyze new modifications for ptosis repair and blepharoplasty.
• Describe the mechanism of action and concepts underlying Botox injections.
• Assess the use of various wrinkle filler substances in the eyelid and facial regions.
• Explain blepharoplasty results by applying current oculoplastic concepts.
• Evaluate several controversial issues in cosmetic oculoplastic surgery.

Saturday, October 2, 2004

UPDATE ON OPHTHALMIC ONCOLOGY 2004: CURRENT KNOWLEDGE AND RECENT ADVANCES

Course Director
Arun D. Singh, M.D.
Director, Department of Ophthalmic Oncology
Cole Eye Institute

Guest Faculty
A. Linn Murphree, M.D.
Professor
Children’s Hospital Los Angeles
Los Angeles, CA

Cole Eye Faculty
Peter K. Kaiser, M.D.
Hilal Lewis, M.D.
Julian D. Perry, M.D.
Jonathan E. Sears, M.D.
Elias I. Traboulsi, M.D.

Content & Objectives
This program is designed to provide comprehensive ophthalmologists, retina specialists, anterior segment specialists, pediatric ophthalmologists and oculoplastic surgeons with a review of ophthalmic tumors. Current knowledge and recent advances in the field of eyelid ocular surface and orbital tumors will be presented. Indications and limitations of new modalities of treatment of retinoblastoma will be discussed. Recent concepts in management of uveal melanoma will be highlighted. Case presentations will be used to emphasize management strategy. There will be ample time for questions and answers and the faculty will be available throughout the course for informal consultations and discussions.

At the conclusion of this course, participants should be able to:
• Recognize recent advances in the management of uveal melanoma.
• Discuss the findings of Collaborative Ocular Melanoma Study and its implications in the management of uveal melanoma.
• Offer appropriate counseling to patients with small choroidal melanocytic lesions.
• Evaluate ongoing clinical trials in the management of metastatic uveal melanoma.
• Consider photodynamic therapy in the management of circumscribed choroidal hemangioma.
• Recognize ocular findings in conditions that masquerade as ocular tumors.
- Identify patients with retinoblastoma and make appropriate referrals.
- Diagnose common eyelid tumors.
- Comprehend the role of chemotherapy in the management of conjunctival tumors.
- Identify clinical findings suggestive of orbital tumors.

**Saturday, December 4, 2004**

**CARDINAL OCULAR SIGNS OF INHERITED SYSTEMIC DISEASES**

**Course Director**
Elias I. Traboulsi, M.D.
Head, Department of Pediatric Ophthalmology and Adult Strabismus
Cole Eye Institute

**Guest Faculty**
Arlene V. Drack, M.D.
Associate Professor
Department of Ophthalmology
University of Colorado Health Sciences Center
Rocky Mountain Lions Eye Institute
Chief of Ophthalmology
Children’s Hospital
Aurora, CO

Richard A. Lewis, M.D., M.S.
Professor, Baylor College of Medicine
Cullen Eye Institute
Houston, Texas

**Cole Eye Faculty**
Arun D. Singh, M.D.
Director, Ophthalmic Oncology

**Content & Objectives**
Ocular abnormalities are present in up to one-third of inherited systemic disorders, and the ophthalmologist is often called upon to assist in the diagnosis of genetic diseases that involve the eye. Occasionally, patients with inherited systemic diseases present primarily to the ophthalmologist, who then assumes the task of recognizing the underlying disease and referring to the appropriate specialists.

- At the end of this course, participants should be able to:
  - Recognize pathognomonic ocular findings in inherited systemic diseases.
  - Describe ocular lesions associated with syndromes predisposing to cancer.
  - Outline the work-up of patients with ocular findings suggestive of an associated metabolic, connective tissue, vascular or neurodegenerative disorder.

**Saturday, January 22, 2005**

**NEURO-OPHTHALMOLOGIC EMERGENCIES**

**Course Directors**
Gregory S. Kosmorsky, D.O.
Department of Neuro-Ophthalmology
Cole Eye Institute

Michael S. Lee, M.D.
Department of Neuro-Ophthalmology
Cole Eye Institute

**Guest Faculty**
Andrew G. Lee, M.D.
Professor of Ophthalmology, Neurology and Neurosurgery
University of Iowa Hospital
Iowa City, IA

Peter J. Savino, M.D.
Director, Neuro-Ophthalmology Service
Attending Surgeon
Wills Eye Hospital
Thomas Jefferson University
Philadelphia, PA

**Content & Objectives**
This course will cover a broad range of neuro-ophthalmologic disorders encountered by the comprehensive ophthalmologist. Diagnostic and management strategies will be presented.

