

# Visual Field changes following Trabeculectomy: A Retrospective Study

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## Aims

It is well known that trabeculectomy is performed to halt or slow the visual field progression in glaucoma patients. However very little information is available if it can improve the visual field.

In our retrospective study we aim to find out how successful is trabeculectomy in preventing further loss of visual field and if at does the of visual field improve in patients.

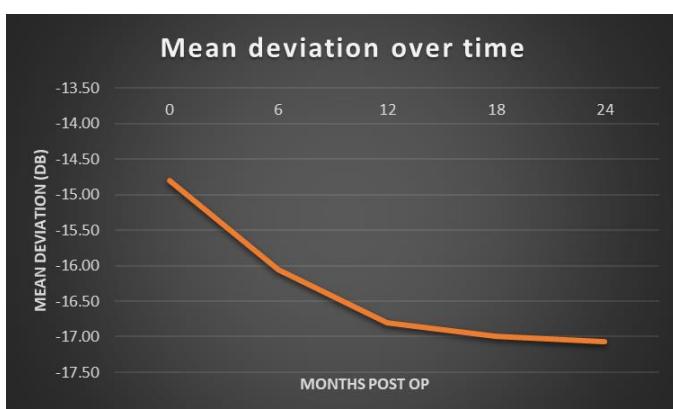
## Method

Data was collected on all glaucoma patients who underwent trabeculectomy with MMC between April 2015 to March 2018.

A total of 340 surgeries were performed (40 were combined Phaco-trabeculectomy with MMC while 300 were MMC Trabeculectomy).

- ❖ A pilot study of 36 cases selected randomly was undertaken (7 MMC PHACO-Trabeculectomy while 29 were MMC Trabeculectomy).
- ❖ The mean deviation on Visual field on Humphreys VF were collected including pre-op, 6-month, 1-year and 2-year post-op visual field results.
- ❖ Improvement was defined as an increase in mean defect (MD) value by  $> 0.50$  DB while deterioration was defined as a decrease by  $> 0.50$  DB at the follow up following surgery.
- ❖ Any change in the values between those two parameters was considered stable.
- ❖ patients were divided into mild (0-6DB), moderate (-6-12DB) and severe ( $>-12$ DB) visual field defect.
- ❖ Their pre-op and post-op (IOP) was recorded and the percentage change in IOP was calculated.

## Results

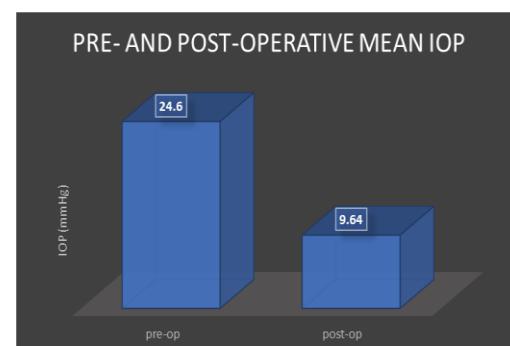


- ❖ There was 16 female and 20 male.
- ❖ Average pre op Mean deviation (MD) was -14.8 DB
- ❖ (range -29.92 to -2.85), which progressed to -16.06 DB (-29.9 to -2.69) 6 month, -16.8 DB (-31.2 to -2.48) 1 year, and -17.07 DB (-31.32 to -3.09) 2 years post op.
- ❖ 16 (44%) showed some improvement, 13 (36%) showed a deterioration while 7 (19%) remained stable.
- ❖ The Preop mean IOP was 24.6mmHg (range 10-64mmHg), while the post op was 9.64mmHg (range 2-16 mmHg).
- ❖ The average reduction in IOP from pre-op to post-op was 14 mmHg which was a 59% reduction.

Pre-op MD for group which showed improvement was -18.7 DB  
Postop -16.1 DB average 2.6 DB improvement (13.9%)

Pre-op MD for group showing deterioration was -14.85 DB. Post op -20.34 DB with average progression of 5.49 DB (36.96%)

	0-6 DB	6-12 DB	>12 DB	TOTAL
Improvement	1	3	11	16
Stability	1	2	4	7
Deterioration	0	3	11	13
	2 patients	8 patients	26 patient	



## Conclusion

In majority of patients VF will continue to progress although at slower rate some of these patients can show improvement, which will prove to be invaluable especially in patients with moderate defect but still driving.