

Glaucoma Surgery: Visual Eye

UTCVM OPHTHALMOLOGY

Glaucoma surgery is most often considered for the visual eye when eye pressures continue to be uncontrolled or are slowly rising despite glaucoma medication. Sometimes this is a very narrow window (days – weeks).

1) Diode Laser Cyclophotocoagulation (CPC)

A laser is used to destroy cells of the ciliary body, which is the gland located inside of the eye that produces fluid. The type of laser utilized at University of Tennessee is transcleral, meaning the laser is directed from the outside white part of the eye. This procedure is estimated to control eye pressure in 50-80% of patients for a period of 6-12 months. It can take anywhere from 2 days to 2 weeks for the laser to “work” and the cells to produce less fluid. If pressures are already uncontrolled on medications this procedure is not recommended on its own. Short term complications include post-laser pressure spikes, inflammation, bleeding, non-healing corneal ulcers, and poor response (i.e. pressure does not come down). Long term complications include regrowth of the tissue and thus rises in pressure again. General anesthesia is required along with a short hospital stay depending on the patient (1-2 days).

2) Aqueous shunt implant (gonioimplant)

A small tube is implanted inside the eye. This tube, or shunt, sits partially inside the eye and partially outside the eye under the mucous membrane (conjunctiva) around the eye to allow fluid to leave the eye when pressure increases above a specific level. The success rate for this procedure to control pressure is similar to laser surgery, 50-90% of patients have controlled pressure for a period of 12 months. This surgery works immediately but short term complications include clogging of the shunt with inflammatory debris or blood that may require injections to unclog and control the pressure. Long term complications include scarring around the shunt causing back-up of the fluid in the eye and dislocation of the shunt. General anesthesia is required along with a stay in the hospital for 2-7 days and is variable depending on if the patient clogs the tube after surgery.



An example of a patient after aqueous shunt implant placement