2007 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 sullied to review your abstract
(RE)

3. PRESENTATION PREFERENCE (REQUIRED) Check one (1)
(a) Paper
(b) Poster

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 Heisinki and the 'UNIFESP Ethical Committee"

Signature of First

Scientific Section Descriptions

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

Deadline: 29/10/2007

FORMAT:
Abstract should contain:
Title, Name of Authors, Name of other au thors (maximum 6), Purpose, Methods, Results, Conclusions.
Example: ARVO (1.10 x 1.70)
Abstract Book

1. FIRST (PRESENTING) AUTHOR (REQUIRED)
Must be author listed first in body of abstract

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(X) PG0 ( ) PG1 ( ) Estagiário ( ) Tecnólogo ( ) PIBIC

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Optical Coherence Tomography in Retinitis Pigmentosa Patients and Microchip Epiretinal Prosthesis

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Purpose: To correlate retinal nervous fiber layer (RNFL), retinal thickness and visual acuity in retinitis pigmentosa (RP) patients with visual acuity better than 20/800. To compare RNFL and retinal thickness in a group of RP patients with visual acuity worse than 20/400 to a patient submitted to a microchip retinal prosthesis insertion.
Methods: This study was approved by the UNIFESP medical research ethical committee. The microchip study was granted an FDA and USC -IRB approval. Twenty RP eyes with visual acuity better than 20/800 were included in the first part of the study (OCT exams thic kness and visual acuity correlation). The visual acuity was converted to LogMar in the analysis. Also eight RP eyes with visual acuity equal or worse than counting fingers and age between 40 and 60 years old were examined and compared to one retinal prosth esis patient (descriptive study). The prosthesis patient had light perception vision and 55 years old. OCT (Fast RNFL Thickness Scan 3.4mm protocol) scans, complete eye exam and electrophysiological tests (full - field electroretinogram and dark adaptation threshold test) were performed. The OCT scans were analyzed manually using the caliper under the RNFL thickness single eye protocol. Statistical analysis was performed with the SPSS version 12.0 software.
Results: The electroretinogram confirmed RP diagnosis in the studied patients. In the first group the age ranged from 14 to 75 years old (mean 46.45 +/ - 20.68) and the mean visual acuity was 0.61 (+/- 0.34); the mean retinal thickness was 205.23um (+/- 30.87) and the mean RNFL thickness was 87.65um (+/ -21.07). When considering the data by quadrant, there was a reverse correlation between visual acuity and retinal thickness (in the temporal quadrant r=0.755, p<0.001) but no correlation between visual acuity and RNFL thickness. The retinal prosthesis patient presented RNFL and retinal thickness in the non implanted eye closer to the UNIFESP RP group than in the implanted (and electrically stimulated) eye (thicker).
Conclusions: RP eyes showed thicker retina proportional to the worsening of the visual acuity (i n LogMar). This may reflect apoptosis changes causing cell edema as the degeneration progress. This is also a new parameter that might be used to determine disease progression in RP patients with good visual acuity. The comparison between RP patients and r etinal prosthesis patient showed a possible electrical neurotrophic effect in the stimulated eye.