(X) R1 ( ) R2 ( ) R3 ( ) PG0 ( ) PG1 ( ) Estagiário ( ) Tecnólogo ( ) PIBIC

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Service (sector)
Glaucoma

Nº CEP
1537/07

Effects of prostaglandin analogue and prostamide on corneal biomechanics

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Purpose: To evaluate the influence of prostaglandin analogues and prostamide on central corneal thickness and corneal hysteresis.

Methods: A cross-sectional study was performed including glaucoma patients with no previous intraocular surgery. Two groups were formed: Prostaglandin group - patients using prostaglandin analogues (latanoprost or travoprost) or prostamide (bimatoprost); Control group - patients not using antiglaucoma medication. Data on intraocular pressure (Goldmann applanation tonometry), central corneal thickness (ultrasound pachymetry), corneal hysteresis, and corneal resistance factor
were analyzed.

Results: Results: A total of 8 patients (12 eyes) in the prostanglandin group and 11
patients (14 eyes) in the control group were included. The mean (standard deviation [SD]) intraocular pressure in the prostaglandin group was 17.5 (6.3) mmHg and in the control group was 27.7 (6.0) mmHg ($P < 0.001$).The mean (SD) central corneal thickness in the prostaglandin group was 520.0 (30.9) µm and in the control group was 538.9 (38.4) µm ($P = 0.25$). The mean (SD) corneal hysteresis in the prostaglandin group was 8.68 (2.00) mmHg and in the control group was 7.82 (1.23) mmHg ($P = 0.24$).

Conclusion: Prostaglandin analogues and prostamide do not seem to alter the central corneal thickness and corneal hysteresis. Larger studies are needed to confirm these findings.