

16th International Conference on

Clinical and Experimental Ophthalmology

September 18-20, 2017 | Zurich, Switzerland

Micro-invasive glaucoma surgery (MIGS)

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Glaucoma is one of the leading causes of irreversible loss of vision and blindness worldwide. Glaucoma treatment is by lowering the intraocular pressure (IOP). This involves using medications, laser, or surgery. Glaucoma filtration surgery (trabeculectomy and/or glaucoma drainage implants) is the mainstay of surgical procedures for glaucoma. While effective in lowering the IOP, both procedures are associated with possible vision threatening complications. Therefore, extensive research has been done to develop procedures that reduce IOP effectively and are safe. Micro-invasive glaucoma surgery (MIGS) has emerged for the treatment of open-angle glaucoma (primary or secondary). MIGS is performed via an *ab-interno* approach, with minimal tissue disruption, therefore a more favorable risk profile, and faster recovery compared to conventional glaucoma surgery. It is usually combined with cataract surgery and performed in patients with mild to moderate glaucoma. The current MIGS devices lower IOP by different mechanisms. These include: increasing conventional trabecular meshwork outflow via a Schlemm's Canal Device: trabecular micro-bypass shunt (iStent, Glaukos, Laguna Hills, CA, USA), Hydrus micro-stent (Ivantus, Irvine, CA, USA), or ab-interno trabeculotomy: Trabectome (NeoMedix, Tustin, CA, USA), GATT (Gonioscopy-Assisted Transluminal Traculotomy), Kahook Dual Blade (New World Medical, Rancho Cucamonga, CA, USA), Trab 360 (Sight Sciences, Menlo Park, CA, USA), and ABiC (ab-interno canaloplasty), (Ellex, Adelaide, Australia). Increasing uveal scleral outflow CyPass Micro-Stent (Alcon, Fort Worth, TX, USA), and iStent Supra (Glaukos, Laguna Hills, CA, USA). Use of subconjunctival space: Xen Gel Stent (Allergan, Irvine, CA, USA) and InnFocus MicroShunt (Santen, Miami, FL, USA).

Biography

Babak Eliassi Rad completed his Medical degree at University of Wisconsin-Madison, the Ophthalmology Residency at Greater Baltimore Medical Center in Baltimore, Maryland, and glaucoma fellowship at Kresge Eye Institute in Detroit, Michigan. He is currently the Director of glaucoma service at Boston University School of Medicine, Department of Ophthalmology. He has published 10 peer reviewed papers in reputed journals and is on the Editorial Board of *Eyewiki* and a Reviewer for *Journal of Glaucoma*.

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