At the conclusion of this course, participants should be able to:
- Identify different causes of transient visual loss.
- Recognize implications of pupil abnormalities.
- Assess a broad range of etiologies of diplopia.

- Describe the pathophysiology and clinical presentation of papilledema.

**Friday and Saturday, March 25–26, 2005**

**CORNEA AND REFRACTIVE SURGERY SUMMIT**

**Course Directors**
Ronald R. Krueger, M.D.
Medical Director, Refractive Surgery
Cole Eye Institute

Steven E. Wilson, M.D.
Director, Corneal Research
Cole Eye Institute

**Guest Faculty**
Marguerite B. McDonald, M.D.
Director, Refractive Surgery Center of the South
Professor of Ophthalmology
Tulane University
New Orleans, LA

Peter J. McDonnell, M.D.
Professor and Chair
Wilmer Ophthalmological Institute
Johns Hopkins University
Baltimore, MD

Stephen C. Pflugfelder, M.D.
Professor of Ophthalmology
Baylor University
Houston, TX
Karl G. Stonecipher, M.D.
South Eastern Laser and Refractive Center
Greensboro, NC

Mark A. Terry, M.D.
Devers Eye Institute
Chief/Cornea, Good Samaritan Hospital
Clinical Associate Professor
Oregon Health Sciences University
Portland, OR

Vance M. Thompson, M.D.
Ophthalmology LTD
Assistant Clinical Professor
University of South Dakota
Sioux Falls, SD

Cole Eye Faculty
Bennie H. Jeng, M.D.
Roger H.S. Langston, M.D.
David M. Meisler, M.D.
Victor L. Perez, M.D.

Content & Objectives
This program provides a forum for presentation of the most advanced work on refractive and corneal research for comprehensive ophthalmologists and refractive surgery specialists.

At the conclusion of this summit, participants should be able to highlight the most recent advances in refractive and corneal surgery, including:
• Custom corneal wavefront analysis.
• Custom corneal ablation.
• Corneal transplantation.
• Replacement of corneal endothelium.
• Femtosecond technology.
• Diseases of the cornea affecting refractive and corneal surgery, such as dry eye disease.

Friday and Saturday,
April 29–30, 2005

RETINA SUMMIT
BEING HELD AT THE CLEVELAND CLINIC INTERCONTINENTAL HOTEL AND CONFERENCE CENTER

Course Director
Hilel Lewis, M.D.
Chairman, Division of Ophthalmology
Director, Cole Eye Institute

Guest Faculty
Alan Bird, M.D.
Professor, Department of Clinical Ophthalmology
Institute of Ophthalmology
Moorefields Eye Hospital
London, England

Stanley Chang, M.D.
Professor and Chairman
Department of Ophthalmology
Edward Harkness Eye Institute
Columbia University
New York, NY

Emily Y. Chew, M.D.
Medical Officer
Division of Biometry and Epidemiology
National Eye Institute
Bethesda, MD

Eugene de Juan, Jr, M.D.
President
Retina Institute
Doheny Eye Institute
University of Southern California
Los Angeles, CA

Alain A. Gaudric, M.D.
Sce Ophthalmologie
Hospital Lariboisiere
Professor, University of Paris
Paris, France

Anselm Kampik, M.D.
Professor and Chairman
University of Munich
Augenklinik Der LMU Munchen
Munich, Germany

Joan W. Miller, M.D., Ph.D.
Chief of Ophthalmology
Massachusetts Eye and Ear Infirmary
Chair, Department of Ophthalmology
Harvard Medical School
Boston, MA

Richard F. Spaide, M.D.
Assistant Clinical Professor
New York Medical College
Manhattan Eye, Ear and Throat Hospital
Vitreous, Retina, Macula Consultants of NY
New York, NY

Yasuo Tano, M.D.
Professor and Chairman
Ophthalmology Department
Osaka University Medical School
Suita, Japan

Michael T. Trese, M.D.
Professor, Oakland University
William Beaumont Hospital
Associated Retinal Consultants, PC
Royal Oak, MI

Marco A. Zarbin, M.D., Ph.D.
Professor and Chairman
Department of Ophthalmology
New Jersey Medical School
Newark, NJ

Cole Eye Faculty
Bela Anand–Apte, Ph.D.
John W. Crabb, Ph.D.
Joe G. Hollyfield, Ph.D.
Peter K. Kaiser, M.D.
Jonathan E. Sears, M.D.
Elias I. Traboulsi, M.D.

