

Fritz Hengerer

University of Heidelberg
Germany



7-Year outcomes after Second-Generation trabecular Micro-Bypass in eyes with or without prior glaucoma surgery

Abstract:

Purpose: In Germany, 2nd-generation trabecular micro-bypass (iStent inject) can be implanted with cataract surgery or as a standalone procedure. The current study evaluated combined and standalone outcomes in a single longitudinal cohort, stratified by whether eyes had undergone prior glaucoma surgery (No-Surg and Prior-Surg groups, respectively).

Methods: This prospective, non-randomized, unmasked study included 125 consecutive iStent inject cases of one surgeon at a large German academic hospital. There were 48 eyes (38% of cohort) with a total of 66 prior glaucoma surgeries, including predominantly trabeculectomies (18), cyclophotocoagulation (27), surgical iridectomy (6), and laser trabeculoplasty (7). Intraocular pressure (IOP), medications, adverse events, and secondary surgeries were assessed through 7 years in All-Eyes and in No-Surg (n=77) and Surg (n=48) subgroups.

Results: Preoperative mean IOP in All-Eyes was 23.5 ± 6.2 mmHg on 2.68 ± 1.02 medications, reducing to 14.1 ± 1.4 mmHg on 1.09 ± 0.66 medications at 7 years (40% and 59% reductions, respectively; both $p < 0.001$). In No-Surg eyes, mean IOP decreased by 29% (22.2 to 15.8 mmHg, $p < 0.001$) and medications by 61% (2.52 to 0.99, $p < 0.001$). In Prior-Surg eyes, mean IOP decreased by 46% (25.6 to 13.9 mmHg, $p < 0.001$) and medications by 65% (2.92 to 1.02, $p < 0.001$). At last follow-up, all eyes had the same or lower IOP and the same or lower medications vs preoperative. Seven eyes had a secondary glaucoma procedure (CPC or Xen); no eyes had filtering surgery.

Conclusions: iStent inject implantation with/without cataract surgery yielded significant, sustained, and safe 7-year IOP and medication reductions in eyes regardless of whether they had undergone prior glaucoma surgery.

Biography

Fritz Hengerer completed his MD from Buerger hospital University and his PhD from University of Heidelberg. He is a professor and attending surgeon at the University Eye Hospital at the University of Heidelberg in Germany. He has published numerous papers in reputed journals and has been a guest presenter at over conferences.