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## **Prediction criteria for diabetic nephropathy in children with type 1 diabetes**

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**Objectives:** Determine the clinical and functional characteristics of kidney damage in type 1 diabetes mellitus (DM) in children to establish criteria for predicting and early diagnosis of diabetic nephropathy (DN).

**Methods:** 125 children 4-18 years old with type 1 diabetes were examined in accordance with federal clinical guidelines for the management of children with type 1 diabetes. Renal function was assessed by determining the serum concentration of cystatin C and calculating the glomerular filtration rate (GFR) using the Hawke formula. The subjects were divided into 2 groups. The first included 29 children with DN. The comparison group was composed of 96 patients with type I diabetes, but without signs of renal damage.

**Results:** In most patients with type 1 diabetes with DN, the median age was 2.5 years higher than in the comparison group 16.5 [10.0 - 16.0] versus 14.0 [10.0 - 16, 0] ( $p < 0.01$ ). The duration of diabetes in patients with DN is twice as high: 10.5 years [8.0 - 13.0] versus 5.0 [3.0 - 8.0] in the comparison group,  $p < 0.005$ . In half the cases, the manifestation of its clinical manifestations was noted up to 5 years of life. DN is 100% combined with other complications of the disease: neuropathy, retinopathy. Patients with DN are characterized by lower birth weights: 3100 [2800 - 3400] g. against 3280 [3100 - 3600] gr. and mass-growth index: 60.0 [56.3 - 63.0] g / cm versus 63.9 [60.4 - 67.3] g / cm,  $p < 0.005$ .

**Conclusions:** Risk factors for the formation of DM in children are over 15 years of age, the duration of the disease is more than 10 years, the presence of neuropathy, retinopathy, cataracts and a combination of these complications, low growth, arterial hypertension, and violations of the lipid spectrum of blood plasma.