

Corneal topography and hyperopia

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Abstract

- **AIM:** To evaluate Orbscan II corneal topography in hyperopic cases.
- **METHODS:** A retrospective, observational, consecutive, clinical case series in 295 eyes of hyperopic patients who undergo a LASIK evaluation. The information that was reviewed included age, sex of the patients and the Orbscan II corneal topographic maps. Refractive powers and the following test indices produced by Orbscan II were analyzed: keratometry, corneal diameter, pupil diameter and anterior chamber depth.
- **RESULTS:** The total mean corneal thickness was $546.3 \pm 35.5 \mu\text{m}$. It was found; $547.3 \pm 38.4 \mu\text{m}$ in 17-29 years old, $553.4 \pm 38.3 \mu\text{m}$ in 30-44 years old and $546.2 \pm 29.3 \mu\text{m}$ in older than 45 years old. The mean corneal thickness was found $551.5 \pm 35.9 \mu\text{m}$ in female, and $542.6 \pm 34.7 \mu\text{m}$ in male. The total mean depth of anterior chamber was $2.57 \pm 0.40 \text{mm}$ and in 17-29 years old patients was $2.82 \pm 0.39 \text{mm}$. In 30-44 years old patients was $2.49 \pm 0.39 \text{mm}$ and in patients older than 45 years old was $2.37 \pm 0.40 \text{mm}$. The mean depth of anterior chamber was $2.53 \pm 0.40 \text{mm}$ in female and $2.60 \pm 0.40 \text{mm}$ in male. A reverse significant relation between corneal thickness and keratometry were found. Refractive error severity had a reverse correlation with depth of anterior chamber and a correlation with keratometry ($P = 0.061$, $r = 0.108$). Corneal thickness had a reverse correlation with keratometry ($P = 0.005$, $r = 0.160$), and correlation with pupil diameter ($P = 0.013$, $r = 0.144$).
- **CONCLUSION:** We provides a description and analysis of Orbscan II findings in hyperopic patients. These show mean corneal thickness $546.3 \pm 35.5 \mu\text{m}$ and anterior chamber depth $2.57 \pm 0.40 \text{mm}$ in hyperopic patients.
- **KEYWORDS:** Orbscan II; corneal topography; hyperopia

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