

# Significance of the Early Marker of Nephrine Diabetic Nephropathy of the Uzbek Nationality with the First Type of Diabetes Mellitus.

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According to the data of the 8th publication of the International Diabetes Federation IDF (2017), the overall number of the patients with DM 1 under 20 years old has increased to 1 million 106 thousand people, including - 586 thousand of children (aged <15 years old). The highest priority hazard of DM is associated with its vascular accidents, in particular, with diabetic nephropathy (DN) progressing with 30–40% of DM 1 and DM 2 patients and leading among the causes of the terminal kidney failure (TKF) around the globe.

## Goal of Research

to assess the significance of the early marker of nephrine diabetic nephropathy of the Uzbek patients with the First Type of diabetes mellitus.

## Materials and Methods

Materials and Methods: 100 patients with DM 1 were examined, including 80 patients with normoalbuminuria (NAU) and 20 patients at the microalbuminuria (MAU). The patients were from 1 to 14 years old with the disease duration from 1 to 5 years. They included 48 boys and 52 girls. 10 healthy children formed control group. Nephrine was identified by immunoenzyme method in the micro-flatbed format with the help of ELISA automatic device (USA). The normal range of nephrine in the blood serum are equal to 0.36 – 0.64 ng/ml.

## Outputs and their Discussion.

The patients under examination were split by two groups: 1st group with normoalbuminuria and 2nd one with microalbuminuria. The analysis of the clinical and anamnestic data demonstrated that 42.5% of examined patients had DM inherited burdening, at that, this indicator in the group with microalbuminuria accounted for 50%, and with normoalbuminuria - 35%. The diabetes duration in the 1st group was equal to  $4.57 \pm 0.50$ , and in the 2nd one –  $4.75 \pm 0.60$  years. The mean glomerular filtrate rate (GFR) was equal to 72.1 ml/min which corresponds to the second stage of the chronic kidney disease. According to the lipid metabolism, in particular, the triglycerids' level in the group with microalbuminuria was equal to  $2.07 \pm 0.41$ , statistically valid exceeding the level in the first group –  $0.89 \pm 0.13$  ( $p < 0.05$ ). Nephrine level in the core group was equal to  $0.65 \pm 0.06$  ng/ml statistically valid exceeding the level in control group, i.e.,  $0.45 \pm 0.05$  ( $p < 0.05$ ). Obtained results demonstrate that nephrine identification at the normoalbuminuria stage is the early marker of the kidney damage

## Conclusions

1. Clinical and anamnestic data demonstrated that DO manifestation rate does not always depend on DM duration.
2. The lipid metabolism indices, in particular, triglycerids' level aggravate together with progressing of manifestation of diabetic nephropathy.
3. Nephrine identification with 32.5% of the patients with 1st type DM at the NAU stage indicates the possibility of this protein application as DM early predictive marker.

## Indicators of nephrenemia in patients with NAU

■ Nephrenemia ■ Without nephrenemia

