Intravitreal Injections and Retinal Diseases
Minhee Cho, MD
Vitreoretinal Diseases and Surgeries
Park Nicollet Clinic

Objective: This course will discuss various retinal diseases and their treatment using intravitreal injections. Injection technique and various types of medications will be discussed.

1. Brief description of OCT
2. Intravitreal drugs
   a. Anti-VEGF
      i. Avastin
      ii. Lucentis
      iii. Eylea
   b. Steroid
      i. Triesence (triamcinolone)
      ii. Ozurdex (dexamethasone)
      iii. Iluvien (fluocinolone)
   c. Vitreolysis
      i. Jetrea
   d. Antibiotics/antiviral/antifungal
      i. Vancomycin/Ceftazidime
      ii. Foscarnet
      iii. Amphotericin/Voriconazole
3. Retinal Diseases
   a. Macular edema
      i. Normal vessels leaking
         1. Diabetes
         2. Vein Occlusion
         3. Post-cataract/intraocular surgery
         4. Uveitis
      ii. Abnormal vessels leaking
         1. Age-related macular degeneration
         2. Myopic degeneration
         3. Histoplasmosis
         4. Idiopathic
   b. Abnormal macular anatomy
      1. Vitreomacular Traction/macular hole
   c. Endophthalmitis
4. Injection Technique
   a. Pre-injection antibiosis
   b. Injection
      i. Site, needle, volume
   c. Post-injection care
Risks:
1. Pain
2. Bleeding (subconjunctival, vitreous hemorrhage)
3. Retinal tear / detachment
4. Cataract (from inadvertently hitting the lens)
5. Infection (Endophthalmitis)
6. Increased IOP, with damage to optic nerve (steroids)
7. Stroke/Heart-Attack (with Anti-VEGF medications, controversial)
8. Off-label use (for Avastin, Kenalog, other medications)