Transient ischemic dilation ratio (TID) correlates with HbA_{1c} in patients with diabetes type 2 with proven myocardial ischemia according to exercise myocardial SPECT

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Objective: Abnormal values of the transient ischemic dilation ratio (TID) according to an exercise myocardial SPECT are linked to severe coronary artery disease. The authors investigated the relationship between TID and the levels of VCAM, ICAM, E-selectin, microalbuminuria, intima-media thickness and HbA_{1c} of diabetic subjects. ***Methods:*** We observed 38 subjects with diabetes type 2 (10 women, 28 men), of average age 56.08 ± 8.24 years, with no past history of cardiovascular disease. All subjects were examined using an exercise myocardial SPECT. Transient ischemic dilation, summed stress score (SSS), summed rest score (SRS) and stress total severity score (STSS) were determined to quantify myocardial ischemia. ***Results:*** The average IMT value was 1.05 ± 0.31 mm. The TID value was 1.02 ± 0.154, VCAM 795.24 ± 163.25 mg/l, ICAM 516.55 ± 164.07, E-selectin 63.82 ± 38.89, HbA_{1c} $7.09 \pm 1.68\%$, microalbuminuria 68.01 ± 55.21 mg/l. When ascertaining the relation of TID to the other factors we used Pearson's correlation at the level of significance $p < 0.05$. We proved a statistically significant correlation between the value of TID and glycosylated hemoglobin HbA_{1c} ($p = 0.035$); the other factors did not show any significant correlation. ***Conclusion:*** Diabetes and its long term unsatisfactory compensation can be one of the factors which affect left ventricular transient ischemic dilation.

Key words: transient ischemic dilation, glycosylated hemoglobin, diabetes mellitus, coronary artery disease