Content & Objectives
This fifth retina summit is intended to provide ophthalmologists and vitreoretinal specialists with information about issues relating to diagnosing and treating vitreoretinal diseases, utilizing the full spectrum of medical and surgical therapies currently available. Live surgery and live laser sessions are part of the summit format. We will examine...
interesting case presentations, where experts will advise on specific treatments for patients with vitreoretinal diseases. This summit offers a great opportunity for audience participation.

At the conclusion of the summit, participants should be able to:

• Discuss the pathophysiology and diagnosis of several vitreoretinal diseases.
• Review a variety of new treatments for age-related macular degeneration, diabetic retinopathy, complicated retinal detachment, and other macular and retinal diseases.
• Examine new technology, including state-of-the-art and experimental imaging systems, drug-delivery systems and new instrumentation.
• Analyze cost-effective therapeutic protocols.
• Review publicized findings, ongoing clinical trials and the assessment of new data and discoveries.
• Demonstrate live surgical procedures.
• Examine interesting case presentations.

Thursday and Friday,
June 16-17, 2005
ANNUAL RESEARCH, RESIDENTS AND ALUMNI MEETING
Course Directors
Hilel Lewis, M.D.
Chairman, Division of Ophthalmology
Director, Cole Eye Institute
Careen Y. Lowder, M.D., Ph.D.
Director, Uveitis Department
Cole Eye Institute

Keynote Speaker
Andrew P. Schachat, M.D.
Karl Hagen Professor of Ophthalmology
Wilmer Ophthalmological Institute
Johns Hopkins University
Editor-in-Chief, Ophthalmology
Baltimore, MD

Content & Objectives
This program provides a scientific forum to present clinical and basic science research of the Cole Eye Institute residents, fellows, staff, alumni and invited ophthalmologists.

The goal of this meeting is to pursue and present the highest-quality, original, thought-provoking clinical research papers. In addition to the educational aspects of the program and learning about new and ongoing investigations, this event offers an excellent opportunity to meet current residents, fellows, new faculty and invited ophthalmologists, and to make and renew friendships.

CME Credit —
To receive a maximum of 0.5 AMA-PRA Category 1 credits:

• READ THE ARTICLES ON PAGES 2 AND 5
• GO ONLINE AT WWW.CLEVELANDCLINICMEDED.COM/FALL04.HTM
• TAKE THE MULTIPLE-CHOICE QUIZ
• COMPLETE THE EVALUATION AND REGISTRATION FORM.

You will then be able to print out your CME credit certificate immediately on your own printer. CME credit for this activity will only be available up to March 1, 2005.

Accreditation
The Cleveland Clinic Foundation Center for Continuing Education is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The Cleveland Clinic Foundation Center for Continuing Education designates this educational activity for a maximum of 0.5 Category 1 credit toward the AMA Physician’s Recognition Award. Each physician should claim only those credits that he/she actually spent in the activity.

This activity may be submitted for American Osteopathic Association Continuing Medical Education Credits in Category 2.

Faculty Disclosure
Current guidelines state that participants in CME activities should be made aware of any affiliation or financial interest that may affect the speaker’s presentation(s) and/or who will be discussing off-label therapies.

The following faculty have indicated they have no relationship which, in the context of their presentation(s), could be perceived as a potential conflict of interest:

Bennie H. Jeng, M.D.
Peter K. Kaiser, M.D.

