

Abstract

PURPOSE: To determine whether a patient's age, gender, local or systemic risk factors affect the rate of preoperative bacterial contamination. **METHODS:** Consecutive 1,474 patients undergoing intraocular surgery were enrolled in this prospective masked study. Past medical history was noted and examinations were performed. The patients were divided into four groups: a control group (without local or systemic risk factors), those with local risk factors (chronic use of topical medications, contact lens wear, blepharitis, chronic eyelid or conjunctival inflammation), those with systemic risk factors (immunosuppression, diabetes, autoimmune conditions, and asthma), and those with both. Conjunctival cultures were obtained before surgery. **RESULTS:** Among the 1,474 patients, 914 bacteria were isolated from 214 (14.9%) patients. Advanced age was associated with a higher rate of positive conjunctival cultures ($p < 0.005$). No statistical difference was found with regard to gender ($p = 0.7173$). Among the 282 patients in the control group, 14 (5%) had a positive conjunctival culture. Compared to the control group, positive conjunctival cultures were found in 118 out of 503 patients (23.5%) with local risk factors ($p < 0.0001$), 65 out of 545 patients (11.9%) with systemic risk factors ($p = 0.0019$), and 22 out of 144 (15.3%) with both ($p = 0.0006$). Two patients developed postoperative endophthalmitis (0.14%), one with both local risk and systemic factors and the other with a systemic risk factor. **CONCLUSIONS:** Patients with local or systemic risk factors or advanced age were found to have a higher rate of bacterial conjunctival contamination before intraocular surgery.