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## Contralateral Comparison of Effect of Small-Aperture Corneal Inlay on Automated Visual Fields

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### Purpose:

Implantation of a small aperture corneal inlay improves UCNVA and maintains UCDVA. Additionally, implantation of the inlay does not cause any localized changes or scotomas in the visual fields as demonstrated by the lack of difference in PSD when comparing the implanted and non-implanted eye.

### Methods:

A small aperture inlay was implanted in the non-dominant eye of 9 subjects. Standard clinical examination including uncorrected distance visual acuity (UCDVA), best-corrected distance visual acuity (BCDVA) and uncorrected near visual acuity (UCNVA). Standard visual field tests were performed using the Zeiss Humphrey 24-2 SITA on both eyes at baseline and at 36 months post-op. Visual field indices Pattern Standard Deviation (PSD) and reliability indices were compared between implant and fellow eyes. All data are presented as mean  $\pm$  SD.

### Results:

Baseline UCDVA ( $47.7 \pm 6.1$  letters) & BCDVA ( $52.7 \pm 3.2$ ) were not significantly different from post-op values ( $47.0 \pm 6.9$  &  $51.0 \pm 4.5$ ,  $p = 0.3$  &  $0.09$ , respectively). Baseline UCNVA improved from  $26.7 \pm 3.6$  to  $44.1 \pm 7.2$  post-op ( $p < 0.001$ ). Baseline mean PSD was  $1.37 \pm 0.25$  in implanted eyes and  $1.53 \pm 0.61$ db non-implanted eyes ( $p = 0.36$ ). Post-op PSD was  $1.58 \pm 0.36$  in implant eye and  $1.52 \pm 0.38$ db ( $p = 0.54$ ) in non-implant eye. Baseline and post-op SAP reliability indices were not significantly different between eyes.

### Conclusion:

Implantation of a small aperture corneal inlay improves UCNVA and maintains UCDVA. Additionally, implantation of the inlay does not cause any localized changes or scotomas in the visual fields as demonstrated by the lack of difference in PSD when comparing the implanted and non-implanted eye.