

Chapter 66

Trabeculectomy



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Indications

Medically uncontrolled glaucoma, unsuccessful laser therapy, and significantly elevated intraocular pressure with high risk for visual disability

Essential Steps

1. Superior quadrant fornix-based conjunctival incision
2. Access to bare sclera
3. Subtenon mitomycin C or antimetabolite application
4. Triangular half-thickness scleral incision and flap creation
5. Paracentesis
6. Rectangular full-thickness scleral/trabecular block excision
7. Peripheral iridectomy
8. Anchor triangular flap
9. Check flow
10. Reapproximation of the conjunctiva

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Complications

- Overfiltering
- Shallow anterior chamber
- Wound leakage
- Hypotony
- Hyphema
- Choroidal effusion
- Dellen
- Increased IOP
- Hemorrhage
- Cystoid macular edema

Template Operative Dictation

Preoperative diagnosis: *Medically uncontrolled glaucoma (OD/OS)*

Procedure: Trabeculectomy (*OD/OS*) with mitomycin C

Postoperative diagnosis: *Same*

Indication: This ___-year-old *male/female* with a well-known and documented history of glaucoma had been unsuccessful with medically controlled treatment plans. 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, general anesthesia was induced. A (*LMA/ETT*) was placed and local anesthetic was injected in the standard (*retrobulbar/peribulbar*) fashion using ___mls of equal parts ___% lidocaine and ___% bupivacaine. 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 in the eye. Tetracaine eye drops were instilled onto the surface of the (*right/left*) eye.

Smooth forceps and Westcott scissors were used to dissect the conjunctiva and Tenon's capsule in the superior quadrant in order to create a fornix-based conjunctival flap (FBCF) incision. Using Westcott scissors, blunt dissection was carried out to the bare sclera. Electrocautery provided hemostasis on the scleral bed. Sponges soaked in mitomycin C were then placed in the subtenon pocket for ___minutes. Three bottles of BSS were then used to copiously irrigate the ocular surface following mitomycin C application. A #64 blade was then used to make a triangular half-thickness scleral incision ___mm in length carried out approximately ___mm from

the limbus. The triangular flap was then retracted inferiorly over the cornea. A paracentesis was then created temporally using a micro sharp blade. A micro sharp blade was then used to create a rectangular full-thickness scleral block beneath the retracted triangular partial-thickness scleral flap. The scleral block excision was then completed using Vannas scissors. A peripheral iridectomy was then created by grasping the iris with 0.12 forceps and sheering with Westcott scissors. A cohesive viscoelastic was then injected over the peripheral iridectomy into the anterior chamber, and the scleral flap was laid flat. # interrupted 10–0 nylon sutures was then used to anchor the apex of the triangular flap to the sclera. Flow through the trabeculectomy site was checked by injecting BSS through the paracentesis wound into the anterior chamber. At this point adequate and appropriate flow was noted. Miochol was then injected into the anterior chamber. The FBCF was reapproximated using # interrupted 10–0 nylon sutures running from limbus to the base of the incision. Atropine eye drops were placed onto the surface of the left eye followed by Maxitrol ointment. The eyelid speculum was removed and the eye was patched and shielded. The patient tolerated the procedure well and was transferred to the postanesthesia care unit in stable condition.

Additional Resource

<http://eyetu.be/ripovi>; <https://www.youtube.com/watch?v=sIa-oOc0B-U>.