Basics of Vitrectomy Surgery, Part II

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Indications for Vitreous Surgery

- Diabetic Retinopathy
- Retinal Detachment
- Macular Hole
- Macular Pucker
- Vitreous Opacity/ Hemorrhage
- Vitreous Infection
Benefits of Vitrectomy

- Improvement of vision/ocular media
  - central vision
  - peripheral vision
- Prevention of visual loss or decline
- Altering natural disease course
  - stabilization of disease
Risks of Vitrectomy

• Infection/ Endophthalmitis
• Retinal Tear
• Retinal Detachment
• Choroidal Effusion or Hemorrhage
• Cataract
• Glaucoma (after gas tamponade or VH removal)
• Anesthesia Block Related
Essentials of Vitrectomy

• Pre-op Evaluation
• Adequate Anesthesia
• Sterile Prep and Technique
• Surgical Assistant
• Proper Sclerotomy/ Wound Placement
Essentials of Vitrectomy

- Intraocular Visualization
- Avoid Retinal Trauma (B Scan Preoperatively)
- Control Any Intraocular Bleeding
- Proper Selection of Vitreous Substitute
  - BSS, Air, Gases, Oils
- Tight Wound Closure
- Post op Evaluations
Vitreous Hemorrhage

- Possible Diagnosis of Vitreous Hemorrhage
  - Proliferative Diabetic Retinopathy
  - Posterior Vitreous Detachment
  - Retinal Tear with Vessel Involvement
  - Retinal Detachment
  - Neovascularization
    - Vascular Occlusions
    - Choroidal Neovascularization
    - Any Ischemic Process
Safety Techniques

• Confirm Intraocular Placement of Infusion
• Maintain Intraocular Spatial Orientation
• Control Intraocular Pressure (too high/too low)
• Avoid Iatrogenic Trauma (Tears/Cataracts)
• Check Wound Integrity
• Visualize Periphery at Conclusion of Every Case
  – Scleral Depressed Exam
• Post-op Instructions with Contact Information
Patient 1

- 64 y/o F
- C/o blurry VA OD. No change over 2 weeks.
- VA OD CF at 5 feet
- Dx VH/ High Myopia post Lasik surgery
Surgery
Review Question

What is a possible risk to vitrectomy surgery?

A. Endophthalmitis
B. Retinal Detachment
C. Cataract
D. Choroidal Hemorrhage
E. All of the above
What are possible causes of vitreous hemorrhage?

A. Proliferative Diabetic Retinopathy
B. Retinal Vein Occlusion
C. Retinal Vasculitis
D. Retinal Tear/ Detachment
E. All the Above
Review Question

What is the best way to prevent post op retinal detachment?

A. Use wide field viewing device
B. Ophthalmoscopy with Scleral depression at end of every case
C. Low aspiration/ vacuum during vitrectomy
D. Avoid the vitreous base with cutter
Review Question

What are the possible causes of worsening elevation of retina during vitrectomy?

A. Choroidal Hemorrhage
B. Misplacement of Infusion Canula (Supra-Choroidal Placement)
C. Hypotony from low Infusion
D. Retinal Detachment
E. All of the above
End

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