Practical Care of the Cataract Patient with Retinal Disease
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Purpose of course
Optometrists are increasingly comanaging the cataract surgery of not only patients with otherwise healthy eyes, but also those with significant coexisting ocular disease. This course discusses the practical considerations of the cataract patient with known prior retina disease or retinal surgery.

General considerations and principles
Accurate, timely and understandable communication between comanaging optometrist, treating retina physician (if any) and cataract surgeon is always important. However, more complex cases require even more attention to both detail and communication.

Know the surgical techniques of the surgeons and subspecialists with whom you work:

- Location of surgery (office or hospital ASC)
- Sedation and anesthesia
- Location of main and port incisions
- Speed of surgeon
- Depth of phacoemulsification

Have a consistent and mutually agreed upon system of communicating complications – or anything out of the ordinary.

Testing
Preoperative spectral domain OCT is now mandatory standard of care for any preexisting macular disease.

Request or perform B-scan ultrasound for any dense cataract that prevents a view of posterior segment to R/O retinal detachment, masses.
APD in an eye with dense cataract gives good prediction of poor post-op vision potential.

**Cataract preoperative discussion and informed consent**

Components of an oral informed consent

1. Indications, risks, benefits and alternatives.
2. Does the patient understand? Can they consent?
3. All questions were answered.
4. Patient chooses (or declines) to proceed.

Indications for surgery:

1. Is there objective evidence that the cataracts are causing vision loss (the “worse than 20/40” rule).

2. Cataracts are having an adverse impact on activities of daily living.

Not always easy to determine even in otherwise healthy patients and is usually much more difficult in those with retinal disease.

There is more uncertainty in the objective outcome and subjective satisfaction.

With few exceptions, it’s always the patient’s choice.

**Cataracts or retina?: 2 questions….**

Which is causing the loss of vision?
Which is causing the patient’s complaints?

Glare is not a common presenting complaint in retina disease
Do symptoms and history match findings?
Glare testing often poor in patients with retina disease.
Caution: the patient with unilateral complaints with bilaterally equivalent cataracts.
Potential acuity testing is invaluable.
Counseling
Provide a detailed explanation of the ocular problems.

Informed consent checklist: See steps in previous section.

There is much greater uncertainty of outcome in patients with coexisting retinal disease.

Document the details of the conversation with particular attention to the uncertainty of outcome/increased risk given coexisting retinal disease.

How likely can the patient’s goals be met with surgery?

Share informed consent details with both the cataract surgeon and treating retina physician.

Surgical plan and counseling
Are both eyes going to have cataract surgery? Consider surgery for the eye with better vision potential first and explain to the patient why.

Avoid monovision and multifocal IOL’s in those with macular disease.

Avoid same day consultation/surgery for uncertain cases.

The patient with prior retinal surgery or retinal disease:

1. Vitrectomy

Vitrectomy is occasionally performed as a stand-alone procedure, but often a step in complex retinal surgery, such as retinal detachment repair and epiretinal membrane peel.

Studies indicate iatrogenic cataracts form in up to 80% of all eyes undergoing pars plana vitrectomy - true incidence is probably closer to nearly all.
Dense central NS can form within weeks after surgery – often results in rapid myopic progression and poor corrected acuity compared to senile NS

Cataract surgical risks and uncertainty:

1. Loss of stable zonules increases risk of capsular tear and IOL dislocation.

2. Replacement of viscous vitreous with liquid aqueous leads to more posterior position of PCIOL and likely more hyperopic refractive surprise.

3. More intraoperative fluctuations of anterior chamber depth increases risk of lens fragments.

2. Retinal detachment repair with scleral buckle

Increased axial length leads to increased uncertainty in IOL calculation.

Careful biometry is necessary to avoid globe perforation when injectable anesthetics are used.

3. Wet AMD

Preoperative OCT is mandatory.

Evidence of response and stability to intravitreal anti-VegF treatment is ideal (3 months?).

What’s the optimum timing of cataract surgery with ongoing anti-VegF treatment? (Within 1 month of last injection?).
4. Dry AMD

Should patients with severe central vision loss have cataract surgery?

- May benefit from improvement in glare, mobility
- Case-by-case basis: Will it improve individual’s activities of daily living?
- There often is a significant subjective improvement in vision and quality of life after cataract surgery.

5. Epiretinal membrane

Epiretinal membrane often occurs in otherwise healthy and high functioning patients with unilateral involvement. Dilemma is often whether cataract or ERM is source of vision complaint.

- Listen to complaint CAREFULLY – distortion vs. glare?
- Is foveal contour distorted on OCT?
- Patients with ERM have up to 5 times incidence of post-op CME that can be very nonresponsive to topical therapy.

6. Retinal vein occlusion

Prior BRVO and CRVO poses a significant risk of post-op CME.

Reducing risk of cataract post-op CME in the retina patient

1-3% incidence in an otherwise healthy eye
Up to 15% with coexisting ERM
Up to 30% with prior RVO

Prophylactic topical NSAID’s may reduce risk in the high-risk groups to an incidence similar in otherwise healthy eyes.
No consensus on prophylaxis schedule – one suggested recipe:

Start drops 1 week prior to cataract surgery

Low risk patients: Minor ERM or diabetic retinopathy without history of diabetic macular edema:
  Four times per day for 1 month post-op

High-risk patients: Previous diabetic macular edema, CME in the fellow eye or prior retinal vein occlusion:
  Four times per day for 2 months post-op

**Peripheral retinal disease**

Concern: reduce risk of post-op rhegmatogenous retinal detachment.

Overall 4-year cumulative RD incidence in pseudophakia is less than 1%

Risk factors for pseudophakic RRD (Haug and Bhisitkul, Curr Opin Ophth, 2012)
  1. Intraoperative complications: posterior capsular rupture
  2. Younger age (less than 50)
  3. Males>Females
  4. High myopia
  5. Highest incidence during first 6 months post-op

**When should a pre-operative retina specialist consult be recommended?**

Make sure the cataract surgeon receives the retina specialist report.