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Service (sector) Glaucoma N° CEP

### **Learning Effects in Frequency Doubling Perimetry**

Larissa Magosso, MD; Felipe A. Gusmão, MD; Rodrigo Lobo, MD; Augusto Paranhos Jr., MD Purpose: To investigate learning effects in frequency doubling technology (FDT) perimetry in subjects with glaucoma who have never undergone testing with FDT. Patients and Methods: 19 eyes of 19 patients from the glaucoma section (UNIFESP) were evaluated by FDT. Inclusion criteria were: Patients who have never performed an FDT examination, did not have any physical impairment preventing testing, and best corrected visual acuity better than 20/60 at least in one eye. Patients were randomly distributed between two groups and had their best visual acuity eye evaluated by FDT examination according to the following schedule with one hour intervals: Group N Test Schedule Strategy Group A 10 A1 First test Screening C20-1 A2 Second test Full threshold C20 A3 Third test Full threshold C20 Group B 9 B1 First test Full threshold C20 B2 Second test Full threshold C20 B3 Third test Full threshold C20 Considering mean deviation (MD) and pattern deviation (PSD), both within (A2 x A3 and B1 x B3) and between (DA3-A2 x DB3-B1) analyses were performed with paired and unpaired T test respectively. Kappa test for presence or not of statistically significant areas for a between agreement analysis was also performed. Results: There were no statistically significant differences (mean difference reported) on the within analysis for both MD (Group A: -0.063dB  $\pm$ 0.915,  $p > 0.05$ ; Group B -1.98 dB  $\pm$ 3.77,  $P > 0.05$ ) and PSD analysis (Group B: 0.851 dB  $\pm$ 2.178,  $p > 0.05$ ; Group B: -0.750dB  $\pm$  2.762,  $p > 0.05$ ). For the between analysis (DA3-A2 x DB3-B1), Group A had a lower difference compared with Group B but this did not reach statistical significance (Group A: 0.063dB  $\pm$ 0.915; Group B: 1.98 dB  $\pm$ 3.77,  $p > 0.05$ ). The agreement regarding significant areas were stronger for Group A (Kappa=0.80;  $p = 0.0049$ ) compared with Group B (Kappa = 0.78,  $p = 0.0082$ ). Conclusion: Performing a screening test before a full threshold could improve the learning effect when agreement was considered.