

Glaucoma

EVALUATION OF INTRAOCULAR PRESSURE IN EYES AFTER FEMTOLASIK SURGERY

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PURPOSE: To evaluate and compare intraocular pressure (IOP), by different methods, pre and post FemtoLASIK (FS-LASIK), for correction of myopia or myopic astigmatism.

METHODS: Retrospective study; the IOP values of eyes undergoing FS-LASIK were measured (preoperatively, at 1st, 3rd and 6th postoperative month) using contact tonometry [Goldmann applanation tonometry (GAT)] and non-contact tonometry (by Corvis®ST according to formulas: 1) pachymetry – Ehlers, Shah, Dresden, Spoerl – and 2) biomechanics – corrected and not corrected). Pachymetry values were obtained (Pentacam®, Oculus).

RESULTS: One hundred twenty-two patients (232 eyes) were evaluated, 59.5% female, mean age 31.8±5.1 years, preoperative spherical equivalent of -3.6±1.7.

Preoperative: pachymetry 586.7±24.2µm, GAT 15.0±2.0 mmHg, mean by Corvis® (mmHg): 1) Ehlers (13.5±2.4), Shah (14.3±2.2), Dresden (14.5±2.1), Spoerl (14.6±2.1); 2) corrected (14.4±1.9), not corrected (15.3±2.2).

Final postoperative: pachymetry 503.2±35.8µm (p0.001; t-test 174.8), GAT 12.5±1.7 mmHg (p0.001; t-test 89.3), mean by Corvis® and compared with TAG (mmHg): 1) Ehlers (15.2±2.9, p0.001, t-test 65.2), Shah (14.5±2.2, p0.001, t-test 79.6), Dresden (14.0±1.9, p0.001, t-test 86.9), Spoerl (12.4±1.8, p0.001, t-test 30.0); 2) corrected (12.9±1.6, p0.001, t-test 101.0), not corrected (11.9±1.7, p0.001, t-test 88.2).

CONCLUSIONS: FS-LASIK causes a decrease in IOP measured by contact tonometry. In non-contact tonometry, except for the Ehlers and Shah formulas, the remaining formulas showed a decrease in IOP at the end of the follow-up. This reduction in IOP may be associated with a decrease in pachymetry. These patients require a thorough evaluation of the IOP value. More studies are needed to evaluate the best method to assess IOP after FS-LASIK surgery.

FINANCIAL DISCLOSURE: No