( ) R1 ( ) R2 ( ) R3 (X) PG0 ( ) PG1 ( ) Estagiário ( ) Tecnólogo ( )
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Service (sector) Refractive Surgery Nº CEP

Learning curve effects on refractive surgery results with LadarVision Excimer laser system

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Purpose : To evaluate and compare the refractive results of LASIK and PRK for myopia and myopic astigmatism achieved during one month prior to and one month after surgical technical and nomogram adjustments applied to LadarVision unit at the refractive surgery sector of Escola Paulista de Medicina- UNIFESP.

Methods : LASIK or PRK was performed on 87 eyes (Mean E.E. -4.2 ± 2.1 D) before (group I) and 88 eyes(Mean E.E. -3.6 ± 2.0 D) after (group II), surgical technical changes and LadarVision nomogram adjustments. To evaluate the impact of such modifications, the following main outcome measures were retrospectively compared between the two groups: Uncorrected visual acuity (UCVA), best-corrected visual acuity (BCVA), one-month postoperative residual spherical equivalent (PRSE), postoperative complication rate, and loss of postoperative BCVA.

Results : UCVA was ³ 20/25 at last visit for 52.4% of the eyes operated on before, compared to 77% of eyes done after the adjustments ($p < 0.05$). Out of the patients with UCVA £ 20/25, residual spherical equivalent was with in ± 0.50 D range for 73.2% in group I, as opposed to 91.9% of the group II cases examined one month post operatively. BCVA loss of two or more lines occurred on 2.6% of group I and 2.3% of group II.

Conclusions : Increasing surgical experience with a new excimer laser technology and a few adaptations on surgical routine resulted in a significant improvement in refractive results for the treatment of myopia and myopic astigmatism.