

Abstract

PURPOSE: To compare the efficacy of topical levofloxacin in combination with povidone-iodine irrigation vs povidone-iodine (PVI) alone in reducing conjunctival bacteria. **DESIGN:** Prospective, randomized, controlled trial. **METHODS:** One hundred and forty eyes of 140 patients scheduled to undergo intraocular surgery eyes were randomized to either group 1 or 2 (70 each). Whereas group 1 eyes had no prophylactic antibiotic, eyes in group 2 received topical treatment with one drop of 0.5% levofloxacin four times on the day before surgery. Both groups underwent irrigation of the fornices with 1% PVI. Conjunctival swabs were inoculated on solid and broth culture media to determine bacterial growth. **RESULTS:** Of 132 eyes evaluated, baseline culture analysis in thioglycolate demonstrated positive culture results in 55 (84.6%) of 65 eyes from group 1, similar to 55 (82.1%) of 67 eyes in group 2 ($P = .697$). Before surgery, 57 (87.7%) of 65 eyes in group 1 had positive culture results, compared with 50 (74.6%) of 67 eyes in group 2 ($P = .055$). After irrigation with PVI, 20 (30.8 %) of 65 eyes in group 1 had positive culture results, compared with only eight (11.9%) of 67 eyes in group 2 ($P = .008$). After surgery, 15 (23.1%) of 65 eyes in group 1 and six (9.0%) of 67 eyes in group 2 had positive culture results ($P = .027$). **CONCLUSIONS:** Our study shows an enhanced effect of using topical levofloxacin in combination with PVI irrigation to reduce conjunctival bacteria in patients undergoing intraocular surgery.