Invest Ophthalmol Vis Sci 2006;47: E-Abstract 2609.

2609—B768

Influence of the Therapy With Dorzolamide on the Corneal Structures : Analysis by Confocal Microscopy (Cs3)

L. Arrico, L. Colella, S. Donati, T. Mascaro and R. Pucci

Ophthalmology, Univ, Rome, Italy

Commercial Relationships: L. Arrico, None; **L. Colella**, None; **S. Donati**, None; **T. Mascaro**, None; **R. Pucci**, None.

Support: None

Abstract

Purpose: To value, in vivo, with the confocal microscopy(CS3) the corneal microscopic changes in a group of patients in therapy with Dorzolamide 2% eyedrops.

Methods: Thirty patients (sixty eyes) with monocular hypertension (IOP≥21 mmHg) and no previous ipotonic therapy were recruited. The hypertensive eye (HE)was treated with Dorzolamine 2% eyedrops three times daily, the normal tension eye (NE) was used as the control eye. At the time of recruitment, one and three months after the beginning of treatment were performed: applanation tonometry, ultrasound pachimetry (USP), and a CS examination.

Results: Mean age was 41,13±10,515 year, at the recruitment time: mean IOP was 16,50±2.34 mmHg in the NE and 22,06±0.68 mmHg in the HE, USP was 542,50±31,18 µ in the NE and 536,63±38,08 in the HE, endothelial cell density was (cell/mm2) 2473,37±339,58 in the NE and 2386,94±284,16 in the HE, stromal reflectivity was 0.36±0.06 in the NE and 0.36±0.05 in the HE. At each control time the IOP was statistically reduced in the treated eyes of a mean of 7,25 mmHg ($p<0.01$), all the corneal data didn't show a statistically significant change during the follow–up period, only the stromal reflectivity seemed to be increased in the last control of 0,1 ($p<0.005$).

Conclusions: The CS3 examination allowed us to value the microscopic corneal structure and to show that no clinically significant changes were produced by dorzolamide local therapy.

Keywords: cornea: basic science • microscopy: confocal/tunneling • drug toxicity/drug effects