

iTrack for treating Pediatric Glaucoma

Childhood Glaucoma is a very challenging entity to manage and can have devastating visual consequences if not detected early and managed promptly. Even though pediatric glaucoma can be secondary to variable etiologies, elevated intraocular pressure (IOP) is a common end result. Successful control of IOP is crucial and challenging and is most often achieved surgically. A newer treatment modality called 360-degree trabeculotomy utilizing a lighted microcatheter called iTrack, developed by iScience Interventional, has revolutionized the treatment of childhood glaucoma.

Trabeculotomy was first developed using a metal probe to open up the Schlemm's canal on both sides of the incision. This procedure worked great as an initial procedure for treating children with primary congenital glaucoma but was limited in its ability to maintain a sustained IOP reduction in long term and most of these patients required another invasive procedure in future. Subsequently this technique was refined by using a 6-0 polypropylene suture threaded around the entire length of Schlemm's canal resulting in a 360-degree trabeculotomy. Even though this procedure theoretically sounded great there were obvious technical issues. The suture is flexible and its path along the Schlemm's canal cannot

easily be tracked as it is fed through the canal and there is always a risk of misdirection into the suprachoroidal space.

A fairly new technique using an illuminated microcatheter (iTrack 250A) that can be continuously visualized while being passed in the Schlemm's canal has alleviated the problem of the "blind pass" avoiding the potential complication resulting from the misdirection of the catheter. The iTrack catheter is an illuminated flexible microcatheter with a central channel for injecting viscoelastics. With this new technology the surgeon can visualize the illuminated catheter once it is inserted in the Schlemm's canal and can continuously monitor its path by following the lighted tip. Another advantage of this catheter is its larger diameter and rounded tip that prevents the catheter from getting stuck in the tributaries of Schlemm's canal thereby facilitating its passage along the Schlemm's canal for 360 degrees.

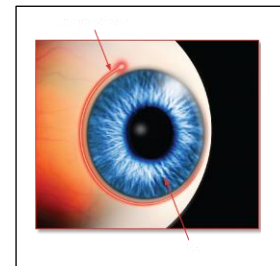
Until recently, patients with juvenile open angle glaucoma and patients who developed glaucoma after removal of congenital cataracts often did not respond to conventional angle surgery and were therefore subjected initially to more invasive surgery. This newer surgical technique employing the illuminated microcatheter has enabled me to successfully treat many of these difficult cases without resorting to more invasive

glaucoma drainage implants.

We are now routinely performing iTrack 360 degree Trabeculotomy for a more effective surgical management of childhood glaucoma.

This new method of managing pediatric glaucoma is only being used at a limited number of centers in the United States. The University of Louisville Physicians Eye specialists, in partnership with Kosair Children's Hospital, is one of these centers. I hope you will consider sending your patients with pediatric Glaucoma to us for the most advanced care for this potentially blinding condition.

By Rahul Bhola- Dr. Bhola is an assistant professor in the University of Louisville Department of Ophthalmology & Visual Sciences and is the Chief of Ophthalmology at Kosair Children's Hospital.



To schedule an appointment at the Kentucky Lions Eye Center, please call 502-852-5466.

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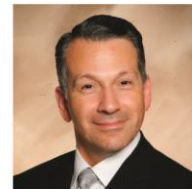
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