

CORRELATIONS BETWEEN MICROALBUMINURIA, LIPID PROFILE INDICATORS AND C-REACTIVE PROTEIN IN PATIENTS WITH TYPE DIABETES TYPE II AND CHRONIC HEART FAILURE

Zolotaikina V. I., Kravchun P. G.

Kharkiv National Medical University, Kharkiv, Ukraine

Objective: diabetic nephropathy is characterized by proteinuria and suggested to be the leading cause of the final stage of chronic renal failure. This study was conducted to identify the relationship between the level of microalbumin and creatinine in the urine and lipid profile and C-reactive protein (CRP) level in patients with type 2 diabetes mellitus (DM) and concomitant chronic heart failure (CHF).

Materials and methods: 50 patients with compensated type II diabetes with a mean duration of 10.2 ± 1.6 years and concomitant NYHA class I-III CHF were examined, the control group consisted of 20 patients with CHF without diabetes, representative of sex and age. The levels of microalbumin and creatinine, as well as their ratio (M/C) (mg/mmol), lipid profile - total cholesterol (TH), high density lipoprotein cholesterol (HDL), low density lipoprotein cholesterol (LDL), triglycerides (TG) using automatic analyzers. High sensitivity CRP level was measured by ELISA assessment.

Results: M/C in the control group was 0.7 ± 0.02 mg/mmol, in the group of patients with diabetes - 4.1 ± 0.13 mg/mmol ($p < 0.01$). There was a significant increase in the levels of TH (7.07 ± 1.52 mmol / l) ($p < 0.05$), HDL (3.9 ± 0.49 mmol / l) ($p < 0.05$), TG ($2, 12 \pm 0.35$ mmol/l) ($p < 0.01$), CRP (2.9 ± 0.13 mg/l) in patients with type II diabetes compared with patients in the control group. A positive statistically significant correlation of the M/C ratio with the level of HDL ($p = 0.020$, $r = 0.831$) and TG ($p = 0.015$, $r = 0.845$) was established. The remaining lipid profile markers and CRP did not have a reliable correlation with the M/C ratio.

Conclusions: microalbuminuria can be used as a predictor for the early diagnosis of cardiovascular and renal disorders along with the lipid profile markers of patients with CHF to prevent mortality from complications of type II diabetes. The use of the determination of the ratio of microalbumin and creatinine in the urine is recommended as the preferred screening strategy for all patients with type II diabetes.