

A PUBLICATION OF THE KENTUCKY LIONS EYE CENTER AT THE UNIVERSITY OF LOUISVILLE

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Improving Glaucoma Surgery

Glaucoma filtering surgery has been the gold standard of surgical glaucoma treatment for decades since it was made popular by Elliott in 1914. Over the years the procedure has been modified significantly. In 1968, Cairns introduced the trabeculectomy and promoted a guarded as opposed to a fullthickness procedure. Since then the introduction of anti-proliferative agents, the use of releasable sutures, and Laser suture lysis has made the procedure quite effective. We now know to apply the anti-proliferative agents more broadly and with new suturing techniques know how to close fornix-based conjunctival flaps water-tight.

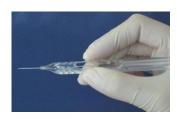
Over the years different approaches to lower the intraocular pressure (IOP) have been developed, e.g. nonpenetrating procedures (deep sclerectomy, viscocanalostomy, canaloplasty), drainage tube implants (Molteno, Baervedt, Ahmed), Trabectome surgery, and the I-stent. They all have their place, but on average do not lower the IOP as well as can be achieved with the trabeculectomy.

A few years ago, the ExPress Shunt was brought to market. It makes glaucoma filtering safer, faster, and easier. The small shunt is inserted

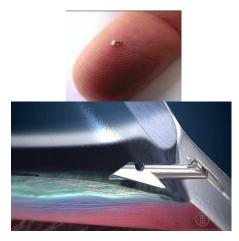
into the anterior chamber angle underneath a trabeculectomy flap.











There is no need for a peripheral iridectomy. The shunt acts as a flow restrictor, however diligent closure of the scleral flap is still very important to prevent hypotony. Postoperatively a lot less inflammation can be noted and topical corticosteroids can be tapered more quickly as opposed to after traditional trabeculectomy. As with the trabeculectomy a filtering bleb develops and needs to be managed postoperatively. The ExPress shunt is not recommended in cases of uveitis or angle-closure glaucoma. It is made out of stainless steel and does not produce any tissue reaction. No problems have been seen with the device in MRI machines up to 3 Tesla.

By - Joern B. Soltau, MD

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