Chapter 70
XEN Gel Stent

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Indications

Glaucoma with IOP not adequately controlled by maximum tolerated medical therapy or laser therapy.

Essential Steps

1. Subconjunctival injection of mitomycin C at site of planned bleb
2. Paracentesis incision
3. Preservative-free Xylocaine instillation
4. Cohesive viscoelastic injection into the AC
5. Clear corneal incision
6. Gonioscopic visualization of angle just nasal to 12 o'clock
7. XEN implantation anterior to the trabecular meshwork and through sclera until 3 mm posterior to the limbus
8. Visualization of XEN injector tip in superonasal subconjunctival space
9. Removal of viscoelastic
10. Visualization of bleb formation
11. Suture placement in temporal corneal incision

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Complications

- Hyphema
- Hypotony
- Ptosis
- Choroidal detachment
- Blebitis
- Endophthalmitis
- Conjunctival/bleb fibrosis
- Bleb dysesthesia
- Suprachoroidal hemorrhage
- XEN occlusion

Template Operative Dictation

Preoperative diagnosis *Uncontrolled glaucoma (OD/OS)*

Procedure Insertion of XEN gel stent *(OD/OS)*

Postoperative diagnosis *Same*

Indication This ____-year-old male/female, with a well-known and documented history of glaucoma, has had elevated IOP despite maximal tolerated medical ± laser therapy ± previous glaucoma surgery. On work-up the patient was noted to have uncontrolled glaucoma with an IOP ranging from ____ to ____ mmHg. After a detailed review of risks and benefits, the patient was 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. 0.5% Tetracaine was instilled into the conjunctival fornices of the *(right/left)* eye. The *(right/left)* eye was prepped and draped in the usual sterile fashion and the operating microscope centered over the *(right/left)* eye. The eyelid speculum was placed. A proper time out was performed verifying correct patient, procedure, site, positioning, and special equipment prior to starting the case.

0.2 mL of subconjunctival mitomycin C at a concentration of 0.2 mg/cc was injected. A 15-degree paracentesis blade was used to make two side port incisions, one inferotemporally and one superotemporally. Lidocaine and then Provisc were injected into the anterior chamber. Under direct gonioscopic visualization, the XEN implant was inserted just anterior to the trabecular meshwork just nasal to 12 o'clock and then passed through the sclera until it arose 3 mm posterior to the limbus in the superonasal subconjunctival space. Viscoelastic was then removed from the eye manually with BSS on a 27-gauge cannula. At this point a nice bleb had formed

around the XEN implant. The wounds were then hydrated to ensure a watertight seal and a 10–0 Nylon suture was placed in the inferotemporal side port incision. Maxitrol ointment was placed into the eye at the conclusion of the case, and the eyelid speculum and surgical drapes removed. The patient was then transferred to the recovery room in stable condition, and (he/she) tolerated the procedure well.

Additional Resource

http://eyetu.be/uuymyal; https://www.youtube.com/watch?v=9T8Wq4N-qu8.