

Trabeculectomy Must Survive!

We are in the midst of a Glaucoma Renaissance with a myriad of new surgical techniques introduced for glaucoma management in the past decade. While many have predicted the demise of trabeculectomy, it still remains the preferred go-to procedure for patients with advanced or rapidly progressing disease who fail maximal medical therapy, particularly those who need very low intraocular pressures (IOPs). As our glaucoma population ages, there will undoubtedly be a need to reach single-digit IOPs to prevent blindness in greater numbers of patients. There is no novel operation on the near horizon that allows titrating the IOPs to this very low range for a substantial proportion of those undergoing surgery. There is a risk, however, that trabeculectomy will vanish despite a public health necessity for this procedure to remain in our surgical armamentarium. The increasing number of primary tube procedures for advanced and sometimes mild disease, as well as the proliferation of minimally invasive glaucoma surgeries, including some that are bleb forming, has led to a decline in the number of trabeculectomy procedures performed in US residency and fellowship programs. Such a decline in trabeculectomy surgery, with the associated decrease in experience relating to the art of early postoperative manipulation to optimize results, has the potential to create a downward spiral where less training results in poor results, followed by further reduction in the number of procedures performed, leading to further decrease in training. As experienced trabeculectomy surgeons retire, it is becoming increasingly difficult to find someone to perform a trabeculectomy with a high likelihood of success and low risk of complications in many parts of the United States. This trend is compounded by a financial disincentive to care for patients

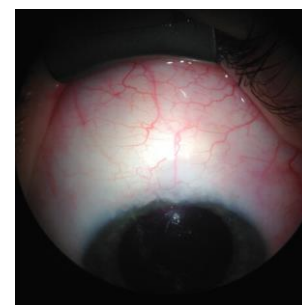
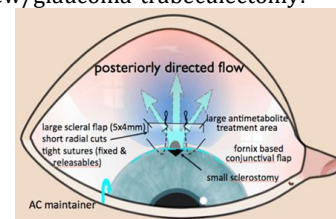
with advanced glaucoma who require trabeculectomy to slow disease progression because of the numerous postoperative visits needed to safely lower IOP to the single digits. Several visits are commonly required in the first postoperative months, with additional visits needed for judiciously timed removal of scleral flap sutures as well as, when necessary, administration of adjunctive subconjunctival 5-fluorouracil or other agents. This adds considerable physician effort to optimize the likelihood of trabeculectomy success. Experienced trabeculectomy surgeons typically aim for higher early postoperative pressures with staged IOP reduction using laser suture lysis or pulling of releasable sutures as the eye heals, thereby decreasing the risk of hypotony-related problems. Unequivocally, the frequent postoperative visits associated with this approach can be a burden for the patient and their family, putting trabeculectomy in a negative light compared with the postoperative course for an uncomplicated cataract extraction with or without a minimally invasive glaucoma procedure. Nurturing a trabeculectomy to success is much like producing a Burgundian wine outside of France. Minimally invasive trabecular meshwork and ab externo surgeries have clearly advanced our options for mild to moderate-stage glaucoma, but generally do not allow us to reach IOP levels at, or below, episcleral venous pressure; levels that can be achieved with a trabeculectomy. The only circumstances worse than a practitioner refusing to perform a trabeculectomy are performing this procedure without appropriate training in intraoperative and early postoperative care techniques or choosing a minimally invasive conjunctival-based procedure with a low likelihood of achieving an IOP below episcleral venous levels in those with advanced disease requiring such aggressive

IOP lowering to slow progression. In addition, there can be significant delay in achieving adequate IOP control while other procedures are tried. There is no room for error or reliance on routine postoperative follow-up. Each procedure, like each vintage, needs individualized care.

Trabeculectomy Must Survive! Kuldev Singh, MD, MPH - Palo Alto, California; Mark B. Sherwood, FRCS, FRCOphth - Gainesville, Florida; Louis R. Pasquale, MD - New York, New York.

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[https://www.aao.org/disease-review/glaucoma-trabeculectomy:](https://www.aao.org/disease-review/glaucoma-trabeculectomy)



By: Joern B. Soltau, MD, Chair



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