

Abstract

The fast and precise identification of infectious agents and their characterization is of utmost importance for the diagnosis and therapy of infectious endophthalmitis. A preliminary estimate of the most probable predominant agents may improve the choice of an adequate antimicrobial therapy prior to definitive microbiological analysis in culture media. A prospective study was performed in 46 patients with endophthalmitis. During surgery mostly undiluted samples were inoculated in 10 different culture media. Microscopic investigation and laboratory processing were performed within the next 10-120 min. A presumptive classification based on immediate direct microscopy and a preliminary recommendation on treatment were achieved in 25 cases. Culture yielded positive results in 38 cases (83%). In 8 cases the inoculates remained negative. Most of the positive cultures (92%) contained only gram-positive bacteria, including 10 cases of mixed gram-positive infections. In 2 samples bacteria and fungi were present, while 2 contained fungi only. Of 8 posttraumatic eyes, 4 were infected with *Bacillus* spp. The results show that specific therapeutic approaches are required. Direct inoculation of surgical culture media combined with immediate microscopic investigation permits a fast and precise microbiological diagnosis.