Cataracts and Surgery

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Epidemiology

- Leading cause of blindness in the world
- 17 million reversibly blind – expected to increase
- In US – 3 million patients undergo cataract surgery each year
- Medicare spends $3.4 billion per year on cataract surgery

Impact of Decreased Vision

- Increasing difficulty with ADLs
- Decreased earning potential
- Limited Participation and Social Isolation
- Anxiety and Depression
- Increasing dependence on others
- Impacts on other members of the family – childcare, transportation, etc.

Anatomy

http://see.eyecarecontacts.com/eye_anatomy.gif
Anatomy

- Crystalline Lens
  - 9mm across
  - 5mm depth at center
- No blood supply
- No innervation
- Refracts light
- Performs accommodation

http://www.retina-doctors.com

Aging Crystalline Lens

- Increase in weight
- Increases in thickness
- Decrease in ability to accommodate
- Loss of clarity

Types of Cataract

- Nuclear
  - Typical age related change
  - Slow, gradual
  - Overall decreased vision, color, contrast
  - Induced myopia
### Types of Cataract

<table>
<thead>
<tr>
<th>Type</th>
<th>Characteristics</th>
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<tbody>
<tr>
<td>Cortical</td>
<td>- Asymmetric&lt;br&gt;- Spokes&lt;br&gt;- Glare&lt;br&gt;- Double vision&lt;br&gt;- Can become symptomatic quickly</td>
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<tr>
<td>Posterior Subcapsular</td>
<td>- Can grow quickly&lt;br&gt;- Glare&lt;br&gt;- Reading problems&lt;br&gt;- Steroids&lt;br&gt;- DM&lt;br&gt;- Younger</td>
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### Changes in Vision

- Blur
- Decreased contrast
- Decreased color
- Glare
- Halos
- Poor night vision
- Myopic shift

### Improving Vision

- Updating glasses
- Improved lighting for reading
- Magnification
- Anti-glare lenses / coatings
## When is the “Right” Time for Surgery?

- Vision is having negative impact on ADLs
  - Reading
  - Driving
  - Socializing
  - Living independently
- Often the input of a family member or loved one is very insightful

## When is the “Right” Time for Surgery

- Benefits outweigh risks
- Almost never an emergency
- A decision to be made together with your eye care provider
- Need to monitor other eye diseases

## Role of the Primary Care Provider

- Encourage regular eye exams
  - Birth / Infancy
  - Preschool
  - School Years
  - 20's x 1; 30's x 2
  - Baseline again at 40
    - Every 2-4 years until 54
  - Every 1-2 until 64, then yearly
  - More often at all ages if systemic disease

- Encourage eye exams:
  - Systemic diseases (DM, HTN, medication toxicity)
  - Vision changes / complaints
- Discuss vision impact on ADLs at regular exams
- Pre-op testing
  - More evidence that little to no testing needed for routine patients
  - Some patients may require pre-operative clearance
Cataracts and Surgery

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Pre-Op Consultation

- Outpatient clinic visit
  - 1 hour

- Full dilated eye exam
- Determine Lens Implant Strength
  - Measure Axial Length
  - Measure Corneal Curvature
- Discuss Risks and Outcomes
  - 1/1000 significant complication risk
  - 50-75% will use no glasses for distance vision after (if no astigmatism)
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<tr>
<td>• Topical</td>
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<tr>
<td>• MAC with Retrobulbar Block</td>
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<td></td>
<td>• Blood Thinners</td>
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<td>• Coumadin</td>
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<td>• Plavix, Aspirin etc…</td>
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## Cataract Surgery

- **Outpatient Surgery**
  - Minimal MAC sedation
  - 5 minutes to 1 hour in length
  - 1 eye at a time
  - Fellow eye 1 to 4 weeks after first eye

## Post Op Surgery

- Follow up typically POD#1, POW#1 and POM#1
- Vision usually improved POD#1 or by POW#1
- Eyedrops for 1 month after the surgery
  - Antibiotic
  - Steroid
  - Optional NSAID
- Limitations for 1 week after surgery
  - No heavy lifting
  - No swimming
  - Wear eye patch when sleeping at night
Lens Implant Options

- Monofocal lens
  - Covered by insurance
  - Will improve vision at either distance or up close without glasses (not both)
    - 50-75% will not need glasses for distance or up close
    - If you have astigmatism, will still need glasses to correct it

- Premium Lens Implant
  - Not covered by insurance (Out of pocket expense)
  - Lens implants to correct astigmatism
  - Lens implants to correct presbyopia
    - Accommodative lens
    - Multifocal lens