The following faculty will be discussing therapies that are not yet labeled (FDA approved) for the use under discussion or that the product is still investigational:

None

Disclaimer
This information is provided for general medical education purposes only and is not meant to substitute for the independent medical judgment of a physician relative to diagnostic and treatment options for a specific patient’s medical condition. In no event will The Cleveland Clinic Foundation be liable for any decision made or action taken in reliance upon the information provided through this activity.
THE DISTINGUISHED LECTURE SERIES PROVIDES A FORUM FOR RENOWNED RESEARCHERS IN THE VISUAL SCIENCES TO PRESENT THEIR LATEST RESEARCH FINDINGS. THIS SERIES OF LECTURES FEATURES ADVANCES IN MANY AREAS OF OPHTHALMIC RESEARCH PRESENTED BY NOTED BASIC AND CLINICAL SCIENTISTS FROM THROUGHOUT THE WORLD. AMPLE OPPORTUNITY FOR QUESTIONS AND ANSWERS IS PROVIDED.

ALL LECTURES ARE HELD ON THURSDAYS FROM 7:00 TO 8:00 AM IN THE JAMES P. STORER CONFERENCE ROOM ON THE FIRST FLOOR AT THE COLE EYE INSTITUTE, CLEVELAND CLINIC FOUNDATION. FREE PARKING IS PROVIDED IN EITHER THE EAST 102ND STREET PARKING LOT (FACING THE FRONT OF THE COLE EYE INSTITUTE) OR THE VISITORS’ PARKING GARAGE AT E. 100TH STREET AND CARNEGIE AVENUE. PARKING TICKETS WILL BE VALIDATED. THERE IS NO REGISTRATION FEE; CME CREDITS ARE NOT PROVIDED.

FOR QUESTIONS, PLEASE CALL 216/444-5832.

September 16, 2004
NEURAL REMODELING IN RETINAL DEGENERATIONS
Robert E. Marc, Ph.D.
Mary H. Boesche Professor of Ophthalmology
Department of Ophthalmology and Visual Sciences
John A. Moran Eye Center
University of Utah School of Medicine
Salt Lake City, UT

October 21, 2004
CHANGING YOUR MIND: MECHANISMS OF RAPID PLASTICITY IN DEVELOPING VISUAL CORTEX
Michael P. Stryker, Ph.D.
William Francis Ganong Professor of Physiology
Chair, Department of Physiology
University of California, San Francisco
San Francisco, CA

November 18, 2004
G PROTEIN SIGNALING IN PHOTORECEPTORS
Vadim Y. Arshavsky, Ph.D.
Associate Professor of Ophthalmology and Neuroscience
Howe Laboratory of Ophthalmology
Harvard Medical School
Massachusetts Eye and Ear Infirmary
Boston, MA

December 16, 2004
THE RETINOID CYCLE AND VISUAL PIGMENT REGENERATION
Rosalie K. Crouch, Ph.D.
Professor of Ophthalmology and Biochemistry
Provost Emerita
Research to Prevent Blindness Senior Scientific Investigator
Medical University of South Carolina
Charleston, SC

January 20, 2005
NOVEL ROLES FOR MUELLER CELLS IN THE RETINA
Vijay Sarthy, Ph.D.
Magerstadt Professor of Ophthalmology
Professor of Cell and Molecular Biology
Northwestern University
Chicago, IL

February 17, 2005
TOLERANCE AND AUTOIMMUNITY TO IMMUNLOGICALLY PRIVILEGED RETINAL ANTIGENS
Rachel R. Caspi, Ph.D.
Chief, Immunoregulation Section
Deputy Chief, Laboratory of Immunology
National Eye Institute, National Institutes of Health
Bethesda, MD

March 17, 2005
MAKING SENSE OF NEURONAL DIVERSITY: A BOTTOM-UP VIEW OF THE RETINA
Richard H. Masland, Ph.D.
Charles A. Pappas Professor of Neuroscience
Investigator, Howard Hughes Medical Institute
Boston, MA

April 21, 2005
LIGHT DETECTION IN THE RETINA
King-Wai Yau, Ph.D.
Professor
Department of Neuroscience
Howard Hughes Medical Institute
The Johns Hopkins School of Medicine
Baltimore, MD

