P149 The Relationship Between Insulin Resistance Scores Parameters and Chemerin in Diabetic and Obese Patients

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ABSTRACT

Background: Chemerin represents a recently discovered chemokine influencing adipocyte function, lipolysis, apparently positively associated with insulin resistance.

Purpose: To evaluate the relationship between chemerin-insulin resistance scores in obese/diabetic patients.

Methods: 88 patients (66 women), mean age 61.96 ± 10.15. Cardiovascular risk factors (body weight, waist circumference, lipid fractions, smoking, diabetes, hypertension) and chemerin were assessed. Insulin resistance scores were calculated: Homeostatic model assessment (HOMA) = insulin (μU/mL) * glicemia (mg/dl)/405 and Quantitative insulin sensitivity check index (QUICKI = 1/[lg10 (insulin (μU/mL)) + lg10 (glicemia)]). Patients were categorized in obese only (20.5%), diabetics only (12.5%), obese and diabetics (14.8%) and non-diabetics-non obese (52.3%).

Results: 35.3% patients were obese, 27.3% diabetics, 79.5% hypertensive, 17% current smokers, 67% dyslipidaemic. The values of chemerin registered in the four groups were as follows: in diabetic + obese patients 7.98 ± 7.22 pg/ml (median 5.2), diabetics only 7.27 ± 5.24 pg/ml (5.6), obese only 8.42 ± 7.56 pg/ml (median 5.8), non-obese-non-diabetics 9.15 ± 7.64 pg/ml (median 7.15). Globally chemerin did not correlate with waist circumference, HDL-cholesterol, LDL-cholesterol, glicemia, insulin, HOMA index or QUICKI index. Going further with analysis, no significant correlations were found between chemerin and HOMA index and QUICKI index in diabetic + obese patients, obese only patients, diabetics only. But, in non-obese-non-diabetics significant correlations were found – between chemerin and glicemia ($r = 0.3$), HOMA index ($r = 0.3$, $p = 0.03$), QUICKI index ($r = -0.310$, $p = 0.037$), but not with waist circumference ($r = 0.224$, $p = NS$), HDL ($r = 0.08$, $p = NS$) or LDL ($r = -0.06$, $p = NS$).

Conclusion: Although many things need to be elucidated regarding the chemerin mechanism, it seems very probable to be involved in early insulin resistance.

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