



**A glaucoma drainage device may be more effective than trabeculectomy in lowering IOP after keratoplasty, but is more likely to result in graft failure**

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

A well-controlled intraocular pressure (IOP) after penetrating keratoplasty (PK) is essential for graft survival and to prevent endothelial cell loss<sup>1</sup>. However, raised IOP is a common consequence of this surgery, particularly in patients with pre-existing peripheral anterior synechiae or a preoperative diagnosis of glaucoma<sup>1,2</sup>. Obtaining accurate IOP measurements after PK can be difficult and may result in a delay in recognising this complication<sup>1</sup>.

A recent retrospective case series comparing the outcomes after trabeculectomy and mitomycin C with glaucoma drainage device (GDD) implantation after PK, concluded that the IOP was significantly more likely to be lower than 22mmHg in the GDD group at the last visit (86.7% vs 64.3%,  $p = 0.04$ ). Although the IOP was more likely to be controlled at 3 years after GDD implantation, the probability of graft failure was higher (52.6% vs 67.7%,  $p = 0.54$ )<sup>3</sup>.

### ***References***

- 1) Kornman HL, Gedde SJ, Glaucoma management after corneal transplantation surgeries. *Curr Opin Ophthalmol* 2016; 27 (2): 132-9
- 2) Karadag O, Kugu S, Erdogan G et al. Incidence of and risk factors for increased intraocular pressure after penetrating keratoplasty. *Cornea* 2010; 29:278-282.
- 3) Yakin M, Eksioglu U, Yainiz-Akkaya Z et al. Outcomes of trabeculectomy and glaucoma drainage devices for elevated intraocular pressure after penetrating keratoplasty. *Cornea* 2018 June; 37 (6) 705-711