Abstract: P2162

Chemerin in prognosis of heart failure development in hypertensive patients with obesity and diabetes mellitus

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Background: The deterioration of heart function in hypertensive patients with concomitant pathology, particularly with diabetes mellitus type 2 and obesity, is a significant problem of cardiology. Chemerin is a marker associated with inflammation and metabolic syndrome, and possibly can play a significant chain in the development of heart failure signs.
The aim is to find the link between increased chemerin concentration and the deterioration of heart function in obese hypertensive patients with diabetes mellitus type 2 (DM2T).
Methods: 72 hypertensive patients were enrolled (61.8% females and 38.2% female), mean age was 58.73±11.54 years, systolic blood pressure – 156.18 ± 7.7 mmHg, diastolic blood pressure – 92.97 ± 4.51 mmHg, HbAc1 – 7.35 ± 2.41 %, BMI – 32.56 ± 3.11 kg/m2. The serum chemerin level was measured at the beginning and after one-year follow-up period by ELISA.
Results: After 12 months of observation, the groups with decreased 6MWT and without it were compared. The serum chemerin in the heart failure group was 298.75 [212.64 - 393.92] ng/ml and 128.02 [91.82-169.11] ng/ml in the group without heart failure signs (p <0.035) Multivariate logistic analysis revealed a significant effect of chemerin on the development of heart failure after one –year follow-up time (OR: 0.912; 95% CI 0.794 - 0.988; p = 0.039). ROC analysis showed that the level of more than 183.5 ng / ml allows to predict the development of heart failure deterioration, AUC = 0.73, (95% CI 0.53-0.882; P = 0.047), with a sensitivity of 85.7% and a specificity of 63.1%
Conclusions: The increased chemerin serum level is a predictor of heart failure. The study found the possibility of chemerin usage as additional marker for stratification of the obese hypertensive patients with DM2T.