

Lightning Rounds: Real Cases, Quick Calls

2 hours

Walter Whitley, OD, MBA, FAAO

Course Description

In a rapid fire format, this course will cover cases that are frequently referred to a tertiary referral clinic from ocular surgery to trauma to infectious disease. We will highlight the benefits of collaborative care by providing a variety of clinical cases and how these patients are properly treated and managed with the referring provider and other specialists.

Learning Objectives

- Discuss the basis of optometric comanagement
- Establish the role that ODs play in the comanagement of cataract and refractive surgery, glaucoma, retina, oculoplastics, neuro-ophthalmology, uveitis, and emergency eye care
- Discuss pre/post-operative considerations for various ocular procedures
- Perform effective triaging
- Improve the differential diagnosis skills
- Evaluate current and future treatment options for various ocular conditions

I. Comanagement Considerations

A. Cataract Surgery

1. Indications for surgery
2. Patient education
3. ODs role in perioperative care
4. IOL options for patients
 - a. Monofocal
 - b. Monovision
 - c. Lifestyle IOLs – Toric / Multifocal / Accommodating IOLs
5. Review cataract surgery procedure
6. Femtosecond laser assisted cataract surgery
7. Postoperative care
8. Case example
 - a. Managing unexpected outcomes
 - b. Maximizing preoperative measurement

B. Cornea Procedures

1. Indications for surgery
2. Preparing the ocular surface – Aggressive surface disease treatment
3. Updates on corneal refractive procedures
 - a. Corneal collagen crosslinking
 - ii. Presbyopic corrections – PresbyLasik, Intracor
4. ABC's of corneal transplant surgery - Penetrating Keratoplasty (PK), Deep Lamellar Endothelial Keratoplasty (DLEK), Descemet's Stripping Endothelial keratoplasty (DSEK), Descemet's Stripping Automated Endothelial Keratoplasty (DSAEK), Descemet's Membrane Endothelial Keratoplasty (DMEK)

- a. DSEK / DSAEK – indications for the procedure
 - i. Inclusion / exclusion
 - ii. Pre/post-operative considerations
 - iii. Advantages of DSEK vs. PK – sutures, visual recovery, astigmatism/ametropia, epithelial complications, corneal allograft rejection, wound strength, globe stability, post op clinic time
 - iv. Review complications
 - Graft failure vs. graft rejection
- 5. Corneal crosslinking
 - a. CXL increases the rigidity of the cornea
 - b. Indications - corneal ectatic disorders, post-LASIK ectasia, infectious keratitis, advanced corneal edema
 - c. Review procedure – epi on versus epi off
 - d. Complications
 - i. Treatment failure – 7.6%
 - Risk factors, 35 yrs or older, VA 20/25 or better, Ks >58D
 - ii. Postoperative infection/ulcer
 - iii. Stromal haze
 - iv. Increased IOP
- 6. Perioperative Case examples

C. Glaucoma Considerations

- 1. Indications for referral
- 2. Combined cataract and glaucoma procedures versus stand-alone procedure
- 3. Preparing patient for glaucoma surgery
- 4. Your role in perioperative care
 - a. Importance of performing baseline testing prior to referral
- 5. Surgical treatments for glaucoma
 - a. Laser treatments
 - i. Selective laser trabeculoplasty
 - ii. Argon laser trabeculoplasty
 - iii. Transcleral cyclophotocoagulation
 - iv. Which is the preferred method?
- 6. Review NEI Glaucoma Studies
- 7. Overview of glaucoma surgical procedures – indications, procedure, post-operative considerations
 - a. Trabeculectomy
 - b. Trabectome
 - c. Express Minishunt
 - d. Tube shunts
 - e. Canaloplasty
 - f. Endocyclophotocoagulation
- 8. No cookbook to glaucoma comanagement
- 9. Perioperative Case examples

