

Femtosecond laser assisted intrastromal corneal ring segment (Keraring)implantation in keratoconus

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PURPOSE: To report results of femtosecond laser assisted intrastromal corneal ring segment (Keraring) implantation in patients with keratoconus.

Material-METHODS: Twelve eyes of 10 patients with clinically and topographically verified keratoconus have been included in the study. Intrastromal corneal ring segments were implanted following tunnel creation by femtosecond laser. In one eye a single 210° Keraring segment has been implanted, one eye received double 90° Keraring segments, another eye received double 120° Keraring segments and 9 eyes received double 160° Keraring segments.

RESULTS: Mean age of patients was 32.5 ± 9.4 years. No complication has occurred during femtosecond laser and implantation stages of the operation. Mean uncorrected visual acuity has increased from 0.095 ± 0.095 (0.01-0.3) preoperatively to 0.30 ± 0.19 (0.1-0.67) at 6th postoperative month and this was statistically high significant ($p=0.002$). Mean best corrected visual acuity increased from 0.40 ± 0.30 (0.16-1.0) preoperatively to 0.55 ± 0.23 (0.2-1.0) at 6th postoperative month and this was statistically significant ($p=0.02$). Mean preoperative spherical refraction was -4.42 ± 4.11 diopters (D) (-14.00,+0.25 D) whereas mean postoperative spherical refraction at 6th month was -1.13 ± 1.39 D (-3.5,+1.00 D). Difference between mean preoperative spherical refraction and mean postoperative spherical refraction was statistically high significant ($p=0.003$).

Mean preoperative cylindrical refraction was -4.60 ± 2.74 D (-9.75, -0.50 D) and mean postoperative cylindrical refraction at 6th month was -1.67 ± 1.38 D (-4.50, 0.00 D), their difference was found to be statistically high significant ($p= 0.005$).

Mean preoperative spherical equivalence has changed from -5.96 ± 4.12 D (-15.00, -1.00 D) to -1.93 ± 1.32 D (-4.25, +0.50 D) at 6th postoperative month and this was also statistically high significant ($p=0.002$).

CONCLUSION: Femtosecond laser assisted intrastromal corneal ring segment implantation (Keraring) is a safe and effective method for the correction of keratoconus.

Key words: Femtosecond laser, intrastromal corneal ring segments, keratoconus, Keraring

Fonte: <http://www.onlinemakale.com/home/jvi.asp?pdire=tog&plng=tur&un=tog-84756&look4=>