

Effect of trabeculectomy on the rate of progression of visual field damage

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OBJECTIVES: This study quantifies the effect of trabeculectomy on the rate of progression (RoP) of visual field (VF) damage utilising pre- and post-operative visual function as the outcome instead of surrogate outcomes of success.

METHODS: Clinical and VF data from 199 sequential patients who underwent trabeculectomy between 2015 and 2016 were extracted from the network of sites of Moorfields Eye Hospital NHS Foundation Trust. Of these, we analysed 80 eyes of 74 patients who met our inclusion criteria of at least three reliable VFs before and after surgery (false positive rate 0.05). **RESULTS:** We analysed $10 \pm 9,12$ VFs per subject (Median \pm Interquartile Range) . At surgery, the age was $67 \pm 57, 72$ years, mean deviation was $-10.84 \pm -14.7, -5.6$ dB and the IOP was $18 \pm 15, 20$ mmHg. One year after surgery, the IOP was $10 \pm 8,13$ mmHg ($p = 0.002$) . Mean RoP before surgery was $-0.94 \pm -1.20, -0.69$ dB/year (Mean \pm 95% credible intervals) and it was slowed down by $0.62 \pm 0.26, 0.97$ dB/year ($p < 0.001$). **CONCLUSIONS:** Trabeculectomy leads to a significant reduction in the RoP of VF loss postoperatively.

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