

THE SIGNIFICANCE OF THE KLOTHO PROTEIN AT THE EARLY STAGE OF DIABETIC NEPHROPATHY

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Klotho is being investigated for its potential as a biomarker for the early diagnosis of diabetic nephropathy in patients with type 2 diabetes. Early detection of diabetic nephropathy is very important to prevent or slow down the progression of kidney damage. Klotho should be studied as a potential biomarker for early diagnosis and risk stratification of diabetic nephropathy.

Research methods

A one-time comprehensive study was conducted for the purpose of early diagnosis of diabetic nephropathy in patients with type 2 diabetes. In order to study the mechanisms of kidney tubules and interstitium damage in the development and progression of kidney dysfunction in patients with type 2 diabetes, the amount of klotho factor and cystatin C in blood serum was examined and studied. Patients with type 2 diabetes with diabetic nephropathy in the early stages of chronic kidney disease were selected for the study. Patients with microalbuminuria were selected for the study.

33 men and 87 women with type 2 diabetes with normal or moderately reduced kidney function, total: 120 patients were examined. The duration of manifestation of type 2 diabetes was 9.8 ± 6.4 years. Renal filtration function was assessed using plasma cystatin C and creatinine levels.

RESULTS

The concentration of cystatin C in the blood serum of the examined control group was 887.05 ± 180.5 pg/ml; If the amount of plasma creatinine was 75.19 ± 8.6 $\mu\text{mol/l}$, cystatin in the blood serum of patients with type 2 diabetes according to the formula $\text{gfr cr-cys C}(\text{ml/min}/1.73 \text{ m}^2)$ in group C2 The concentration of C is 1171.18 ± 119.4 pg/ml; The amount of plasma creatinine was 81.3 ± 13.9 $\mu\text{mol/l}$, and according to the formula of $\text{gfr cr-cys C}(\text{ml/min}/1.73 \text{ m}^2)$ group C 3a patients with type 2 diabetes mellitus, cystatin C in serum concentration 1342.18 ± 169.01 pg/ml; the amount of plasma creatinine was 88.27 ± 15.5 $\mu\text{mol/l}$. According to the gfr cr-cys C formula, the glomerular filtration rate in the control group was 87.69

ml/min/1.73 m², while the average indicators of the glomerular filtration rate of patients in the C2 group were 69.3 ml/min/ was 1.73m² and in group C 3a was 54.9 ml/min/1.73m². We studied the indicators of the amount of klotho in the blood of the control and C2 patient groups with GFR C2 according to the e gfr cr-cys C formula. In the control group, according to the e gfr cr formula, GFR was -87.93 ml/min/1.73m², and the average indicators of the amount of klotho in the blood of this group were 355.34 pg/ml. When we studied patients with GFR C2 according to the e gfr cr-cys C formula, the average GFR values were 69.3 ml/min/1.73m², and the average indicators of the amount of klotho in the blood of these patients were 295 was pg/ml.

CONCLUSION

According to the results of the study, in patients with diabetic nephropathy, in the early stages of chronic kidney disease, the amount of klotho is lower than in the control group, and the amount of klotho decreases in accordance with the decrease in the rate of glomerular filtration. shows that it is important in diagnosis.

Klotho is a protein with potential therapeutic effects and may serve as a biomarker for early detection and risk stratification. This factor provides valuable insights into Klotho as a potential target for interventions to preserve kidney function.

