LASIK vs. LASEK for the Correction of Low to Moderate Myopia and Astigmatism

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- **Purpose:** To compare the visual and refractive outcomes of LASIK and LASEK in the treatment of low to moderate myopia and astigmatism. Methods: A retrospective analysis comprised 2361 eyes of patients with manifest refraction spherical component lower than -5.00 D and cylinder components lower than -3.00 D were assigned to two groups: 1306 eyes were treated with LASIK and 1055 eyes with LASEK; all refractive surgery was performed by the same surgeon. UCVA, best spectacle-corrected visual acuity (BSCVA), remaining refractive error, and complications were evaluated at one week and at 2, 6, 12, and 24 months postoperatively. **Results:** The mean spherical equivalent (SE) was -3.56 D~ 1.03 (SD) in the LASIK group, -2.95 D~ 0.98 (SD) in the LASEK group preoperatively; -0.12 ~ 0.27 D at 2 months, -0.17 ~ 0.27 D at D 6 months, -0.20.t 0.29 D at 12 months, and -0.29.t 0.32 at 24 months in the LASIK group; and -0.06.t 0.22 D, 0.07 ± 0.22 D, 0.1 ± 0.24 D, and 0.13 ± 0.22 D, respectively, in the LASEK group. At 2, 6, 12, and 24 months, the UCVA was 20/20 in 91.9%, 92.0%, 90.1 %, and 86.60% in the LASIK group, and 96.8%, 96.7%, 95.9%, and 95.1% in the LASEK group. 95.6%, 93.8%, 91.6%, and 84.4% in the LASIK group and 98.5%, 97.6%, 95.3%, and 95.3% in the LASEK group, respectively, were within ±0.5 D of emmetropia at the various time points. No eye lost more than two lines of BSCVA. DLK occurred in 4% and corneal ectasia in 14 eyes (1.1 %) in the LASIK group, and corneal haze was seen in 11.6% of eyes in the LASEK group. The between-group differences in SE and magnitude of cylinder were not statistically significant (P <.OS). Conclusion: Both LASIK and LASEK were safe and effectively treated eyes with low to moderate myopia and astigmatism. LASEK provided superior results in visual outcomes.