

## ABSTRACT

### COMPARATIVE STUDY OF CONTRAST SENSITIVITY BEFORE AND AFTER LASIK BETWEEN THIN FLAP AND THICK FLAP

(Longitudinal Observational Study at Undaan Eye Hospital Surabaya)

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**Purpose :** To compare contrast sensitivity changes after LASIK between thin flap and thick flap.

**Methods :** This study involved 22 eyes of 11 myopia and myopic astigmatism patients who underwent LASIK. Each patient underwent a routine examination pre-LASIK and determination of flap thickness as determined by the residual stromal bed thickness. Patients underwent wavefront-guided LASIK using VISX Star S4 CustomVue. Five patients underwent thin flap LASIK with Moria M2 single-use head microkeratome SU 90 and 6 patients underwent thick flap LASIK with Moria M2 single-use head microkeratome SU 130. Intended flap thickness of Moria M2 SU 90 is 110  $\mu\text{m}$  and Moria M2 SU 130 is 150  $\mu\text{m}$ . Contrast sensitivity were measure before LASIK, day 1, day 7 and 30 after LASIK using MARS contrast sensitivity chart.

**Result :** There were no difference in contrast sensitivity after LASIK between thin flap and thick flap. Contrast sensitivity significantly increased by 1 day, 1 week and 1 month after LASIK ( $p < 0,05$ ).

**Conclusion :** Different flap thickness created by microkeratome Moria M2 did not offer any differences in changes of contrast sensitivity through 30 days after LASIK.

**Keywords:** contrast sensitivity, flap thickness, microkeratome, LASIK.