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Abstract (poster session)

**Acremonium endophthalmitis after cataract extraction: a report of two rare cases**

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Objectives: Infective endophthalmitis is one of the most significant complications of cataract surgery. Typically it is caused by the perioperative introduction of microbial organisms (mainly gram-positive bacteria) into the eye from the patient's normal conjunctival and skin flora. On the contrary, fungal aetiology is considered an extremely rare occurrence. We report two cases of Acremonium endophthalmitis after cataract surgery on the same day in the same operating room of the hospital's ophthalmology clinic. Both patients, a 75-years-old man and a 64-years-old woman, developed endophthalmitis 2 and 3 weeks after cataract extraction, respectively, with decrease in visual acuity, loss of media clarity, ocular hyperemia followed by palpebral edema, conjunctival hyperemia and hypopion. Methods: The samples culture was performed using conventional methods for bacteria and fungi. Fungal DNA for molecular analysis was extracted from colonies grown on Sabouraud dextrose agar at 30°C using "HPPT Preparation Kit" (Roche Diagnostics) following the yeast and moulds extraction manufacturer's protocols. A restriction fragment length polymorphism (RFLP)-PCR of the nuclear 5.8S and internal transcribed spacer (ITS2) regions of the ribosomal DNA, amplified with the universal ITS3 and ITS4 fungal primers, was performed by the endonucleases HinfI, MspI, Sau3 AI and TaqI. Results: Moulds with similar macroscopic and microscopic features, consistent with Acremonium genus, were isolated from all the samples (vitreous washing, aqueous fluid and intraocular lens from the first patient and acqueous fluid from the second). Bacterial cultures were negative. Amplification products, ranging from 360 to 380 bp, were obtained from all the cultures indicating the presence of Acremonium spp. DNA. RFLP of the amplicons showed the same restriction pattern for all the samples culture from both the patients. Conclusion: Since filamentous fungi with similar morphologies and the same 5.8S and ITS2 rDNA restriction pattern (though it was not possible to identify the Acremonium species involved, it is likely that it was the same in the two cases) were isolated from all the analyzed samples and the two patients underwent surgery on the same day in the same operating room, it is possible to speculate that inadequate sterilization procedures of the instruments or contaminated irrigation fluids and disposables could have been involved in the transmission of the infection.