Postoperative refractive outcomes in phacotrabeculectomy in comparison to phacoemulsification
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Purpose: To compare the postoperative refractive outcomes following phacotrabeculectomy and phacoemulsification.

Method: A retrospective comparative study of 34 eyes who had underwent uncomplicated phacotrabeculectomy or phacoemulsification with 3.2 mm clear corneal incision and posterior chamber IOL (AR 40, AMO). All biometry measurements were performed by IOL Master (Zeiss). Visual acuity, refraction, IOP, prediction error (difference between the postoperative spherical equivalent end the preoperative predicted one) were studied at one week and one month postoperative.

Results: 15 eyes underwent phacoemulsification and 17 eyes underwent phacotrabeculectomy. The mean prediction error of the phacotrabeculectomy group at one week (-0.99 D) and at one month (-0.61 D) was significantly different from the phacoemulsification group one (+0.05 D and +0.12 D) (p < 0.05). The proportion of case with prediction error in ± 0.5 D range is 100% in phacoemulsification group and 35% in phacotrabeculectomy group. 76% of eyes with phacotrabeculectomy had a prediction error in ± 1D range. There were no correlation between the refractive error and the IOP decrease neither axial length in phacotrabeculectomy group.

Conclusion: Postoperative myopic shift was significantly more frequent in phacotrabeculectomy than in phacoemulsification. This myopic shift was not associated with axial length neither IOP decrease.