16th International Conference on

## **Clinical and Experimental Ophthalmology**

September 18-20, 2017 | Zurich, Switzerland

## Improvement of visual field following successful trabeculectomy is related to preoperative mean deviation

Magdalene Yin Lin, Ting<sup>1</sup>, George Yu Xiang, Kong<sup>1,2,</sup> and Keith Martin<sup>1</sup> <sup>1</sup>Cambridge University NHS Trust, UK <sup>2</sup>Centre for Eye Research Australia, Australia

**Background:** Despite surgery, glaucomatous optic nerve dysfunction is believed to be permanent. Recent studies showed mixed results of visual field (VF) threshold sensitivity changes post-trabeculectomy.

Aims and Objectives: This study investigates VF improvement following successful trabeculectomy and relationships with disease factors.

**Methods:** The Trabeculectomy group included consecutive cases of successful trabeculectomy surgeries from December 2011 to February 2016, giving 67 eyes. All had a Humphrey Field Analyser (HFA) 24-2 SITA Standard VF on the wait-listing day and post-operative 24-2 SITA Standard VFs. The control group consisted of 72 randomly-selected patients attending clinic without changes in IOP management.

**Results:** Overall mean deviation (MD) for trabeculectomy group was insignificantly changed by surgery (-8.2±5.0dB pre-operative vs. -8.7±5.8dB post-operative, p=0.14), however change in MD for trabeculectomy group ( $\Delta$ =+0.5±2.5dB) is better than Control group ( $\Delta$ =-0.4±1.4dB, p=0.03). For trabeculectomy group, changes in MD values were not associated with preoperative IOP, magnitude of IOP reduction, or change in visual acuity. Interestingly, there was a near-linear relationship between change in MD and preoperative MD (R = 0.49). There was a tendency for eyes with mild preoperative MD (> -6.0dB) to have worsened MD postoperatively ( $\Delta$ =-0.83±1.67dB) compared to an improvement in MD for eyes with moderate MD (-12.0dB < MD ≤ -6.0dB,  $\Delta$ =+0.62±2.11dB), severe MD (-20.0dB < MD ≤-12.0dB,  $\Delta$ =+2.26±3.31dB) and advanced MD (< -20.0dB,  $\Delta$ =+1.39±1.46dB) (ANOVA p=0.001).

**Conclusion:** As a single group, VF changes from trabeculectomy were insignificant. However, stratification suggests visual field improvement can occur following trabeculectomy, especially patients with MD between -12.0dB and -20.0dB.

## Biography

Magdalene Yin Lin is currently a year 5 medical student at Trinity Hall, University of Cambridge, UK

ting.mayl@gmail.com

Notes: