

Assessment of serum concentrations of adropin, afamin and neudesin in children with type 1 diabetes

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Introduction:

The increasing knowledge of regulatory peptides, glucose metabolism and insulin resistance allows for the assessment of the differences in their concentrations between the groups with varied duration of diabetes mellitus (DM). Most studies assessing the relationship of adropin, afamin and neudesin with glucose metabolism provide data obtained from research conducted on animal models, adults with type 2 diabetes and women with gestational diabetes. There are only few studies concerning these relationships in children.

Aim of the study:

Assessment of serum levels of adropin, afamin and neudesin in children with type 1 diabetes, with respect to the disease duration.

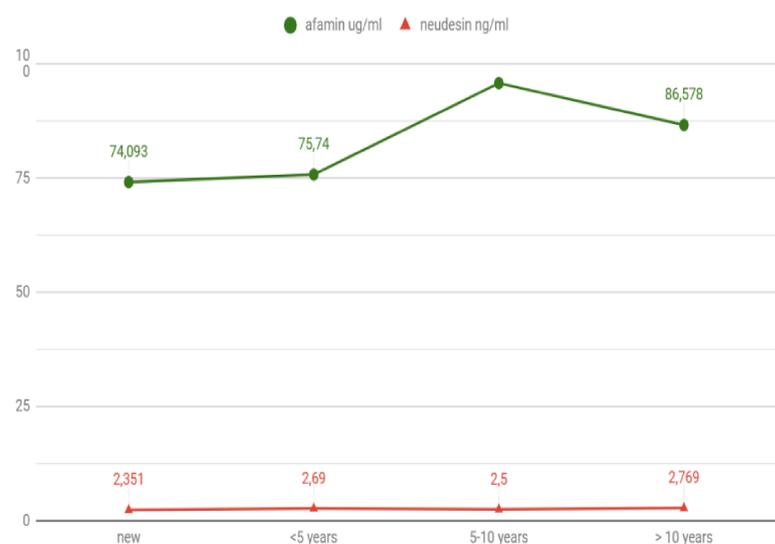
Material and methods:

The study consisted of 138 patients aged 5-18 years (M 40.58%). Children with type 1 diabetes (n=68) were compared to the control group (n=70). The diabetic group was divided into 4 subgroups: (I) newly diagnosed patients, after an episode of ketoacidosis (n=14), (II) duration no longer than 5 years (n=18), (III) 5 to 10 years (n=27) and (IV) longer than 10 years (n=9). We used ELISA to measure serum concentrations of adropin, afamin and neudesin in the patients. The criterion for statistical significance was $p < 0.05$.

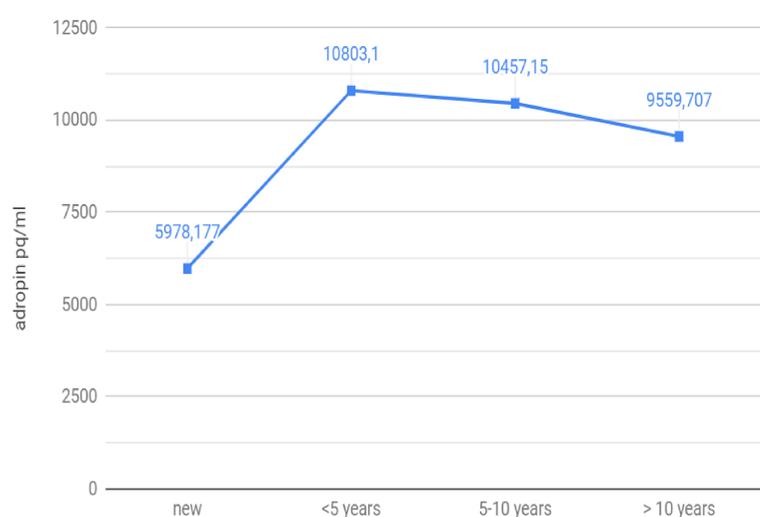
Results:

The mean levels of adropin and afamin in all subgroups were lower than in the control group and fluctuated during the course of the type 1 diabetes. The mean levels of adropin and afamin were lower in newly diagnosed children than in those with the longest disease duration. Whereas the mean level of neudesin remained stable over the disease progression and was higher than in the control. The differences were statistically significant.

afamin ug/ml i neudesin ng/ml



adropin pq/ml



Conclusions:

The levels of adropin and afamin may be associated with the time of current type 1 diabetes and may change during its course. There is a need for more research connected with this subject.

