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

2. SCIENTIFIC SECTION PREFERENCE (REQUIRED): EF

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:
- X 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"

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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)

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

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

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Service (Sector): ELECTROPHYSIOLOGY (EF)

CEP Number: 1174/06

SERIAL MEASURES OF PATTERN–REVERSAL VISUALLY EVOKED POTENTIAL IN LEBER´S HEREDITARY OPTIC NEUROPATHY (LHON)

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Purpose: LHON is a maternally inherited disease associated with mitochondrial DNA point mutations and characterized by profound bilateral loss of central vision. Subclinical visual abnormalities have been reported in psychophysical and clinical assessment of non-affected LHON carriers. The purpose of this longitudinal study was to investigate possible subclinical abnormalities by pattern-reversal visual evoked potential (PRVEP) in non-affected carriers from an extensive Brazilian 11778 LHON pedigree.
Methods: Transient PRVEP (reversal rate = 1.9Hz; checkerboard stimuli 15' and 60'; 100% contrast) was recorded from each eye in 15 non-affected carriers, aging from 19-57 years (mean= 38.7±12.3 yrs; median= 38.9; 10 females) in three visits (2002, 2006 and 2008). All participants had best corrected visual acuity of 20/20. An additional group of 26 healthy subjects aging from 20-60 years (mean= 36.8±10.6 yrs; median= 35.7; 14 females) was tested as control. Latency (ms) of N75, P100 and N135 peaks and N75-P100 amplitude (μV) were determined for both stimuli size. Temporal dispersion of the response was calculated by the difference in latency between N135 and N75. Mann-Whitney test was used for comparison between carriers and controls. Kruskal-Wallis one-way analysis of variance was used to compare the three visits follow-up measurements.
Results: In the first visit, statistically prolonged latencies were found in carriers when compared to controls with stimulus size 15' (P=0.030) for P100 and N135 (P<0.001) and with stimulus size 60' for N135 (P=0.004). Widened response was found in carriers when compared to controls with 15'and 60'stimuli size (P=0.013 and P=0.017, respectively). No differences were found for N75-P100 amplitudes between carriers and controls for both stimulus sizes. Intra-subject analysis for P100 latency and temporal dispersion was comparable in the three visits.
Conclusions: Subclinical PRVEP abnormalities characterized by consistently prolonged latencies were found in non-affected carriers from this large 11778 LHON pedigree. Prolonged P100 latencies and larger temporal dispersion have not changed along time in this group.

Keywords: Visual Evoked Potential; Leber´s Hereditary Disease; Optic Nerve.