History of Trabeculotomy and Development of T-hook for Canal Opening Surgery (MIGS)

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Canal opening surgery, a type of minimally invasive glaucoma (MIGS), has gained increasing popularity in recent years for the treatment of mild to moderate glaucoma.

Its evolution began from a report published in British Journal of Ophthalmology by R Smith in 1960. Initially, which was a topic of significant interest, however, faced time of hardship between 1980-2004. Major criticism stemmed from data derived from monkey eye experiments, where the surgical would close within 4 months and no improvement in outflow facility was observed in “normal” monkey eyes. Even though Japanese and European doctors reported favorable surgical outcome in adult onset POAG between 1993-2004, with trabeculotomy ab externo accounting 38% of all glaucoma surgeries in Japan, these positive results were not universally accepted.

A paradigm shift occurred in 2005 following a report by the opinion leader Don Minckler who developed the “Trabectome” that incises the trabecular meshwork from inside the eye.

Later histopathological studies on human post-trabeculotomy eyes revealed distinct tissue reactions compared to monkey eyes. And the success by Minckler lead to development of various devices such as suture trabeculotomy, Kahook dual blade and Tanito micro hook designed to open the trabecular meshwork. These devices are praised for being simple, cheap and effective enough in reducing IOP

Currently the focus is on minimizing surgical insult to the BELL. To mitigate surgical injury to the outer wall of the Schlemm’s canal, the use of less-traumatic device “T hook” may be advantageous for reducing the risk of post-surgical bleeding, IOP spike, and the need for re-operation.

We would like to introduce the T hook, specifically designed for this purpose.