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Macular Thickness in Insulin-Dependent Patients: Evaluation with OCT

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Introduction: Diabetic patients not showing clinical alterations during routine eye examinations have been studied with OCT to evaluate whether it would be able to show subclinical retinal modifications.

Furthermore, we analyzed whether there is a seat of topographical macular predilection for the alterations and the connection between their onset and the duration of the disease.

Methods or Study Design: 78 Caucasian subjects, aged between 13 and 33, were enrolled. 40 of them were healthy subjects, and 38 were patients affected by insulin-dependent type I diabetes mellitus. OCT scans were performed and macular thickness maps were obtained on all subjects. Macular thickness was compared between diabetic and healthy subjects. Diabetic patients were divided in two subgroups, on the basis of disease duration (\leq / $>$ 16 years), and compared with two age-matched subgroups of healthy subjects. Statistical analysis was performed using SPSS 19.0 for Windows. Mean RT values of different areas were compared using the Student t test. A $p < 0.05$ was considered statistically significant assuming equal variances.

Results: In patients affected by diabetes mellitus for 16 years or less no statistically significant differences could be detected in macular thickness. On the other hand, a statistically significant increase was detected in temporal macular thickness in patients affected by diabetes for more than 16 years. According to medical literature, macular thickness is significantly greater in men than in women.

Conclusions: OCT discloses early subclinical alterations in peripheral temporal macular region in patients affected by insulin-dependent diabetes for more than 16 years. Statistically significant macular thickening could be predictive of disease progression.

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Keywords: OCT, Macular Thickness, Diabetic Retinopathy, Pediatric Diseases.

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Sensitivity and Specificity of Nassar Colour Test in Early Detection of Diabetic Macular Oedema

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Introduction: This study aims to evaluate the Sensitivity and Specificity of Nassar colour discrimination test with the presence of macular oedema in patients with diabetes Mellitus as a sensitive diagnostic tool for the detection of early functional changes.

Methods or Study Design: A Prospective, comparative case control study.

The study included 120 eyes with type I diabetes recruited from the outpatient clinic. All patients examined ophthalmologically and tested with Nassar Colour plate test, FFA and OCT. The Main Outcome Measures is The presence of mild or moderate tritans indicate early DME changes were documented in each group. Student's t-test and ANOVA (f) test were used for statistical analysis. p values less than 0.05 were considered statistically significant.

Results: The 120 patients seen were with type I diabetes. The mean age of the patients was 41.15 ± 5.61 years (range 23–49 years) with a mean disease duration of 13.56 ± 2.59 years (range 10–20 years). All patient with dry macula ($n = 60, 50\%$) were normal while with DME showed normal ($n = 6, 5\%$), mild tritan ($n = 14, 11.66\%$) and moderate ($n = 40, 33.33\%$) the nassar color test is 90% Sensitivity and 100% Specific.

Conclusions: The Nassar color plate is a cheap and effective test to early detect macular edema and recommend to be used in all ophthalmic primary examination especially in areas far away from OCT and FFA.

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Keywords: Nassar Color Test, Diabetic Macular Edema, Color Deficiency.

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Sociodemographic Factors Responsible for Vision Impairment in Diabetic Patients in Beni-Suef Governorate

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Introduction: To evaluate Sociodemographic factors responsible for vision impairment and blindness among diabetic patients in Beni-Suef Governorate.