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iSTENT *INJECT*® W: A GAME CHANGER FOR CLINICAL PRACTICE

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Preserving patients' visual function and acuity.

WATCH IT NOW

MIGS devices have come to the forefront of the glaucoma landscape, challenging the paradigm of patient care. Notably, the **iStent inject® W (Glaukos) has emerged as a valuable tool for interventional glaucoma,** transforming the way we approach patients with mild to moderate disease. It is tempting to think about the ideal patient for the iStent *inject*® W, focusing primarily on aspects of the disease and treatment targets and goals. My experience with the iStent® technologies in clinical practice has been transformative to the way I care for patients. **Rather than thinking about the treatment first, I now think about treating the patient first.** This, in my opinion, includes **considering the iStent *inject*® W for all glaucoma patients undergoing cataract surgery** who have no contraindications for the procedure. **We must think about patients' best long-term interests and involve them in the treatment decision.**

BENEFITS OF COMBINED PROCEDURES

Combining the iStent *inject*® W with cataract surgery in patients with mild to moderate glaucoma can help **reduce their medication burden, improve their quality of life, and reduce the progression of their functional disease[1].** Performing a trabecular microbypass procedure earlier in the disease state helps curb the progression of functional disease over time.

The iStent technologies have traditionally been reserved for patients with mild to moderate glaucoma, especially those taking medications for other conditions such as ocular surface disease and those patients who have difficulty instilling their eye drops such as those with arthritis.

Combining procedures also shifts patients from a moderate to low-risk category for disease progression.

Regardless of the target glaucoma patient population, including a trabecular microbypass strategy such as the iStent *inject*® W technologies as a routine procedure is important in the current management landscape.

LONG-TERM SAFETY AND STABILITY

iStent *inject*® W has an overall high safety profile similar to standalone cataract surgery[2].

Long-term studies also demonstrate that the iStent technologies effectively lower IOP and ultimately preserve visual function and acuity. In a 5-year prospective, longitudinal case series of standalone and combined iStent *inject*® procedures in 125 patients with a high preoperative treatment burden, the visual field, retinal nerve fiber layer thickness, and cup:disc ratio were positive (Table 1)[3]. **Patients who underwent combined cataract and iStent procedures exhibited stable visual fields and reduced reliance on glaucoma medications over 5 years.** In another study of 41 patients in low- and high-risk subgroups, only five patients required further surgery during a 7-year follow-up period. Four of the five were in the high-risk group (Table 2)[4].

PERSONAL EXPERIENCE

I have been implanting iStents for over 10 years. I recently performed an observational, retrospective, longitudinal cohort study of 91 well-matched patients with open-angle glaucoma or ocular hypertension who underwent either cataract surgery plus the first-generation iStent (n = 47) or cataract surgery alone (n = 44).

The results showed that **patients who received the iStent had statistically significantly less visual field progression and were better controlled on fewer**

	STAND ALONE (N=44)	COMBINED WITH CATARACT (N=81)
VF MD	-7.0 vs -7.1 (P = 0.502)	-6.6 vs -6.7 (P = 0.462)
RNFL	82.1 vs 80.9 (P = 0.194)	81.4 vs 80.2 (P = 0.497)
C:D RATIO	0.78 vs 0.79 (P = 0.386)	0.74 vs 0.76 (P =0.324)

TABLE 1. *Disease Stability: Standalone Versus Combined iStent inject Procedures*

	LOW RISK SUBGROUP (N=27)	HIGH RISK SUBGROUP (N=14)
VF MD	-7.58 vs -8.16 (P = 0.44)	-10.31 vs -10.79 (P = 0.67)
IOP (mmHg)	19.5 vs 17.9 (P = 0.05)	24.7 vs 17.9 (P = 0.0006)
C:D RATIO	0.63 vs 0.67 (P = 0.01)	0.75 vs 0.79 (P = 0.04)

TABLE 2. *Disease Stability: Low-Risk Versus High-Risk Groups*

medications. Further, 26% were medication-free at 5 years. At that time, the mean IOP reduction was 6.8 mmHg in the combination group but only 4 mmHg in the standalone group.

Patients in the combination group also had a mean reduction in medications at 5 years postoperative (2.36 to 1.39) whereas the standalone group experienced an increase in medication use (1.65 medications). Visual field changes are found in the Figure.

CONCLUSION

In my practice, **the iStent *inject*® W is an important treatment modality for the management of glaucoma.** It can be seamlessly integrated into our cataract surgery workflow, **helping patients reduce the medication burden and maintain stable visual function at both mild to moderate stages of disease.** ■

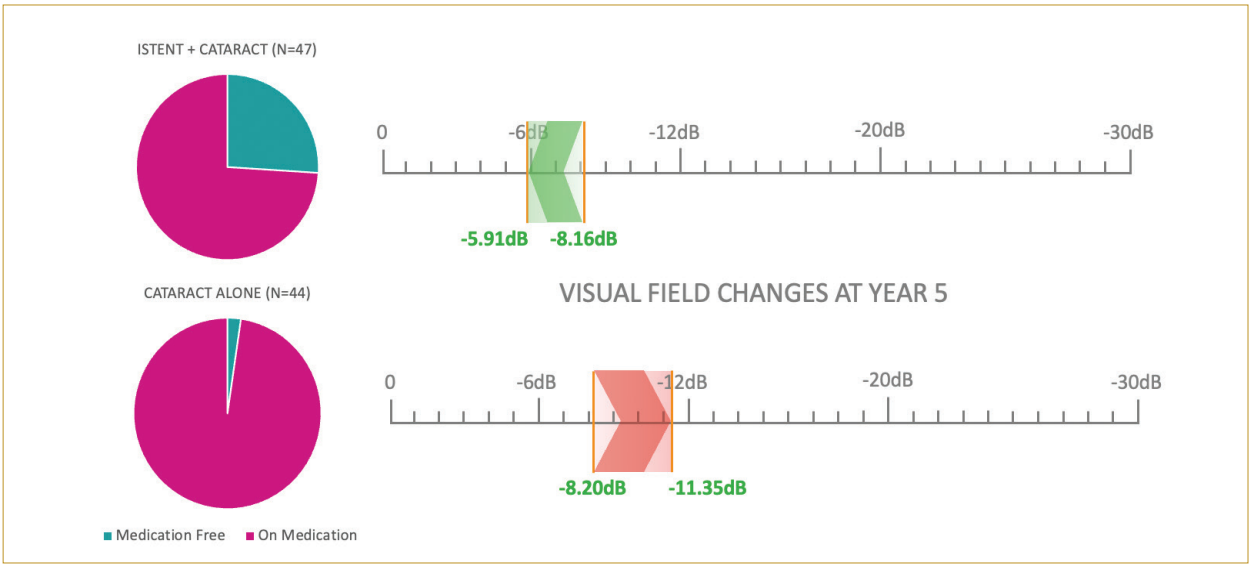

Figure. Data from Dr. Ahmed's practice showing the visual field changes and medication burden 5 years after iStent implantation.

References:

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