



## Consider glaucoma drainage implant in patients with iridocorneal endothelial syndrome

### ***The Science behind the Tip***

Glaucoma occurs in up to 70% of patients with iridocorneal endothelial syndrome (ICE) (1). Given the high failure rate of medical treatment, surgery is often required to control intraocular pressure (IOP). However, surgical management of this entity is challenging. Patients with ICE syndrome have a higher surgical failure rate than patients with primary open-angle glaucoma. A significant proportion of eyes undergoing trabeculectomy for ICE syndrome (12.5%-53.8%) eventually require a secondary glaucoma drainage implant (GDI), suggesting that augmented trabeculectomy is not always a definitive treatment (2).

Doe et al reported a decrease in success rate to 29% at 5 years (compared with 73% at 1 year) in the group receiving trabeculectomy with antifibrotic agents; in the same study, the success rate was almost double (53% at 5 years) in the group receiving a GDI (3). It must be mentioned that this study is a retrospective, noncomparative case series. Nevertheless, it is worth considering GDI early in patients who have failed trabeculectomy, as the success rate of filtration surgery decreases with each subsequent procedure. Alternative treatment options include transscleral cyclophotocoagulation in end-stage disease (or in patients for whom surgery is not an option) and goniotomy, which resulted in a long-term reduction in IOP in one case series (4). Regardless of the procedure, it was found that these patients usually require multiple interventions to maintain stable IOP.

### ***References***

- 1) Chandran P, Rao HL, Mandal AK, Choudhari NS, Garudadri CS, Senthil S. Glaucoma associated with iridocorneal endothelial syndrome in 203 Indian subjects. *PLoS One*. 2017;12(3):e0171884.
- 2) Andrew Walkden and Leon Au Iridocorneal endothelial syndrome: clinical perspectives *Clin Ophthalmol*. 2018; 12: 657–664.
- 3) Doe EA, Budenz DL, Gedde SJ, Imami NR. Long-term surgical outcomes of patients with glaucoma secondary to the iridocorneal endothelial syndrome. *Ophthalmology*. 2001;108(10):1789–1795.
- 4) Espana E, Dorairaj S, Ritch R, Liebmann J. Goniotomy for uncontrolled intraocular pressure in iridocorneal endothelial syndrome. *Asian J Ophthalmol* 2007;9:107-10.

*Contributor: Megir Schawkat, MD FEBO, Glaucoma Fellow, Royal Devon and Exeter Hospital, UK*

---