

2009 Research Days Abstract Form – Department of Ophthalmology – UNIFESP/EPM

2. SCIENTIFIC SECTION PREFERENCE (REQUIRED):

Review the Scientific Section Descriptions. Select and enter the two-letter Code for the one (1) Section best suited to review your abstract.

3. PRESENTATION PREFERENCE (REQUIRED) Check one:

- Paper X
- Poster
- FAST Paper

4. The signature of the First (Presenting) Author (REQUIRED) acting as the authorized agent for all authors, hereby certifies that any research reported was conducted in compliance with the Declaration of Helsinki and the 'UNIFESP Ethical Committee'

Scientific Section Descriptions (two-letter code):

- (BE) OCULAR BIOENGINEERING
- (CO) CORNEA AND EXTERNAL DISEASE
- (CA) CATARACT
- (EF) ELECTROPHYSIOLOGY
- (EP) EPIDEMIOLOGY
- (EX) EXPERIMENTAL SURGERY
- (GL) GLAUCOMA
- (LA) LABORATORY
- (LS) LACRIMAL SYSTEM
- (LV) LOW VISION
- (NO) NEURO-OPHTHALMOLOGY
- (OR) ORBIT
- (PL) OCULAR PLASTIC SURGERY
- (PH) PHARMACOLOGY
- (RE) RETINA AND VITREOUS
- (RS) REFRACTIVE SURGERY
- (RX) REFRACTION-CONTACT LENSES
- (ST) STRABISMUS
- (TR) TRAUMA
- (TU) TUMORS AND PATHOLOGY
- (UV) UVEITIS
- (US) OCULAR ULTRASOUND

Deadline: Oct 12, 2009

FORMAT:
Abstract should contain:

Title
Author, Co-authors (maximum 6),
Purpose, Methods, Results,
Conclusion.

Poster guidelines:
ARVO Abstract Book (1.10 x 1.70m)

16. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

- () R1 () R2 () R3 () PIBIC
- () PG0 (X) PG1 () Fellow () Technician

Last Name: Melo
First Name: Gustavo
Middle: Barreto

Service (Sector): LA

CFP Number: 1422/06

5. ABSTRACT (REQUIRED):

Incidence of endophthalmitis after cataract surgery and application of molecular microbiological diagnosis

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Purpose: To report on the incidence, diagnostic technique, microbiological features of endophthalmitis at a university setting in Brazil. Additionally, we aimed at assessing the accuracy of real-time polymerase chain reaction (PCR) for diagnostic purposes.

Methods: All cases of presumed postoperative endophthalmitis from 2002 to 2008 at a teaching-hospital were included. The main data assessed were: number of cataract surgeries performed, incidence of endophthalmitis, microbiological result (aqueous and/or vitreous culture and Gram staining), and antimicrobial susceptibility testing of the positive cases. Laboratory diagnosis with conventional culture was compared with PCR in 21 clinical samples of presumed infectious endophthalmitis. Twelve samples of noninflamed vitreous samples from vitrectomy were used as controls.

Results: Seventy-three eyes of 73 patients (43 females and 30 males) developed endophthalmitis after 24,590 cataract surgeries. The incidence decreased from 0.49% in 2003 to 0.17% in 2006 and stabilized afterwards. Coagulase negative *Staphylococci* (CoNS) and *Streptococcus viridans* (56.5% and 15%, respectively) were the most common bacterial isolates. Culture and Gram stain were negative in 36.9%. CoNS presented susceptibility rates of 80%-sensitivity to oxacillin, 90% to fourth-generation quinolones and 100% to vancomycin. In the comparative analysis of the diagnostic techniques, culture was positive in 47.6% while PCR detected bacteria in 95.3% of the presumed infectious endophthalmitis cases. All control samples were negative (specificity= 100%)

Conclusions: The rate of endophthalmitis, diagnostic ability of conventional laboratory investigation, microbial isolates and antibiotic susceptibility are in accordance with other findings of the literature. Despite using prophylactic antibiotic drops, it was possible to identify organisms that were susceptible to the antibiotics topically applied. Real time PCR disclosed very high sensitivity and specificity and may be a valuable diagnostic tool for this pathology.

Keywords: endophthalmitis; incidence; molecular diagnosis; polymerase