

## Effect of clear corneal incision location on tear film following phacoemulsification surgery

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[View references \(7\)](#)

### Abstract

**Purpose:** To investigate tear film status after phacoemulsification surgery with temporal and supratemporal clear corneal incision in a cohort of patients with senile cataract. **Methods:** We enrolled sixty eight eyes of 34 patients with senile cataract requiring phacoemulsification in a prospective, cohort study. All patients undergone Basic Tear Secretion Test (BTST), Tear Meniscus Height (TMH), Tear Break Up Time Test (TBUT) and Schimer I test (SIT), preoperatively and three months after surgery. Preoperative keratometry was used to determine the steepest meridian and corresponding location of clear corneal incision. **Results:** The cohort included 26 men (76.2%) and 22 women (32.3%), with an age range of 48 to 82 years (mean 66.9±9.4 years). Phacoemulsification was performed with temporal clear corneal incision in 36 eyes (52.9%) and with supratemporal clear corneal incision in 32 eyes (47.1%). There was no statistically significant difference between the results of pre and postoperative SIT, TMH and BTST. The results of these tests were not statistically different according to incision location. In contrast, TBUT results differed significantly in pre and postoperative examination in both incision location groups ( $P < 0.001$ ); however, there was no statistically significant difference in TBUT results according to incision location. **Conclusion:** Phacoemulsification cataract surgery has no significant effect on tear film. In addition the location of clear corneal incision had no effect on tear film tests. © 2009 by the Iranian Society of Ophthalmology.

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