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
☐ 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"

Filipe de Oliveira

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)

47. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

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

Last Name: Oliveira
First Name: Filipe
Middle:

Service (Sector): Clinical Trials

CEP Number: 0630/05

5. ABSTRACT (REQUIRED)

COMPARISON OF THE OCULAR AXIAL DIMENSIONS IN THE CATARACTOUS EYE BY OPTICAL AND ULTRASONIC DEVICES

Filipe de Oliveira, Eduardo S. Soriano, Cristina Muccioli

Purpose: The many sources of error in the calculation of IOL power and the heightened patient expectations to precise postoperative refractive results have spurred the continued improvements in the biometry field. The purpose of this study was to describe ocular biometry relationships, the accuracy and the reproducibility from optical and ultrasonic devices.
Methods: The axial length (AL), anterior chamber depth (ACD), and keratometry (K) from 168 cataractous eyes were examined using the IOLMaster® (optical), the OcuscanRxP® (ultrasound – immersion and contact) and Topcon OM-4® manual keratometer according to appropriated indication. The variables was analyzed statistically and the coefficient of variation (COV) was obtained from each device and the agreement were evaluated by Bland-Altman analyzes.
Results: The COV of the AL measured with the IOLMaster, OcuscanRxP immersion and contact were respectively 4.43%, 4.29% and 4.39%. With respect to the ACD were 13.29%, 12.32% and 13% respectively. The COV of the K obtained by IOLMaster and Topcon OM-4 were 3.37% and 3.39% respectively.
Conclusion: The axial ocular dimensions obtained from optical and ultrasonic devices were consistent and reliable in clinical use, however further studies can be required to evaluate better the differences and the inherent sources of error.

Keywords: ocular biometry, partial coherence interferometry, A-scan, reproducibility