



## *“Diseases of the Orbit”*

### **Introduction:**

The orbit or eye socket is at the junction of the face and the calvarium. It has important relations with the frontal lobes superiorly, temporal lobes posteriorly, ethmoidal and sphenoidal sinuses medially, maxillary sinus inferiorly and the temporal fossa laterally.

The adult human orbit contains approximately 30cc of tissue. Apart from the oculus itself, the orbit contains the optic nerve, extraocular muscles, oft-neglected orbital fat, motor and sensory nerves, the lacrimal gland, and nasolacrimal sac along with a variety of vascular structures.

Diseases affecting the orbit can arise from the intraconal or extraconal space or enter the orbit from the foraminae or neighboring structures and spaces already mentioned.

The response of the orbit to disease is relatively limited such as loss of vision, double vision, proptosis, enophthalmos, dystopia and pain with inflammation. The Celsus described accompaniments of inflammation, rubor, tumour, calor and dolor are all well documented in the human orbit.

### **Cases:**

Patients of the presenter were shown and discussed with the audience. Thyroid eye disease, orbital cellulitis, Wegener’s granulomatosis, mucormycosis, basal cell carcinoma, idiopathic orbital inflammatory disease, melanoma, frontal sinus mucocele, traumatic optic neuropathy and other cases were elucidated.

Common themes to all, history, examination, investigation and special investigation (in particular imaging with MRI, CT and ultrasound) were emphasized.

### **Discussion:**

Orbital disease is a, sometimes, confusing area for the ophthalmologist and non-ophthalmic physician. A myriad of medical conditions affect this region often with systemic origin and features. The special elements of sight, eye movement and cosmesis make this area a challenging yet rewarding area to diagnose and treat.

### **Conclusion:**

Orbital disease has limited manifestations that should be appreciated by physicians. A number of simple investigations beyond careful history and examination (especially examination) should allow a focus and a much smaller number of possibly responsible

ailments. An orbital or neuro-ophthalmologist specialized in these disease processes and with the assistance of the physicians in other subspecialties can bring about favorable outcomes in serious, disfiguring and life-threatening conditions.

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## *“Update on Kidney Transplantation”*

### **Introduction:**

Kidney transplantation (KTX) is the treatment of choice for most individuals with end stage renal disease (ESRD). Each year there are increasing numbers of individuals awaiting a KTX but unfortunately there is a very limited supply of donors. Living and deceased donor KTX options will be reviewed.

### **Goals:**

1. Define options available to an individual with ESRD regarding KTX
2. Define deceased donor KTX options
3. Define living donor KTX options
4. Address issues related to the living kidney donor candidate
5. Review options available to individuals with HLA or ABO incompatible donors

### **Summary:**

There are over 83,000 individuals in this country awaiting a KTX and the list continues to grow yearly. Median wait times for a deceased donor KTX can be as high as 9-10 years in some regions depending on blood type. There are 2 options available to an individual with ESRD awaiting a KTX. The first and most preferred option is a living donor transplant. Living donor KTX has better patient and graft survival compared to deceased donor KTX. 5 year renal graft survival is 81% for living donor KTX vs 71% for deceased donor KTX.

Although living donor KTX is generally preferred, this is not always possible due to lack of available donors. Living kidney dona-

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tion is considered to be very safe from both a short and long term perspective. The surgical technique for donor nephrectomy has evolved over time and currently is a laparoscopic based approach in most transplant centers. Most common adverse events associated with donor nephrectomy are urinary tract and wound infections. Long term safety regarding kidney donation has been established. There are multiple publications showing that kidney donors do not have decreased mortality and some studies have actually indicated that donors may have decreased mortality compared to the general population. Although mortality is not increased in donation, it does not mean that kidney donation is without any long term side effects. Various studies have suggested that kidney donors are at increased risk for development of hypertension and low grade proteinuria.

There are several options available to patients with ESRD who do not have an available living donor. These options include: standard criteria donors (SCD) and extended criteria donors (ECD). A shorter wait time is the main benefit of an ECD transplant compared to a SCD transplant. ECD kidney donors must have at least 2 of the following 3 characteristics if between the ages of 50-59: history of hypertension, death due to cerebrovascular accident and a serum creatinine about 1.5 mg/dl. Any deceased donor aged 60 or older would be considered an ECD kidney donor. Although ECD kidneys have inferior patient and graft survival, ECD kidneys are recommended for KTX candidates who live in areas with a long wait time and with minimal wait time accrued.

Donation after cardiac death (DCD) kidney transplantation is an emerging kidney donor source. DCD kidneys have been shown to have similar outcomes to SCD transplants.

Individuals with HLA and/or ABO incompatible kidney donors have had few options in the past other than continued waiting on the deceased donor transplant list. This has changed recently with the introduction of desensitization protocols that would allow a transplant to occur across immunologic barriers. There are various desensitization protocols that incorporate IVIG, Rituxan and/or plasmapheresis with good success. Donor paired exchange has also recently emerged as an alternative strategy for the candidate with an ABO or HLA incompatible kidney donor. There are several national registries and there are reports that geography should not be considered to be an impediment for living kidney donor exchange.

