

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo
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Service (sector) Refractive Surgery N° CEP 01678/06

Evaluation of Submitted Young Patients to the Examination of Wave Front With and Without Cycloplegia in Dilated Pupils

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Purpose: Evaluation of submitted young patients to the examination of Wave Front with and without cycloplegia in dilated pupils, comparing the possible effect of the mechanism of accommodation in relation the aberrations of low and high order

Design: Interventional prospective case series **Methods:** 53 eyes of 28 pertaining patients to the clinic of refraction of the Institute of Vision - UNIFESP had been examined, with inferior age the 30 years. First it was used fenilefrine 10% until if getting bigger dilated pupil than 6,5mm. It was carried through examination of Wave Front (analyzed by LADAR WAVE 4000 – Alcon) after 30 minutes of the last drop (group I) After that it was used cyclopentolate 1% two times with difference of 10 minutes between the two drops. It was carried through new examination of Wave Front after 40 minutes of the first drop (group II). The same examiner had carried through all examinations. The aberrations of high and low order between the two groups had been compared (group I and II)

Results: 53 eyes of 28 patients, 13 men and 15 women, with age of 9 the 29 years (average 23,5 years), three eyes could not have been enclosed in the study due the corneal alterations. Group I (average/medium) Sphere - 2,47 / - 2,11 diopters, Match 80,83 / 88, Defocus 4,46 / 4,01, Astigmatism 1,50 / 0,93, Coma 0,26 / 0,22, Spherical Aberration 0,16 / 0,12, Other 0,26 / 0,23 Group I (average/medium) Sphere - 1,82 / - 1,69 diopters, Match 78,5 / 87, Defocus 4,04 / 3,31, Astigmatism 1,51 / 0,89, Coma 0,25 / 0,20, Spherical Aberration 0,17 / 0,17, Other 0,25 / 0,23 Using the method one way anova and p-students, statistical alterations between the two groups had not been found. **Conclusions:** Although to have been joined difference in the low order sphere aberration of 0,65 diopters between the two groups, probably for the possible effect of the mechanism of accommodation, the result was not significant. Other alterations of low and high order aberration did not present difference enter the groups with and without cycloplegia.