Ascorbic acid Versus Placebo in Postoperative Pain Relief of Patients Status Post Photorefractive Keratectomy: A Double-Masked, Randomized, Prospective Study

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Abstract

Purpose: Ascorbic acids are currently being used anecdotally for postoperative pain following photorefractive keratectomy (PRK) despite the lack of evidence. The purpose of this study is to evaluate the effectiveness of Ascorbic acid in mitigating pain after PRK compared to the standard of care. Methods: Fifty-two patients scheduled for PRK at the Baqiyatallah Refractive Surgery Center in Tehran, Iran were randomized to receive either oral Ascorbic acids 250 mg once daily for 5 days or placebo, in addition to the standard pain care regimen. Post operative pain, Corneal Haze, corneal repithelialization and lid edema were the main outcome. Results: There was no statistically significant difference in the primary outcome of subjective pain scores along with Corneal Haze, corneal repithelialization between the treatment and placebo groups at any point during the postoperative period, but there was a statistically significant difference and trend for lower lid edema in the Ascorbic acids group on postoperative day 1 (P < 0.05). Conclusions: This study demonstrates that Ascorbic acids may provide an alternative or add-on option for lid edema relief after PRK.

Keywords: Ascorbic, Postoperative