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"

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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)

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

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

Last Name:Renesto
First Name:Adimara
Middle: da Candelaria

Service (Sector):Refractive Surgery (RS)

CEP Number:1915/07

5. ABSTRACT (REQUIRED):
Title: **EVALUATION OF TOPICAL RIBOFLAVIN EXPOSURE TO UVA RADIATION AND IMPLANTATION OF INTRASTROMAL CORNEAL RING SEGMENTS FOR KERATOCONUS**

Author and Co-authors (maximum 6):Adimara da Candelaria Renesto;Mauro Campos;Marta Sartori.

Purpose:To determine whether corneal collagen cross-linking(CXL) with riboflavin and UVA light augments the effect of intrastromal corneal ring segments.
Methods:Prospective, randomized, interventional, clinical study.Forty keratoconic eyes were randomized for corneal collagen cross-linking or no.After three months all patients underwent insertion of intrastromal corneal ring segments.Outcomes measures were uncorrected visual acuity (UCVA), best spectacle-corrected visual acuity (BSCVA), intraocular pressure (IOP) taken by contact (Goldmann Applanation Tonometry-GAT and Dynamic Countour Tonometry-DCT) and noncontact (Corneal Compensated-IOPcc and hysteresis) , topography, scanning-slit(SL), scheimpflug images(SI), optical coherence methods, contrast sensitivity, ultrasound pachymetry(UP), endothelial cell count and impression cytologic(IC).
Results:We show some preliminary results, because the study is still running.Central corneal thickness (CCT) and thinnest corneal thickness (TCT) were statistically different when SL and SI values were included ($P<0.001$, repeated-measures analysis of variance) in the crosslinking group, at preoperative, one month and three months after treatment.Related to IOP, GAT values did not change significantly during these time points.DCT didn't have the same behavior along the baseline, 1 month and 3 months after CXL ($P=0.002$).A significant difference ($P<0.001$; $P<0.036$ and $P<0.011$) in IOPcc and corneal hysteresis respectively after CXL was observed.Despite impression cytology, patients in cross-linking group showed a decrease in goblet cell density on the superior conjunctiva after CXL ($P=0.008$).Patients that did not underwent CXL demonstrated improvement in cell-to-cell contact of epithelial cells and reduced keratinization on the temporal conjunctiva ($P=0.003$ and $P=0.034$, respectively).
Conclusion:Cross-linking may disturb the values of pachymetry and intraocular pressure taken by different ways of devices.Despite changes in goblet cell density after CXL in the superior conjunctiva, and an improvement in the morphology of epithelial cells, comparison of total IC scores showed no difference between groups.

Keywords: keratoconus;riboflavin;crosslinking;