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Comparison of Contrast Sensitivity Between Monofocal And Multifocal Intra-ocular Lens Implantation After Phacoemulsification Cataract Surgery

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Purpose: To compare the contrast sensitivity of monofocal and multifocal intraocular lens implanted eyes after phacoemulsification cataract surgery.

Methods: All the cataractous eyes underwent a complete ocular evaluation (Refraction, Slit Lamp examination, Keratometry, Biometry, Tonometry and Ophthalmoscopy) before surgery. Post-operative unaided and aided, distance and near, visual acuity was recorded after 1 month and spectacles prescribed. Post operative contrast sensitivity was taken in photopic condition one time after 3 month with best corrected visual acuity.

Results: Fifty eyes of forty one subjects underwent cataract extraction, 17 were multifocal patients and 24 were monofocal patients, each group having 25. Monofocal group's age range was 40-83 year (mean 61.92 ± 12.03), 15 male, 9 female. Multifocal group age range was 40-65 year (mean 53.24 ± 8.65), 5 male, 12 female. Unaided near N6 visual acuity was 64% in multifocal group, none in monofocal group (P value < 0.0001). The contrast sensitivity shows no significant difference between monofocal and multifocal IOL eyes (P value > 0.05).

Conclusion: Multifocal intra ocular lens implanted patients had high rate of spectacle independency. There is no significant changes of contrast sensitivity occurred after three months of phacoemulsification between monofocal and multifocal IOL implanted patient.

Key words: Monofocal IOL, Multifocal IOL, Phacoemulsification Surgery, Contrast Sensitivity