May 19, 2005
AN EYE ON REPAIR: LESSONS FROM CONFOCAL MICROSCOPY
James V. Jester, Ph.D.
Professor
Department of Ophthalmology
University of Texas Southwestern Medical School
Dallas, TX
GENETICS
STUDIES OF THE MOLECULAR GENETICS OF EYE DISEASES
Objective: To map the genes for inherited eye diseases. To screen candidate genes for mutations in a variety of genetic ocular disorders, including ocular malformations, congenital cataracts and retinal dystrophies.
Contact: E. Traboulsi, M.D., at (216) 444-4363 or S. Crowe, C.O.T., at (216) 445-3840

PEDIATRICS
AMBLYOPIA TREATMENT STUDY (ATSS): A RANDOMIZED TRIAL TO EVALUATE 2 HOURS OF DAILY PATCHING FOR AMBLYOPIA IN CHILDREN 3 TO <7 YEARS OLD
Objective: The Amblyopia Treatment Study is a two-part study. The first part is being conducted to determine whether wearing glasses can improve amblyopia. The second part is being conducted to determine whether patching treatment improves amblyopia. A group with two hours of patching the sound eye combined with at least one hour of near work will be compared with a control group, which will wear glasses only. The study is funded by the National Eye Institute and is coordinated by the JAEB center for Health Research, a nonprofit clinical research center. The Pediatric Eye Institute is a multi-center bioengineering partnership composed of glaucoma suspects, clinical centers at the Cleveland Clinic Foundation (CCF), University of Pittsburgh Medical Center/University of Pittsburgh School of Medicine (UPMC), the University of Miami, Bascom Palmer Eye Institute and the University of Southern California. The goal of the partnership is to develop advanced imaging technologies to improve the detection and management of glaucoma. The technologies will be evaluated in a longitudinal 5-year clinical trial composed of glaucoma suspects, glaucoma patients and normal subjects.
Contact: S. Smith, M.D., M.P.H., at (216) 444-4821 or R. Scott at (216) 444-0680

RETINAL DISEASES
A PHASE III, MULTI-CENTER, RANDOMIZED, DOUBLE-MASKED, ACTIVE TREATMENT-CONTROLLED STUDY OF THE EFFICACY AND SAFETY OF RHUFAB V2 (RANIBIZUMAB) COMPARED WITH VERTEPORFIN (VISUDYNE) PHOTODYNAMIC THERAPY IN SUBJECTS WITH PREDOMINANTLY CLASSIC SUBFOVEAL NEOVASCULAR AGE-RELATED MACULAR DEGENERATION
Objective: To evaluate the efficacy of intravitreal injections of ranibizumab administered monthly compared with verteporfin PDT in preventing vision loss, as measured by the proportion of subjects who lose fewer than 15 letters in visual acuity at 12 months compared with baseline.
Contact: P. Kaiser, M.D., at (216) 444-6702 or L. Holody, C.O.A., at (216) 445-3762

PROTOCOL B7A-MC-MBDL REDUCTION IN THE OCCURRENCE OF CENTER-THREATENING DIABETIC MACULAR EDEMA
Objective: The primary objective of this study is to test the hypothesis that oral administration of 12 mg per day of ruboxistaurin for approximately 36 months will reduce, relative to placebo, the occurrence of center-threatening diabetic macular edema as assessed by fundus photography in patients with non-clinically significant macular edema and nonproliferative diabetic retinopathy at baseline.
Contact: P. Kaiser, M.D., at (216) 444-6702 or C. Rosal, R.N., B.S.N., at (216) 445-1256

A PHASE II RANDOMIZED, DOSE-RANGING, DOUBLE-MASKED, MULTI-CENTER TRIAL, IN PARALLEL GROUPS, TO DETERMINE THE SAFETY, EFFICACY AND PHARMACOKINETICS OF INTRAVITREAL INJECTIONS OF PEGFANATIB SODIUM COMPARED WITH SHAM INJECTION FOR 30 WEEKS IN PATIENTS WITH RECENT VISION LOSS DUE TO MACULAR EDEMA SECONDARY TO CRVO
Objective: To determine the effectiveness of pegfanatib sodium in improving vision in patients with CRVO. Injections of active treatment or sham will be every 6 weeks with one week post-injection checks. The study will last 1 year. Patients must have been diagnosed with CRVO within the past 6 months.
Contact: H. Lewis, M.D., at (216) 444-0430 or L. Schaaf, R.N., at (216) 445-4086

