

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

2. SCIENTIFIC SECTION PREFERENCE (REQUIRED):

(GL) GLAUCOMA

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'

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 13, 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)

106. FIRST (PRESENTING) AUTHOR (REQUIRED):

Must be the author listed first in abstract body.

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

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5. ABSTRACT (REQUIRED):

Title: FACTORS ASSOCIATED WITH OPTIC NERVE HEAD TOPOGRAPHY IN NEWLY DIAGNOSED PRIMARY OPEN-ANGLE GLAUCOMA PATIENTS

Author and Co-authors Thiago P Magalhães, MD; Tiago S Prata, MD; Verônica Castro Lima, MD; Lia M Guedes; Fernanda P Magalhães, MD; Luis Biteli, MD; Sergio H Teixeira, MD; Augusto Paranhos Jr, MD,PhD.

Purpose: To investigate factors associated with optic nerve head (ONH) topography in newly diagnosed primary open-angle glaucoma (POAG) patients.

Methods : We prospectively enrolled consecutive patients with newly diagnosed POAG without glaucoma treatment [intraocular pressure (IOP) >21 mmHg]. After a complete ophthalmological examination, those with any ocular disease other than glaucoma were excluded. Data collected included age, race, gender, IOP and central corneal thickness (CCT). All patients underwent CH measurement using the Ocular Response Analyzer and confocal scanning laser ophthalmoscopy for ONH topography evaluation. The mean of three measurements was considered for analysis. Multiple regression analysis (controlling for baseline IOP and disc area) was used to investigate factors associated with the following ONH topographic parameters: cup-to-disc ratio (CDR) and mean cup depth (MCD)  
 Results : Forty-two patients (42 eyes) were included (mean age, 66.7±11.8 years; mean IOP, 27.9±8.1). The only factor significantly associated with both CDR (r=-0.41, p=0.02) and MCD (r=-0.34, p=0.03) was CH. Central corneal thickness was significantly associated with MCD (r=-0.35, p=0.02), but not with CDR (r=-0.25, p=0.10). Although marginally significantly associated with CDR (r=0.23, p=0.10), age was not associated with MCD (r=0.06, p=0.72). No significant associations were found for gender and race (p≥0.54). When comparing eyes of patients with bilateral POAG (n=20), those with higher CH had smaller CDR in 78% of the cases.

Conclusion In untreated newly diagnosed patients with POAG, those with thicker corneas and mainly higher corneal hysteresis seem to have a smaller cup-to-disc ratio and shallower cup

(independently of IOP values and disc area size). This association was significant for both

corneal parameters only when cup depth (but not cup-to-disc ratio) was considered. Whether

these observations have implications in the understanding of glaucoma pathophysiology

requires further investigation.

Keywords

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