Abstract citation ID: znae163.106

1235 Challenges in Glaucoma Management: A Case Study on OMNI® Surgical System Interventions for Primary Open-Angle Glaucoma

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Introduction: This report explores the challenges faced in addressing early-stage primary open-angle glaucoma (POAG) in a 74-year-old male. Following a steroid-induced elevation in intraocular pressure (IOP) after endoscopic cyclophotocoagulation (ECP) in the right eye, the patient underwent minimally invasive canaloplasty and goniotomy using the OMNI® Surgical System (Sight Sciences) on his left eye.

Case Description: IOPs at diagnosis measured at 28 mmHg and 27 mmHg in the right and left eye, respectively, leading to the prescription of bilateral latanoprost. An adverse reaction to latanoprost resulted in eye swelling, hyperaemia, facial and jaw discomfort, and photophobia, prompting the cessation of the medication. In December 2022, bilateral selective laser trabeculoplasty (SLT) was performed, with minimal impact on IOP. Subsequently, in March 2023, right cataract surgery with ECP successfully reduced right eye IOP to 16 mmHg. Postoperatively, the use of dexamethasone 0.1% drops caused an intraocular steroid-response, increasing IOP (maximal IOP =25 mmHg), resolving upon medication completion. To mitigate prolonged steroid drop-associated complications, left eye phacoemulsification with OMNI canaloplasty and goniotomy was conducted in June 2023. Standard 4-week low-frequency steroid drops were administered postoperatively with no complications.

Conclusions: Pressure control was successfully achieved with IOP normalization to 15 mmHg bilaterally. Significant visual acuity improvements were noted post ECP (right eye=6/24 to 6/6) and OMNI (left eye=6/7.5 to 6/6). This case highlights the efficacy of OMNI combined with phacoemulsification in the safe reduction of IOP and sustained IOP control in POAG patients, alluding to its favourable safety profile.