GLAUCOMA
ADVANCED IMAGING FOR GLAUCOMA
Objective: Advanced Imaging for Glaucoma (AIG) is a multi-center bioengineering partnership sponsored by the Cleveland Clinic Foundation (CCF), University of Pittsburgh Medical Center/University of Pittsburgh School of Medicine (UPMC), the University of Miami, Bascom Palmer Eye Institute and the University of Southern California. The goal of the partnership is to develop advanced imaging technologies to improve the detection and management of glaucoma. The technologies will be evaluated in a longitudinal 5-year clinical trial composed of glaucoma suspects, glaucoma patients and normal subjects.
Contact: S. Smith, M.D., M.P.H., at (216) 444-4821 or R. Scott at (216) 444-0680

GLAUCOMA DIAGNOSIS BY OPTICAL COHERENCE TOMOGRAPHY ANALYSIS OF RETINA AND OPTIC NERVE
Objective: The purpose of this study is to evaluate the ability of the Optical Coherence Tomography Unit Model 2010 to measure accurately and reproducibly optic nerve head excavation, retinal fiber thickness layer and the perifoveal retinal thickness in patients suspected of having glaucoma or known to have glaucoma.
Contact: S. Smith, M.D., M.P.H., at (216) 444-4821 or R. Scott at (216) 444-0680

The following studies are currently enrolling. All have been approved by the Institutional Review Board.
Hilel Lewis, M.D.
Chairman, Division of Ophthalmology
Director, Cole Eye Institute
Specialty/Research Interests: Vitreoretinal surgery for complicated retinal detachment and trauma, age-related macular degeneration, diabetic retinopathy, retinal photocoagulation, instrument development

Bela Anand-Apte, M.B.B.S., Ph.D.
Ophthalmic Research Department
Research Interest: Angiogenesis

John W. Crabb, Ph.D.
Ophthalmic Research Department
Research Interests: Age-related macular degeneration, inherited retinal diseases

Marc A. Feldman, M.D.
Ophthalmic Anesthesia
Specialty Interests: Ophthalmic surgery anesthesia, preoperative assessment, resident education

Philip N. Goldberg, M.D.
Comprehensive Ophthalmology Department
Specialty Interests: Cataract, glaucoma

Froncie A. Gutman, M.D.
Vitreoretinal Department
Specialty Interests: Retinal vascular diseases, laser therapy, diabetic retinopathy

Stephanie A. Hagstrom, Ph.D.
Ophthalmic Research Department
Research Interests: Inherited forms of retinal degeneration, including macular degeneration and retinitis pigmentosa

Joe G. Hollyfield, Ph.D.
Ophthalmic Research Department
Research Interests: Retinal degeneration, retinal diseases

Bennie H. Jeng, M.D.
Cornea and External Disease Department
Specialty/Research Interests: Corneal transplantation, ocular surface disease, limbal stem cell transplantation, artificial corneas, eye banking, cataracts

Peter K. Kaiser, M.D.
Vitreoretinal Department
Specialty/Research Interests: Vitreoretinal diseases, age-related macular degeneration, retinal detachment, diabetic retinopathy, endophthalmitis, posterior segment complications of anterior segment surgery

Gregory S. Kosmorsky, D.O.
Neuro-Ophthalmology Department
Specialty Interests: Neuro-ophthalmology, cataract, refractive surgery

Ronald R. Krueger, M.D.
Refractive Surgery Department
Specialty/Research Interests: Refractive surgery, lasers, refractive corneal pathology, lamellar corneal transplants, investigational clinical trials

Roger H.S. Langston, M.D.
Corneal and External Disease Department
Specialty Interests: Cornea and external disease, corneal transplantation

Michael S. Lee, M.D.
Neuro-Ophthalmology Department
Specialty Interests: Neuro-ophthalmology, optic neuropathies, double vision

Careen Y. Lowder, M.D., Ph.D.
Uveitis Department
Specialty/Research Interests: Uveitis, intraocular inflammatory diseases, pathology

Andreas Marcotty, M.D.
Pediatric Ophthalmology and Strabismus Department
Specialty Interests: Pediatric ophthalmology, adult strabismus

David M. Meisler, M.D.
Cornea and External Disease Department
Specialty/Research Interests: Corneal and external disease, inflammatory and infectious diseases of the cornea, corneal transplantation, refractive surgery