### Conclusion:

Kidney transplantation is the treatment of choice for individuals with ESRD. The wait list for a transplant continues to grow at an alarming rate. There have been recent developments for both living and deceased donor transplantation. Individuals with either an HLA or ABO incompatible living donor now have several options including participating in a desensitization or donor exchange protocol.

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### GRAND ROUNDS

*“Competencies Required for Internal Medicine”*

**Tuesday, June 8, 2010**

**12:00 – 1:00 PM**

### ACGME GENERAL COMPETENCIES

#### PATIENT CARE

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

- communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
- gather essential and accurate information about their patients
- make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
- develop and carry out patient management plans
- counsel and educate patients and their families
- use information technology to support patient care decisions and patient education
- perform competently all medical and invasive procedures considered essential for the area of practice
- provide health care services aimed at preventing health problems or maintaining health
- work with health care professionals, including those from other disciplines, to provide patient-focused care

#### MEDICAL KNOWLEDGE

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:

- demonstrate an investigatory and analytic thinking approach to clinical situations
- know and apply the basic and clinically supportive sciences which are appropriate to their discipline

#### PRACTICE-BASED LEARNING AND IMPROVEMENT

Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:

- analyze practice experience and perform practice-based improvement activities using a systematic methodology
- locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems
- obtain and use information about their own population of patients and the larger population from which their patients are drawn
- apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on

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## Academic Updates (continued)

- diagnostic and therapeutic effectiveness
- use information technology to manage information, access on-line medical information; and support their own education
- facilitate the learning of students and other health care professionals

### INTERPERSONAL AND COMMUNICATION SKILLS

Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:

- create and sustain a therapeutic and ethically sound relationship with patients
- use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills
- work effectively with others as a member or leader of a health care team or other professional group

### PROFESSIONALISM

Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:

- demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development
- demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices
- demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities

### SYSTEMS-BASED PRACTICE

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:

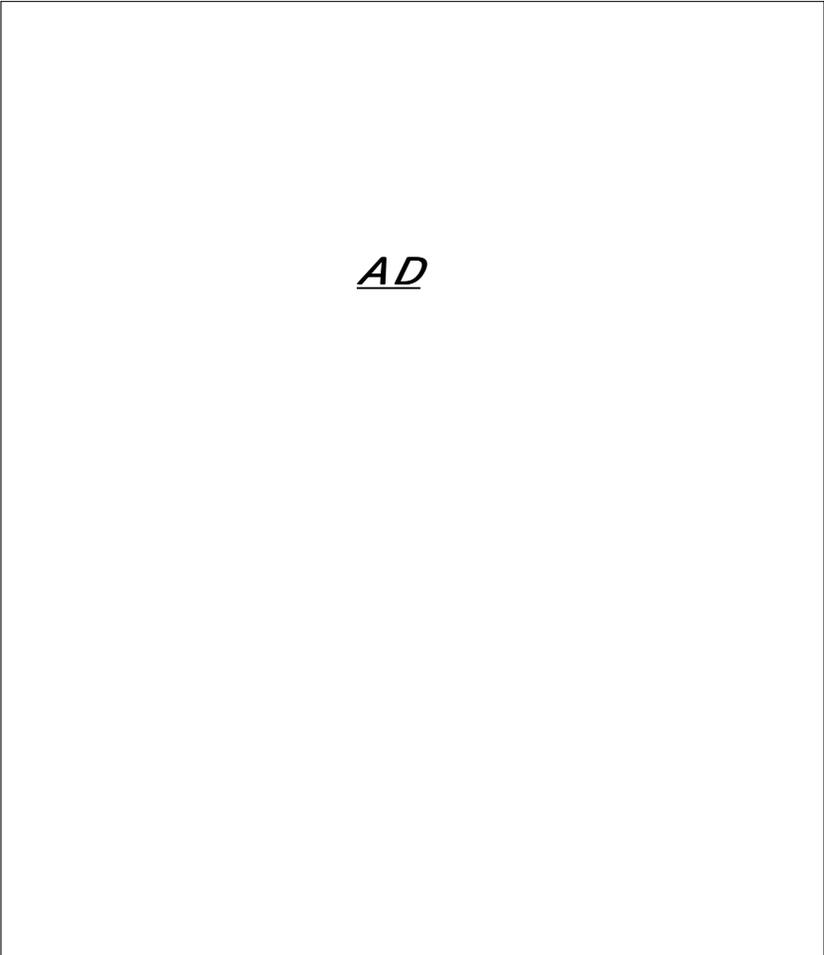
- understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice
- know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources
- practice cost-effective health care and resource allocation that does not compromise quality of care
- advocate for quality patient care and assist patients in dealing with system complexities

- know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance

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*AD*