Tip of the Month

October 2016

EUROPEAN GLAUCOMA SOCIETY

www.eugs.org

Despite the increased central corneal thickness (CCT) that may follow lamellar corneal surgery, reliable IOP measurements can be obtained with Goldmann applanation tonometry or Pascal dynamic tomography

The Science behind the Tip

Lamellar corneal surgery (DSAEK, DMEK) is replacing penetrating keratoplasty, because visual recovery is better and faster and the graft rejection rate is lower[1]. The incidence of secondary ocular hypertension and glaucoma has also decreased, presumably because of reduced surgery – induced damage to the irido-corneal anatomy and a reduced period of post-operative steroid use[2,3].

Goldmann applanation tomography and Pascal dynamic contour tomography have been reported to provide accurate IOP measurements after lamellar corneal surgery, despite a post-operative increase of CCT and altered corneal structure. Corneal-corrected IOP when measured with ocular response analyzer is unhelpful as it appears to over-estimate the IOP[4].

References

1. Lee WB, Jacobs DS, Musch DC et al. Descemets' stripping endothelial keratoplasty: safety and outcomes: a report by the American Academy of Ophthalmology. Ophthalmology 2009; 116: 1818-30.

2. Maurino V, Aiello F. Glaucoma risks in advanced corneal surgery. Prog Brain Res 2015; 221: 271-95.

3. Borderie V, Loriaut L, Bouheraoua N, Nordmann JP. Incidence of intraocular pressure elevation and glaucoma after lamellar versus full-thickness penetrating keratoplasty. Ophthalmology 2016; 123: 1428-34.

4. Clemmensen K, Hjortdal J. Intraocular pressure and corneal biomechanics in Fuchs' endothelial dystrophy and after posterior lamellar keratoplasty. Acta Ophthalmol 2014; 92: 350-4

Contributor: Dr G Sunaric Megevand Consultant Ophthalmologist - Geneva (CH)