Michael Millstein, M.D.
Comprehensive Ophthalmology Department
Specialty Interests: Cataract, glaucoma, refractive surgery

Neal S. Peachey, Ph.D.
Ophthalmic Research Department
Research Interests: Visual loss associated with hereditary retinal degeneration

Victor L. Perez, M.D.
Cornea and External Disease Department
Specialty/Research Interests: Medical and surgical treatments of autoimmune inflammatory conditions of the cornea and ocular surface, uveitis, corneal transplantation, cataract surgery

Julian D. Perry, M.D.
Oculoplastic and Orbital Surgery Department
Specialty/Research Interests: Aesthetic facial surgery/fat transplantation and repositioning, acellular human dermal graft matrix, new bovine hydroxyapatite orbital implant, thyroid eye disease rate of strabismus after decompression surgery for dysthyroid orbitopathy

Edward J. Rockwood, M.D.
Glaucoma Department
Specialty/Research Interests: Glaucoma, glaucoma laser surgery, combined cataract and glaucoma surgery, glaucoma filtering surgery with antimetabolite therapy, glaucomatous optic nerve damage

Allen S. Roth, M.D.
Comprehensive Ophthalmology Department
Specialty Interests: Corneal transplantation, refractive surgery, cataract and implant surgery

Jonathan E. Sears, M.D.
Vitreoretinal Department
Specialty/Research Interests: Pediatric and adult vitreoretinal diseases, pediatric retinal detachment, inherited vitreoretinal disorders, retinopathy of prematurity, other acquired proliferative diseases

David B. Sholiton, M.D.
Comprehensive Ophthalmology Department
Specialty Interests: Cataract and implant surgery, glaucoma, ocuoplastics

Arun D. Singh, M.D.
Ophthalmic Oncology Department
Specialty/Research Interests: Adult and pediatric ocular tumors, uveal melanoma, genetics of retinoblastoma, retinal capillary hemangioma, von Hippel-Lindau disease

Scott D. Smith, M.D., M.P.H.
Glaucoma Department
Specialty/Research Interests: Glaucoma, cataract, prevention of eye disease, international ophthalmology

Elias I. Traboulsi, M.D.
Pediatric Ophthalmology and Strabismus Department
Center for Genetic Eye Diseases
Specialty/Research Interests: Ocular diseases of children, genetic eye diseases, strabismus, retinoblastoma, congenital cataracts, childhood glaucoma

Steven E. Wilson, M.D.
Cornea and External Disease and Refractive Surgery Departments
Specialty/Research Interests: Corneal and external disease, corneal transplantation, refractive surgery, corneal healing

216/444-2020
The Cleveland Clinic
Cole Eye Institute
www.clevelandclinic.org/eye
A 42–YEAR-OLD CAUCASIAN WOMAN EXPERIENCED “A LIGHTNING BOLT IN MY HEAD” ON FEB. 7, 2004. SHE WENT TO THE LOCAL EMERGENCY ROOM, WHERE A SUBARACHNOID HEMORRHAGE WAS SUSPECTED AND CT WITH AND WITHOUT CONTRAST ENHANCEMENT WAS PERFORMED AS WELL AS A LUMBAR PUNCTURE TO RULE OUT THIS POSSIBILITY. BOTH OF THESE STUDIES WERE INTERPRETED AS NORMAL AND SHE WAS SENT HOME WITH PAIN MEDICATIONS.

On March 1, she began to experience diplopia that was oblique in nature and changed with direction of gaze. She went back to the emergency room where another CT study and lumbar puncture were performed on the suspicion of a subarachnoid hemorrhage and additionally, an MR with contrast enhancement and MRA (Figure 1) were performed. All of these tests were interpreted as normal and she was once again sent home. Because of the diplopia, she sought the advice of a local ophthalmologist, who documented the presence of pupil-involving 3rd nerve palsy and referred her to The Cleveland Clinic.

The patient was evaluated in the neuro-ophthalmology clinic on March 11 and was found to have a pupil-involving 3rd nerve palsy (Figure 2). Re-review of the MRA revealed the presence of a probable aneurysm of the posterior communicating artery on the left side. A cerebral angiogram performed the next day confirmed the presence of a large posterior communicating artery aneurysm (Figure 3). The aneurysm was clipped surgically that day, and fortunately the patient regained full function of the 3rd nerve within four weeks of the surgery.

