Morbidity and Blindness

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History

• 64 y.o with pigmentary glaucoma in both eyes
  – VF defects progressing right eye, despite management with 3 topical agents
  – Progressive cupping

• POHx: pseudophakic B, DES
• Meds: Azopt, Xalatan, Timolol
Exam

- Vacc: 20/20, 20/20
- SLE:
  - Transillumination defects
  - PCIOL ou
- IOP: mid teens both eyes, multiple visits
- C/D: 0.9 both
Surgery

• Uneventful Trabeculectomy with MMC right eye, 10/2006

• POD #1 in the AM
  – Eye ached during the night, took ASA earlier this AM
  – Va: HM
  – IOP: 2
  – Diffuse bleb, seidel negative, deep and turbid AC, small hyphema
  – PF q2, Ocuflox qid
POD #1 – later in the afternoon

- Pt returned with episode of severe right eye pain after bending over
  - Episode lasted a few minutes and then completely resolved
- Va: HM
- IOP: 4
- SLE:
  - AC slightly shallow with a small hyphema
  - No iris bombe
  - PCIOL in normal position
POD #3

Eye pain last night, worse with movement
Va: LP
Tp: 9
SLE:
  • Deep AC
    – Small hypema
B scan
POD #7

• Drainage of choroidal hemorrhage
  – 180° conjunctival peritomy
  – Placement of infusion line
  – 2 sclerotomy sites were made 10mm from limbus
Suprachoroidal hemorrhage

- Anatomic considerations:
  - Potential space between choroid and sclera
  - Lobular appearance
    - Choroid firmly attached to sclera at vortex veins
- Definitions
  - Choroidal detachment
    - Serous fluid in suprachoroidal space
      - Secondary to hypotony and inflammation
  - Suprachoroidal hemorrhage (SCH)
    - Classified by size or timing of development
    - Suprachoroidal hematomas - resolve spontaneously
    - Massive hemorrhage
      - “kissing SCH” or retinal apposition
Timing

- Intraoperative SCH
  - Expulsive SCH - expulsion of intraocular contents

- Postoperative or Delayed SCH
  - Closed system
Pathophysiology

- Hypotony is the major precipitating factor
- Rupture of a posterior ciliary artery
  - Hypotony may lead to effusion
    - Stretches and weakens blood vessels
Postoperative Diagnosis and Management

• Usually presents after uncomplicated glaucoma filtering surgery
  – Sudden onset of severe pain followed by LOV
  – IOP may be low, normal, or elevated

• Management
  – If IOP is elevated, aggressive lowering
  – Control inflammation
Indications for Surgical Drainage

- Several reports advocate early surgical drainage
- Specific clinical features may influence the decision
  - Central retinal apposition
  - RD (serous vs rhegmatogenous)
  - Vitreous incarceration in surgical wound
  - Retained lens material
Timing and Technique

• Delay surgery until clot lysis begins
  – Usually within 7-14 days
  – Manipulation to remove clotted blood can lead to additional injury/hemorrhage
  – Confirm clot lysis with ultrasound

• Drainage sclerotomy in the involved quadrant
  – IOP maintained with infusion or viscoelastic material
Risk Factors for SCH

- Age
- Hypertension
- Diabetes
- Use of anticoagulants and antiplatelet agents
- Prior intraocular surgery
- Higher IOP prior to surgery
- Aphakia
- Postoperative hypotony
Appositional Suprachoroidal Hemorrhage (ASCH)

- AJO, December 2004
- Case-control study
  - 37 cases with 92 surgeon/procedure-matched controls
- Intraoperative or delayed ASCH
- Significant increased risk: Age and prior history of PPV
- Antiplatelet and anticoagulation agents were not associated with increased risk
Delayed Suprachoroidal Hemorrhage after Glaucoma Filtering Procedures

- Ophthalmology, October 2001
- Case-control study
  - 66 cases identified of 2285 glaucoma surgeries
  - The control group was matched by procedure

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Total Number</th>
<th>DSCH Number</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Trab without antimetabolite</td>
<td>615</td>
<td>9</td>
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<tr>
<td>Trab with antimetabolite</td>
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<td>Valved tube shunt</td>
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<td>Non-valved tube shunt</td>
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</table>
Our patient - 6 weeks after surgery…

• Va: 20/50
• Meds:
  – Azopt tid, both eyes
  – Timolol bid, both eyes
  – Xalatan bid, both eyes
  – Pred forte qid, right eye
• IOP: 10
• Significant scarring of bleb
References