D. Retina Considerations

1. When should a patient be referred from primary to secondary to tertiary retinal care
 2. Preparing patient for retina surgery
 - a. Patient education
 - b. Your role in perioperative care
 - c. Importance of performing baseline testing prior to referral
 3. Surgical treatment options
 - a. Injections
 - i. Macular degeneration – Anti-vegf, steroid
 - b. Laser procedures
 - i. Glaucoma – PRP for neovascular conditions
 - ii. Macular degeneration – focal laser
 - iii. Diabetes – focal laser, pan retinal photocoagulation
 - iv. Retinal tears/detachment - retinopexy
 4. Surgical treatments for the retina – indications, procedure, post-operative considerations
 - a. Vitrectomy – macular hole, PDR, endophthalmitis, epiretinal membranes, retinal detachment
 - b. Retinal tears / detachments
 5. Advances in retina treatments
 6. Peri-operative Case examples
- E. Oculoplastics Surgery
1. Indications for referral - chalazion, hordeolum, blepharochalasis, floppy eyelid Syndrome, ectropian, entropican, tearing, enucleation, ptosis, conjunctivalchalasis
 2. Surgical Treatment for lid disorders – indications, procedures, post-operative care
 - a. Ectropian / entropian repair
 - b. Blepharoplasty and Brow lifts
 - c. Dacryocystorhinostomy
 3. Perioperative Case Examples
- F. Neuro-ophthalmology
1. Common reasons for a referral
 2. Urgency vs. emergency
 3. Discuss imaging and lab testing to aid in the diagnosis
 4. Case example
- G. Uveitis
1. Background on uveitis
 2. Importance of history
 3. Lab testing considerations
 4. Aggressive treatment
 5. Current and future treatment options
 6. Comanagement with primary care, rheumatology
- F. Emergency Eye Care / Triage Considerations - **10 min**

1. Urgency versus emergency
2. Triage considerations - Who? What? When? Where? How?
3. Traumatic Conditions – diagnosis, treatment and management
 - a. Refractive – myopia
 - b. Adnexa – ecchymosis, eyelid lacerations
 - c. Anterior Segment – abrasions, lacerations, foreign bodies
 - d. Chemical burns – acid versus base
 - e. Hyphema – angle recession, iridodialysis
 - f. Orbit - Intraorbital foreign body, globe rupture, retrobulbar hemorrhage, orbital fracture
 - g. Posterior Segment - traumatic optic neuropathy, optic nerve avulsion, pre-retinal hemorrhage, posterior vitreous detachment, choroidal rupture, macular hole, retinal detachment, commotio retinae
4. Treatment and Management of Injuries

H. Rpaid Fire Case Examples

1. Open globe injury
 - a. Case presentation and exam findings
 - i. Protect with shield to prevent digital expulsion of contents. Emergent surgical treatment necessary with systemic antibiotic treatment.
 - b. Background information
 - i. Symptoms – usually traumatic cause (foreign body, direct force, workplace accident) with pain and decrease in vision
 - ii. Signs – decreased VA, Seidel positive, expulsed intraocular contents, shallow anterior chamber, peaked pupil, low IOP
 - iii. Management – immediate surgery to close any wounds; Fox shield to protect the globe; CT scan for any concern of intraocular foreign body
 - iv. Prognosis often poor, dependent on initial VA
2. Chemical Burn
 - a. Case presentation and exam findings
 - i. Management – pH measurement followed by immediate irrigation (before any testing) until pH neutral; antibiotic for epithelial defects, steroid for inflammation, artificial tears
 - ii. Follow up and recovery
 - b. Background information
 - i. Symptoms – pain, blurred vision, redness
 - ii. Signs – SPK or epithelial defects, corneal opacification potentially, lid edema, AC reaction, potential corneal or scleral melt with very basic chemicals, symblepharon
 - iii. Management – antibiotics for epithelial defects, steroids cautiously if epi defects, IOP management, frequent lubrication, doxycycline/vitamin C for anti-MMP9 effect to prevent melts,

amniotic membranes, surgical management including corneal transplant

3. Holes, Tears, and Detachments
 - a. Symptoms- floaters, flashes, blurry vision, peripheral vision loss, curtain over vision
 - b. Signs- posterior vitreous detachment, hemorrhage, Shafer Sign, retinal tear, subretinal fluid, operculum demarcation line, retinal folds
 - c. Risk Factors- lattice, high myopia, family history systemic diseases, history of retinal break in the fellow eye
 - d. Management and Treatment: monitor, referral to retina specialist
 - i. Pneumatic retinopexy, cryotherapy, vitrectomy, silicone oil, gas
4. Ischemic Optic Neuropathy
 - a. Symptoms- sudden vision loss, unilateral, >55 years old, headache, scalp tenderness, jaw pain, joint aches, weight loss, fever
 - b. Signs- APD, decreased vision, swollen optic disc, optic nerve atrophy, hemorrhages, altitudinal or central visual field defect, reduced color vision
 - c. Etiology- idiopathic, diabetes, hypertension, anemia, sleep apnea, hyperlipidemia, hyperhomocysteinemia, cardiovascular disease; Rule out Giant Cell Arteritis!
 - d. Management and Treatment- urgent ESR and CRP, CBC differential, temporal artery biopsy, systemic steroids, referral to PCP/cardiologist

I. Q&A / Discussion