Heuristic value
The patient exhibited classic signs and symptoms of a subarachnoid hemorrhage at presentation and the correct tests were ordered, but were unrevealing. When she began to experience diplopia, she once again had appropriate testing, including an MRA study that was again interpreted as normal. Unfortunately, the MRA was interpreted by a general radiologist, and the posterior communicating aneurysm that was responsible for the classic pupil involving 3rd nerve palsy, seen with aneurysmal compression of the 3rd nerve, was overlooked.

The astute general ophthalmologist, suspecting an ominous cause, referred the patient for further investigation. Review of the MRA revealed the expected posterior communicating aneurysm and a cerebral angiogram confirmed this impression. This scenario confirms what William F. Hoyt, M.D., was famous for saying: “Neuro-ophthalmology is that subspecialty where the diagnosis is made upon reinterpretation of allegedly normal scans.”

This patient was extraordinarily fortunate in that a miniscule percentage of patients with aneurysmal compression of the 3rd cranial nerve regain normal function of the 3rd nerve.

Case Study: ‘Lightning Bolt In My Head’
By Gregory S. Kosmorsky, D.O.

Two new ophthalmologists are joining the Cleveland Clinic Cole Eye Institute.

Richard E. Gans, M.D., F.A.C.S., and Shari Martyn, M.D., previously were affiliated with University Hospitals of Cleveland. Both are comprehensive ophthalmologists with specialty interests in cataracts, glaucoma and diabetes.

Dr. Gans received his bachelor’s degree at Emory University in Atlanta. He is a graduate of Case Western Reserve University School of Medicine in Cleveland, where he also completed his residency training.

Dr. Martyn received her bachelor’s degree at Case Western Reserve University, where she also received her medical degree. She completed two residencies, one in internal medicine and another in ophthalmology, at Mt. Sinai Medical Center, Cleveland.

Both are assistant professors in the Department of Ophthalmology at Case Western Reserve University and are board certified. They joined University Hospitals in 1999 after 14 years in private practice together.

Two New Ophthalmologists to Join Cole Eye Institute

Richard E. Gans, M.D., F.A.C.S. Shari Martyn, M.D.
First Class Begins at Cleveland Clinic Lerner College of Medicine

THE FIRST CLASS OF THE CLEVELAND CLINIC LERNER COLLEGE OF MEDICINE BEGAN IN JULY WITH A PRESTIGIOUS FACULTY THAT WILL INCLUDE MEMBERS OF THE COLE EYE INSTITUTE STAFF.

There was tight competition for placement in the class – about 600 students applied for the 32 spots in the five-year program that combines the medical education and research programs at the Cleveland Clinic and Case Western Reserve University to prepare physician-investigators and scientists dedicated to advancing biomedical research and practice.

Many members of the Cleveland Clinic Cole Eye Institute will serve on the faculty. Appointments are still pending.

According to the National Academy of Sciences’ Institute of Medicine, less than 2 percent of physicians in the United States are prepared to perform clinical research.

The school is named in honor of a $100 million pledge from Al Lerner, longtime Cleveland businessman, friend of the Clinic and owner of the Cleveland Browns, who died in 2002.

The five-year program involves two years in basic science disciplines and three in core clinical experience, elective rotations and a research project unique to each student.

New Chair to Support Vision Research, Education

E. Bruce and Virginia Chaney of Bratenahl, Ohio, have established the first endowed chair at The Cleveland Clinic Cole Eye Institute to support the continued advancement of research and education here and the development of new treatments and cures for vision disorders. The chair will be held by Hilel Lewis, M.D., chairman of the Cole Eye Institute.

“We are immensely grateful to Bruce and Virginia Chaney for their generous support,” Dr. Lewis says. “With their gift, they have shared the most sincere expression of confidence in the work of the Cole Eye Institute and the future of this institution.”

Mr. and Mrs. Chaney have received treatment for glaucoma and macular degeneration at the Cole Eye Institute. “In making our commitment to establish this chair, it is our hope that others will continue to enjoy the same remarkable treatment our family has experienced,” Mr. Chaney says.