Bacteriologic Findings in Patients with Ocular Infection and Antibiotic Susceptibility Patterns of Isolated Pathogens

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Background & Objectives: The eye is a unique organ that is virtually impermeable to most environmental agents. However in some circumstances infectious agents gain access to the posterior segment of the eye following one of three routes: 1- as a consequence of intraocular surgery 2- following a penetrating injury of the globe, or 3- from hematogeous spread of bacteria to the eye from a distant anatomical site. The aim of this study isolation of common pathogens involved in ocular infection and antibiotic susceptibility patterns of isolated pathogens.

Methods: Corneal scrapings were obtained from 318 hospitalized patients and inoculated directly onto blood agar and Thioglycollate broth and were incubated. Subcultures were performed and the necessary biochemical tests were conducted and the organisms identified as per standard procedures. Antibiotic susceptibility was determined for all positive cultures and susceptibility of isolated pathogens to commonly used ocular antibiotics was examined.

Results: Seventy various organisms were isolated. Gram positive cocci accounted for 47 (67.2%) of all bacterial isolates and gram negative bacilli for 23 (32.8%). Coagulase negative staphylococci (33%) and pseudomonas sp. (24%) were the most common isolated organisms. In susceptibility testing, Gentamicin had coverage against 35 (74.5%) of 47 gram positive cocci and 19 (82.6%) of 23 gram negative bacilli. tested isolates. The coverage of Tetracycline, Cephalotin and Ceftriaxone against gram positive cocci tested isolates were 61.7%, 55% and 53% respectively. Ceftriaxone and Tobramycin had coverage against 17 (73.9%) and 14 (60.8%) of 23 gram negative bacilli tested isolates respectively.

Conclusion: Susceptibility analysis revealed, the antibiotics with great coverage were Gentamicin (77.1% of 54 isolates) and Ceftriaxone (42% of 42 isolates). Both antibiotics had good coverage against gram-positive cocci which constitute the majority (67.1%) of ocular isolates in this study.

Keywords: Bacteria; Ocular Infection; Antibiotic Susceptibility