

Session 4-M: Refractive: Refractive Potpourri

Title: Effect of Gatifloxacin 0.3% and Moxifloxacin 0.5% on Corneal Epithelial Wound Healing After PRK

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Purpose: To evaluate the effects of commercially available gatifloxacin (Zymar) and moxifloxacin (Vigamox) on epithelial wound healing following photorefractive keratectomy (PRK).

Methods: Twenty-two patients undergoing bilateral PRK were randomized in a double-masked study to receive gatifloxacin or moxifloxacin one day prior to surgery and postoperatively for one week. The size of the epithelial defects was recorded at the time of surgery and then daily until the defects healed. Digital photography was performed daily until the epithelial defects closed. Uncorrected visual acuity was recorded at all visits. Best-corrected visual acuity and corneal clarity were recorded at all visits following 1 week.

Results: Mean epithelial closure time for gatifloxacin-treated eyes was significantly faster at 3.8 +/- 0.61 days (range 3 - 5 days) than for the moxifloxacin-treated eyes, 4.7 +/- 1.21 days (range 3 - 7 days) ($p = 0.002$). One eye treated with moxifloxacin exhibited corneal haze. All eyes other than the one that developed cornea haze demonstrated a BCVA of at least 20/20 at six months.

Conclusion: Moxifloxacin delays corneal epithelial wound healing in comparison to gatifloxacin in patients undergoing PRK.