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EVALUATION OF EARLY POSTOPERATIVE OCULAR PAIN AFTER PHOTOREFRACTIVE KERATECTOMY AND CORNEAL CROSSLINKING

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Purpose: To evaluate and compare early postoperative pain after photorefractive keratectomy (PRK) and corneal crosslinking (CXL).

Setting: Khatam-al-Anbia Eye Hospital, Mashhad, Iran.

Design: Prospective case series.

Methods: The PRK group included patients with simple refractive errors whereas the CXL group included patients with clinical keratoconus. The groups were compared regarding the level of pain based on the visual analogue scale (VAS), verbal rating scale (VRS), and Wong-Baker FACES pain rating scale immediately after surgery, 6 hours postoperatively; 1, 3, and 7 days postoperatively. The epithelial defect size was measured at 6 hours after surgery and 1 day and 3 days after surgery in both groups.

Results: The study comprised 68 patients (34 patients in the PRK group and 34 patients in the CXL group). The epithelial defect size was significantly smaller in the CXL group than in the PRK group (P< .001); however, the amount of pain was significantly higher after CXL than after PRK based on VAS and VRS (PZ.04 and PZ.019, respectively). In the FACES scaling system, the pain score was also higher in the CXL group than in the PRK group. However, the difference was not statistically significant. No intraoperative or postoperative complications were observed during follow-up.

Conclusions: The epithelial defect healing rate was statistically significantly faster in the CXL group than in the PRK group. However, the level of pain was greater in the CXL group, suggesting that postsurgical pain might be influenced by other factors than the epithelial defect

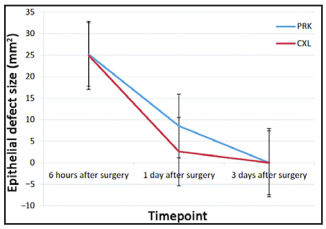

Figure.1 Comparison of the epithelial defect size between the PRK and CXL groups 6 hours after surgery and 1 and 3 days after surgery, indicating a significantly faster healing rate in the CXL group (CXL = corneal crosslinking; PRK= photorefractive keratectomy)

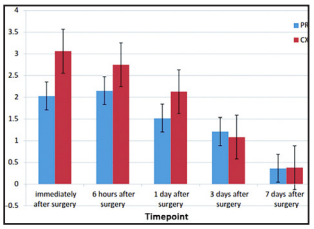

Figure.2 Comparison of the VRS pain scale between the PRK andCXL groups, showing a higher score in the first 24 hours after CXL(CXL = corneal crosslinking; PRK = photorefractive keratectomy; VRS = verbal rating scale)

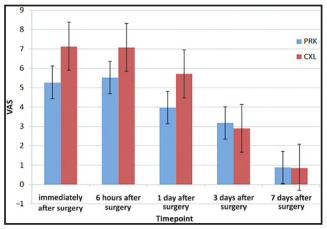

Figure.3 Comparison of the VAS pain scale between the PRK and CXL groups, showing a higher score in the first 24 hours after CXL (CXL = corneal crosslinking; PRK = photorefractive keratectomy; VAS = visual analogue scale)

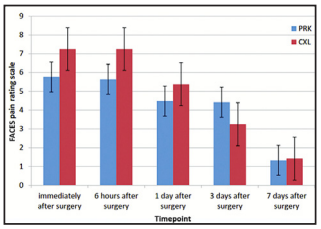

Figure.4. Comparison of the FACES pain scale between the PRKand CXL groups, showing a higher score for CXL in the first 24 hours, although it was not statistically significant (CXL= corneal crosslinking; FACES = Wong-Baker FACES pain scale; PRK =photorefractive keratectomy)

Biography

Soheyla Jafarpour completed her MD at the age of 26 years from Mashhad University of Medical Sciences and attended residency program in ophthalmology for four years thereafter at the same university and graduated in 2016. She passed ICO examinations (Basic sciences, Optics and Refraction and Clinical Ophthalmology) during residency and was certified as FICO by passing the Advanced ICO exam in 2016 after being certified in National board exam. She is a member of Iranian Society of Ophthalmology and a researcher in Eye Research Center, Khatam-al-Anbia Eye Hospital.

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