

## **THE ASSESSMENT OF ARCHITECTURE OF CLEAR CORNEAL INCISION WITH ANTERIOR SEGMENT OPTIC COHERENCE TOMOGRAPHY IN PATIENTS WITH AND WITHOUT STROMAL HYDRATION**

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**Purpose:** To assess architecture of clear corneal incision with anterior segment optic coherence tomography (AS-OCT) in patients with and without stromal hydration. **Methods:** Seventy eyes of 70 patients those had been planned to have phacoemulsification and intraocular lens implantation under topical anesthesia, were involved in this study. The main clear corneal incision was done with 2.75 mm corneal knife. During operation corneal hydration was performed in clear main corneal incision of 35 randomised selected patients and stromal hydration was not performed in other 35 patients. The architecture of main clear corneal incision was assessed with AS-OCT at postoperative 1<sup>st</sup>, 7<sup>th</sup>, 30<sup>th</sup> days. **Results:** It was observed that corneal thickness at corneal incision region was thicker in eyes with stromal hydration performed at postoperative 1<sup>st</sup> and 7<sup>th</sup> days ( $p=0.034$  ve  $p=0.048$ ). The average main corneal incision lengths were  $1.72\pm 0.23$  mm and  $1.54\pm 0.33$  mm in eyes with and without stromal hydration, respectively ( $p=0.043$ ). The epithelial gaping rate, endothelial gaping rate and rate of local detachment of Descemet membrane were %25 (9 patients), % 57 (20 patients), %31 (11 patients) at postoperative 1<sup>st</sup> day in stromal hydration performed clear corneal incisions, respectively. **Conclusions:** It could be said that the effect of stromal hydration continues at least seven days along and the pathologies of corneal incision at early postoperative period are observed more frequent in eyes with stromal hydration when compared without stromal hydration. **Financial Disclosure:** No author has a financial or proprietary interest in any material or method mentioned.