Chapter 21
Cataract Extraction, the Use of Iris Hooks for Intraoperative Floppy Iris Syndrome (IFIS)

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Abstract Patients should have been evaluated and deemed appropriate for such surgical intervention. Surgical indications for cataracts include those that impair visual acuity, create visual disability, affect activities of daily living, or deemed medically necessary for monitoring or further surgical procedures. Additionally, intraoperative floppy iris syndrome can occur in any individual with a current or past history of alpha-1 antagonist use. All patients should be screened regarding past and current medication use, as well as all medical conditions. Patients should have been educated about the risks and benefits of the procedure, including alternatives.

Keywords Cataracts • Cataract extraction • Mature cataract • Intraocular lens • IOL • PCIOL • Phacoemulsification • Floppy iris syndrome • IFIS • Iris hooks • Mydriatic assist device • Visualization • Flomax

Indications

In patients with floppy iris syndrome and mature cataract, cataract causing impaired visual acuity, cataract with diabetic retinopathy, in preparation for vitrectomy, in preparation for surgical retinal detachment repair, or intraocular pathology necessitating clear media.

Essential Steps

1. Sideport incision
2. Additional paracentesis incisions
3. Insertion of iris hooks

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4. Injection of air and trypan blue if hypermature or white
5. Viscoelastic injection into the AC
6. Clear corneal incision
7. Curvilinear capsulorrhexis
8. Hydrodissection of lens
9. Phacoemulsification and aspiration
10. Coaxial irrigation and aspiration of cortical material
11. Viscoelastic injection into capsular bag
12. PCIOL insertion
13. Removal of iris hooks
14. Removal of viscoelastic
15. Stromal hydration

Complications

- Hyphema
- Corneal edema
- Cystoid macular edema (CME)
- Retinal detachment
- Lens dislocation
- Zonular dehiscence
- Dysphotopsias
- Endophthalmitis

Template Operative Dictation

Preoperative diagnosis: *Mature cataract (OD/OS)*

Procedure: Cataract extraction *(OD/OS)* with the use of iris hooks for intraoperative floppy iris syndrome

Postoperative diagnosis: *Mature cataract (OD/OS) and poorly dilating pupil with intraoperative floppy iris syndrome*

Indication: This ____-year-old (*male/female*) had developed a cataract over the past ____ (*months/years*) and on workup was found to have a (*nuclear/cortical/posterior subcapsular)* (*Lens Opacities Classification System III/Wisconsin Grading/Oxford Clinical Cataract Classification*) grade ___ cataract. The visual impairment was affecting activities of daily living, and after a detailed review of risks and benefits, the patient elected to undergo the procedure.

Description of the procedure: The patient was identified in the holding area, and the *(right/left)* eye was marked with a marking pen. The patient was brought into the OR on an eye stretcher in the supine position. After proper time-out was performed verifying correct patient, procedure, site, positioning, and special equipment prior to starting the case, topical anesthesia, 0.5 % tetracaine, was instilled three times

into the conjunctival fornices of the *(right/left)* eye. The *(right/left)* eye was prepped and draped in the usual sterile fashion. The operating microscope was centered over the *(right/left)* eye, and an eyelid speculum was placed.

A sideport incision was created using a _____mm keratome blade. Intracameral preservative-free xylocaine was injected into the anterior chamber followed by viscoelastic. After noting that the pupil only dilated to less than 4 mm, four additional sideport incisions were created at the *12 o'clock*, *3 o'clock*, *6 o'clock*, *and 9 o'clock* meridians. An iris hook was then inserted through each of the paracentesis ports. The iris and the pupil were secured using the hooks in order to dilate and maintain a _____mm diameter pupil.

If blue dye used: Air was injected into the anterior chamber, and trypan blue dye was used to stain the anterior capsule.

The anterior chamber was then filled with viscoelastic. A uniplanar clear corneal incision was then created *temporally* using a ____mm keratome. A ____mm continuous curvilinear capsulorrhexis was then carried out using capsulorrhexis forceps. Hydrodissection was gently performed, and a fluid wave was noted. Phacoemulsification and phacoaspiration was used to disassemble and remove the nucleus and was followed by irrigation and aspiration of the cortical material using a (*standard/bimanual*) irrigation/aspiration (I/A) handpiece. A total _____ absolute phaco-time (APT) was used in the procedure.

Viscoelastic was injected to inflate the capsular bag and reform the anterior chamber. A ____ diopter posterior chamber intraocular lens was then injected and delivered into the capsular bag.

If toric IOL used: The trailing haptics were dialed into the correct position.

The pupil was then freed from the iris hooks, and the hooks were then removed from the eye. Viscoelastic was removed from the eye using irrigation and aspiration. Stromal hydration of the corneal incisions was performed, and the incisions were noted to be watertight. Eyelid speculum and drape were removed. Maxitrol eye ointment was placed in the inferior fornix, and a shield was placed over the eye. The patient was transferred to the post anesthesia care unit in stable condition.