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ASSOCIATION OF PEDIATRIC OPHTHALMOLOGY CLINICS

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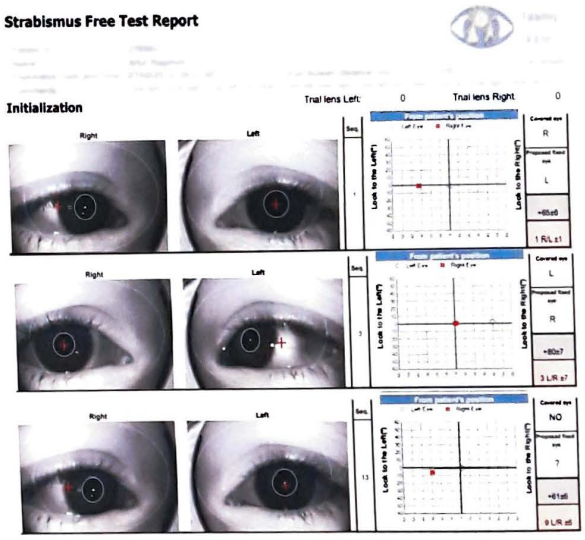
DETERMINATION OF THE STRABISMUS SURGERY DOSAGE ACCURACY USING A NEW TECHNOLOGY

INTRODUCTION

Strabismus needs a complex treatment including accurate diagnostics, surgery dosage and technique, and recovery of fusion and stereo acuity. All this aspects we connect in an innovative system of strabismus treatment called "STRABO care". The aim of this study was to show one of the parts of this system, namely the accuracy of mathematical computer program "Strabo" with the use of high tech technology

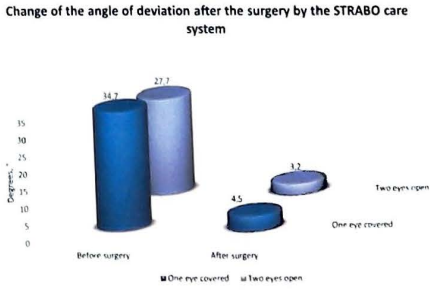


METHODS:

All patients passed standard pre- and postoperative ophthalmologic examinations. Additionally all patients undergone Free or 5-point test before and on the 7th day after surgery.

RESULTS:

11 patients were operated, mean age 5,8 ± 1,5 years. The average value of the deviation with one eye covered was 34,7 ± 12,2 degrees, when two eyes open 27,7±13,9 degrees. Evaluation of the effectiveness of surgery dosage was measured by postoperative angle of strabismus measured by new technology. The average value of the deviation after surgery with one eye covered was 4,5 ± 1,1 degrees, when two eyes open 3,2 ± 0,9 degrees. Mathematical surgery simulation differed from the actual surgical results by only ± 4,7 degrees.



DISCUSSION:

Results obtained after the strabismus surgery correlated with the expected results that was received by "Strabo" program.

CONCLUSION:

A mathematical model of the surgery allows to distribute the surgical effect on both eyes with a high cosmetic and functional result.

REFERENCES: 1. Kushner BJ, Fisher MR, Lucchese NJ, Morton GV. Factors influencing response to strabismus surgery. Arch Ophthalmol. 1993; 111(1); 75-9.