Surgical Management

- Radial Optic Neurotomy
  - Surgical procedure to relieve compression at scleral outlet
  - Relax confines of CRV
  - Variable reports of success

Radial Optic Neurotomy - Concept

- Hypothesis - Compartment Sx
- Opremcak EM et al, 2001 and 2003

Radial Optic Neurotomy

- 3-port pars plana vitrectomy
- 20g vs 25g
- Posterior hyaloid separation
- Radial nasal incision
- Hemostasis
- +/- intravitreal triamcinolone acetate (4mg)
Radial Optic Neurotomy – Retina Institute of California Experience

- **Purpose**: Review our initial experience with RON for CRVO
- **Methods**: Retrospective, chart review, OR records (1/1/01)
- **Intervention**: PPV (20 or 25g), RON, +/- IV TA (4mg)
- **Measures**: Visual acuity, macular edema, FA perfusion status

- **Results**
  - 8 eyes / 8 patients (1 male, 7 female)
  - Avg age ~ 73.5 years
  - Mean duration of symptoms ~ 3.9 months (3 weeks-1 year)
  - Pre-op perfusion status - perfused (3), nonperfused (1), indeterminate (4)
  - Mean follow-up ~ 7.5 months (1-24 months)

### Table: Radial Optic Neurotomy - Results

<table>
<thead>
<tr>
<th>Study</th>
<th>Eyes</th>
<th>Dur</th>
<th>PreVA</th>
<th>PostVA</th>
<th>FU</th>
<th>Comps</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opromcak, 2003</td>
<td>11</td>
<td>20-400</td>
<td>20/50</td>
<td>20/60</td>
<td>None</td>
<td>None</td>
<td>75%</td>
</tr>
<tr>
<td>Le Rouic, 2003</td>
<td>10</td>
<td>20/300</td>
<td>20/100</td>
<td>4.5mo</td>
<td>None</td>
<td>None</td>
<td>Shunt=3</td>
</tr>
<tr>
<td>Garcia, 2003</td>
<td>14</td>
<td>20/100</td>
<td>20/60</td>
<td>9.6mo</td>
<td>None</td>
<td>None</td>
<td>Shunt=3</td>
</tr>
<tr>
<td>Weizer, 2003</td>
<td>8</td>
<td>5-8mo</td>
<td>20/400</td>
<td>4.6mo</td>
<td>None</td>
<td>None</td>
<td>Shunt=3</td>
</tr>
<tr>
<td>Nomoto, 2004</td>
<td>15</td>
<td>4mo</td>
<td>20/300</td>
<td>20/100</td>
<td>None</td>
<td>None</td>
<td>Shunt=2</td>
</tr>
<tr>
<td>Spada, 2004</td>
<td>6</td>
<td>2.3mo</td>
<td>20/400</td>
<td>20/400</td>
<td>None</td>
<td>None</td>
<td>Shunt=2</td>
</tr>
</tbody>
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Radial Optic Neurotomy - Retina Institute of California Experience

- Mean preoperative VA - 5/200
- Mean postoperative VA - 20/400
- 4 patients improved VA (50%)
- 4 patients maintained VA (50%)
- One patient improved from CF to 20/50
- Macular edema - resolved in 2 eyes, decreased in 6 eyes
- Mean OCT foveal thickness 595 => 394 microns (3 eyes)
- Bottom Line: Reasonable option for hemorrhagic CRVO with 20/200 VA or worse

CRVO: Treatment Paradigms

1) Non-ischemic CRVO:
   a) Non-Hemorrhagic - Observe
   b) Hemorrhagic - RON
      - Avastin

2) Ischemic CRVO: PRP
   Avastin