

Turkish Journal of Medical Sciences

Turkish Journal

of

Medical Sciences

Progression of binocular vision following cataract surgery*

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[Keywords](#)



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Abstract: Aim: To investigate the progression of binocular vision of patients after cataract surgery in the early postoperative period. Materials and methods: Eighty four cataract patients were evaluated at postoperative 1 and 3 months after phacoemulsification and posterior chamber monofocal lens implantation. For the evaluation of the grades of binocular vision, synoptophore was used. Stereoscopic acuity was measured with the Titmus Stereotest. Results: Evaluation at postoperative 3 months was associated with a significantly higher proportion of patients with stereopsis ($P = 0.004$), better levels of stereoacuties ($P < 0.001$) than the evaluation at postoperative 1 month. Significantly higher visual acuties ($P = 0.001$) and lower interocular difference in refraction values ($P = 0.023$) were also noted at postoperative 3 months. The level of stereoscopic acuity was not significantly correlated with the level of visual acuity, interocular visual acuity difference, interocular difference in refraction, and the age of patients ($P > 0.05$). In patients without fusion, suppression was found in the operated eyes with favorable visual acuties, and even in some of those with higher visual acuties compared to the fellow eye. Conclusion: During the early postoperative period of cataract patients, improvements in binocular vision were observed, which may be attributed to neural factors along with optical factors because of the cerebral basis for binocular vision.

Key words: Binocular vision, binocular functions, stereopsis, stereoacuity, cataract surgery, neuroadaptation

Turk J Med Sci 2009; **39**(6): 837-841.

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