A retrospective analysis of efficacy and safety outcomes in patients undergoing microshunt surgery for glaucoma

AUTHORS

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DISCLOSURES

PRIOR CONSULTING WORK UNDERTAKEN FOR SANTEN

INTRODUCTION

Microinvasive glaucoma surgery has become increasingly popular due to its ability to achieve significant intraooular pressure (IOP) reduction with a good safety profile (1). This retrospective study aimed to analyse the safety and efficacy outcomes of patients undergoing microshunt surgery with the PreserFlo device at a single centre and compare them to results available in the literature.

Early Adverse Events

Type	% of eyes	No. of eyes
Bleb Scarring	12.8	5
Shunt Extrusion	2.5	1
Hypotony at Month 3	0	0
Hyphaema	20.5	8
Bleb Leak	12.8	5
Choroidal Effusion	10.3	4
IOP Rise	10.3	4
FB Sensation	7.7	3

METHODOLOGY

This retrospective study analysed the medical records of 39 microshunt procedures performed on 38 patients between March 2022 and August 2023. Data was collected from a combination of the electronic health record and paper notes. IOP measurements, adverse events and demographic data were amongst the key measures recorded.

RESULTS

Our demographic data was similar to those published in the literature with an average age of 69 years and mean pre-surgical IOP of 16.5 mmHg (1). Of note 64.1% of the patients had moderate to severe glaucoma based on their visual field mean deviation.

Most patients had a good reduction in their IOP with 79.5% of procedures resulting in an IOP $\leqslant$ 12 mmHg at month three of follow up. The incidence of early adverse events in this group was similar to the rates published previously with 28.2% of eyes experiencing an IOP of < 6 mmHg at one point before month 3 (1). No patients had persistent hypotony at month three follow up . Only 10.3% of eyes had an increase in IOP by month 3 requiring treatment.

CONCLUSION

This study suggests that microshunt surgery performed at our centre had similar safety and efficacy profiles compared to those published in the literature (1). This would support the case for increasing use of microinvasive glaucoma surgery as an alternative to traditional glaucoma surgery.

Success at Month 3

Type	% of eyes	No. of eyes
Complete (IOP$\leqslant$ 21 mmHg no medication)	76.9	30
Qualified (IOP$\leqslant$ 21 mmHg with medication)	12.8	5
Failure (IOP >21 mmHg with medication)	10.3	4

REFERENCES

(1) Baker ND, Barnebey HS, Moster MR, Stiles MC, Vold SD, Khatana AK, et al. INN005 Study Group. Ab-Externo MicroShunt versus Trabeculectomy in Primary Open-Angle Glaucoma: One-Year Results from a 2-Year Randomized, Multicenter Study. Ophthalmology. 2021 Dec;128(12):1710-1721.