



Intraoperative bacterial contamination of the aqueous humor.

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Abstract: Indigenous ocular flora has been presumed to be a source of infectious organisms in postoperative bacterial endophthalmitis. While bacteria have been recovered from the anterior chamber at the time of cataract wound closure in a significant percentage of cases, and bacteria from the vitreous of endophthalmitis cases have appeared genetically to be very similar to bacteria recovered from the adnexa and/or nares at the time of vitrectomy for endophthalmitis, no study has examined the relationship between organisms isolated from the eyelid and conjunctiva, and organisms recovered from the aqueous humor at the time of wound closure. This study examined 59 eyes undergoing cataract and other intraocular surgeries. Cultures of the eyelids and conjunctiva were taken before and after routine preparation with povidone-iodine solution. Cultures also were taken of the aqueous humor at the time of incision into the anterior chamber and at the time of wound closure. No organisms grew from aqueous humor samples taken at the time of incision. However, 13 eyes (22%) grew gram-positive organisms from samples taken at the time of wound closure. Eight of the 13 eyes (62%) had organisms with identical typing and antibiotic sensitivities to organisms isolated from the eyelids and conjunctiva before or after disinfection. This study suggests that a significant number of cases had inoperative bacterial contamination of the aqueous humor by the time of wound closure and that organisms from the eyelids and conjunctiva are an important source of contamination in these cases.

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