

# Back to School With Eyetube.net

BY NATHAN M. RADCLIFFE, MD

One of the things that I like (and occasionally dislike) about the field of glaucoma is the fact that there is never a dull moment in the management of this challenging disease. Even the seemingly perfect surgery can produce problems just a little way down the road. While most of us have been trained to deal with familiar complications, it seems that unique challenges present themselves every day. When we encounter something new, it is nice to have resources at our side. This article discusses a variety of educational resources that can be found on Eyetube.net that are of assistance in the medical and surgical treatment of glaucoma.

As glaucoma surgeons, we often plan for a sequence of surgeries that may unfold over a given patient's lifetime, because failure is a known risk of any IOP-lowering procedure. Some surgical failures are easier to plan for than others. Erosion of the tube after an otherwise successful implantation of a glaucoma drainage device is a particularly challenging and often unanticipated problem, but it may occur after up to 5% of these procedures.<sup>1</sup> The educational value of the videos described herein can truly make a difference in the way we surgeons approach failed IOP-lowering techniques.

## EXTENDING TUBES AND KNOWLEDGE

In many cases of a tube's erosion, the conjunctiva is afflicted by underlying ocular disease (eg, uveitis), has endured prolonged exposure to hypotensive medications, or has undergone prior conjunctival incisional surgery (eg, vitrectomy or trabeculectomy). I therefore felt great relief upon discovering a recently submitted video on Eyetube.net titled, "Tube Extender Used to Redirect an Eroded Baerveldt Tube," by Devesh K. Varma, MD, and Ike K. Ahmed, MD (Figure 1) (<http://eyetube.net/?v=pasup>).

In this video, the surgeons describe a uveitic patient with late tube erosion and friable conjunctiva prohibiting a primary repair. First, they free the original tube by careful dissection, removing the tube's tip from the anterior chamber after instilling viscoelastic. After closing the site of the previous tube's insertion, the surgeons inject trypan blue 0.1% (VisionBlue; Dutch Ophthalmic Research



Figure 1. The surgeon uses a tube extender to redirect an eroded tube implant.

Center International BV, Zuidland, The Netherlands) through the tube's tip to demonstrate that the drainage device is still patent. They then amputate the tube close to the plate. After preparing an adjacent quadrant of tissue with extensive dissection and mobilization of the conjunctiva, they place the Tube Extender (New World Medical, Inc., Rancho Cucamonga, CA) at the site of the original tube's amputation. The additional length allows placement of the tube in the anterior chamber at least 90° from the previous site. The surgeons place numerous scleral patch grafts and close the conjunctiva. The surgery provides many pearls for a very challenging case.

## BLEB LEAKS

We know, of course, that delayed complications related to a breakdown of tissue occur after glaucoma procedures other than the implantation of drainage devices. Late-onset bleb leaks have been reported in up to 25% of patients undergoing trabeculectomy with mitomycin C.<sup>2</sup> In "Hypotony Filtration Revision," Steven V. L. Brown, MD, presents the case of a 66-year-old man undergoing revision of a 20-year-old trabeculectomy. The filtering procedure is complicated by hypotony maculopathy due to a recurrent bleb leak, which is not respon-

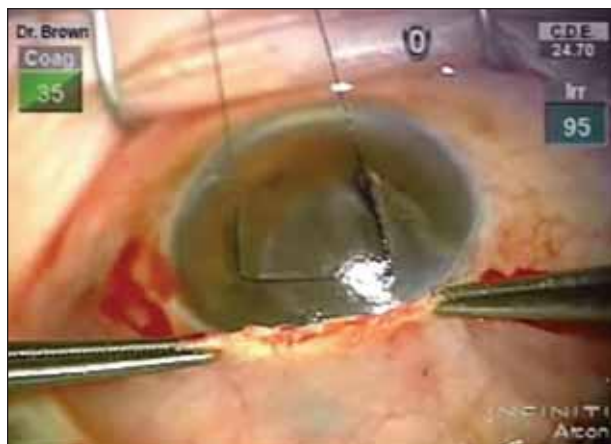


Figure 2. The surgeon performs a filtration revision surgery for hypotony maculopathy.

sive to an amniotic membrane graft (Figure 2) (<http://eyetube.net/?v=helohi>). Dr. Brown's technique is a classic conjunctival advancement procedure. He begins with a conjunctival peritomy posterior to the "ring of steel," with excision of the ischemic bleb epithelium and surrounding scar tissue. The conjunctiva is then advanced to the limbus and closed with a running, absorbable 8-0 polyglyconate suture. Budenz et al have presented data on a similar conjunctival advancement procedure. Although half of their patients required reinstitution of medical therapy, only 8% required additional glaucoma surgery.<sup>3</sup>

### DRAINAGE DEVICES

Eyetube.net has at least a dozen videos related to the placement of the Ex-Press mini glaucoma shunt (Alcon Laboratories, Inc., Fort Worth, TX). Other videos present clinical data on the success of this procedure. In "Assessment of Bleb Morphology and Postop Outcomes After Ex-Press vs Trab," Malik Kahook, MD, discusses his retrospective, comparative, case-controlled series of 70 patients undergoing either a trabeculectomy or placement of an Ex-Press P-50, both groups treated with mitomycin C (Figure 3) (<http://eyetube.net/?v=vomuke>). Dr. Kahook's data suggest that, although success rates and IOP were similar between groups, there may be a faster visual recovery, a lower incidence of hypotony, and fewer postoperative visits after the placement of the Ex-Press mini glaucoma shunt.

### EYE DROPS

In "Ophthalmic Formulations: Equivalence and Patient Care," Robert Noecker, MD, MBA, presents a tremendous amount of information on exactly what is contained in a given eye drop in addition to the active ingredient, and he describes how these agents interact to lower IOP (<http://eyetube.net/?v=bitiv>). With a number of impor-

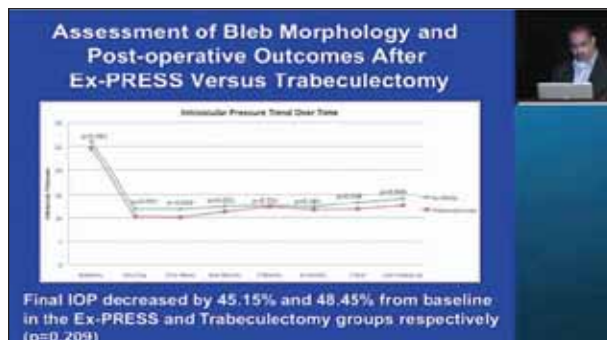


Figure 3. Dr. Kahook presents an assessment of bleb morphology and postoperative outcomes after Ex-Press implant versus trabeculectomy.

tant IOP-lowering medications emerging on the generic market, it is interesting to learn what requirements these medications do (or do not) need to meet in order to become available for our patients. Dr. Noecker also shares a lot of interesting information on gels, preservatives, and pH balance in glaucoma medications.

### CONCLUSION

In addition to hosting a collection of interesting surgical videos, Eyetube.net features a variety of educational information for glaucoma providers and ophthalmologists. I am happy to see that Eyetube.net is hosting a free market of ideas in ophthalmic management, and I encourage readers to post their own surgical videos, lectures, or clinical data. □

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