MACULAR PIGMENT OPTICAL DENSITY IN TYPE 2 DIABETES AND NORMAL CONTROLS; CORRELATION WITH VITAMIN D LEVELS

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AIM

To compare macular pigment optical density (MPOD) in diabetic and non-diabetic patients by using heterochromatic flicker photometry and to investigate the correlation of MPOD with glycosylated hemoglobin (HbA1C), serum lipid levels and vitamin D levels.

METHODS

Sixty-seven patients with 10/0 visual acuity were divided into group 1 (controls, n:35) and group 2 (diabetics without retinopathy, n: 32). MPOD was measured with a heterochromatic flicker method and compared between groups. Diabetes duration, smoking status, HbA1c and serum lipid levels and body mass index were recorded for each patient. The correlation of HbA1C, serum lipid (HDL, LDL, total cholesterol, and triglycerides) and vitamin D levels with MPOD were analyzed in both groups.

RESULTS

The mean (±SD) age in group 1 (48.74 ± 1.568) and group 2 (51.59 ± 1.527) were statistically similar (p> 0.05). Mean MPOD was not significantly different between group 1 (0.5589±0.02183) and group 2 (0.5716 ± 0.023) (p>0.05). No significant correlations were found between MPOD and HbA1C, serum lipid levels or vitamin D levels in both groups (p>0.05).

CONCLUSIONS

Type 2 diabetic patients without retinopathy had not reduced MPOD when compared with non-diabetic patients. No correlation was found between MPOD, HbA1C, serum lipid levels and vitamin D levels.

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