INDICATORS AND CAUSES OF ENDOCRINE DISEASES IN CHILDREN

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Throughout the world, endocrine system diseases in children attract the attention of researchers of different specialties, as this pathology is characterized by a long course and subsequent non-developing complications that worsen the quality of life and health prognosis of children and adolescents. The prevalence and structure of endocrine pathology in childhood and adolescence are significantly different from those in adults. The study of the laws of development of this pathology and its consequences among children is important for the planning and implementation of measures to improve endocrinology care, improve the prognosis of children and adolescents, their social adaptation.

According to the state statistics of diseases in Tashkent among children aged 0-12 years, endocrine system diseases are 3.7%, and among adolescents aged 13-16 years – 12.1% (2020). In recent years, there has been a steady increase in the pathology of this class of diseases among children of all age groups: in 2020-2021, the incidence of treatment increased 2.8 times, among adolescents – 3.6 times. By 2021, the incidence among children aged 0-12 was destabilizirovatb, but among teenagers 13–16 years it grew by 8.4%.

The incidence of endocrine diseases in 2016 per 100 000 population was 1863,87, 2021 year 4515,67, that is (2016-2021 years) increased by 58,7%, in children this indicator respectively 2016 year 2890,85; 2021 year 5916,11 that is 48,8% increased. Among the identified pathologies in boys, with restrictions slujbe in the army, with the addition of endocrinocytes disease and metabolic disorders sostavili10,9%, finishing in fifth place after psychiastrist and behavioral disorders (22,4%); diseases of the musculoskeletal system (21.4%), eye and adnexa (13.1%); respiratory (12.2%).

In the structure of endocrine pathology in children in the city of Tashkent is more prevalent diabetes (12.0 percent), iodevicetree condition (goiter) (40,0%) and obesity (20,0%) (Fig-1.1.). These diseases account for 72.0% of all endocrine pathologies in children.
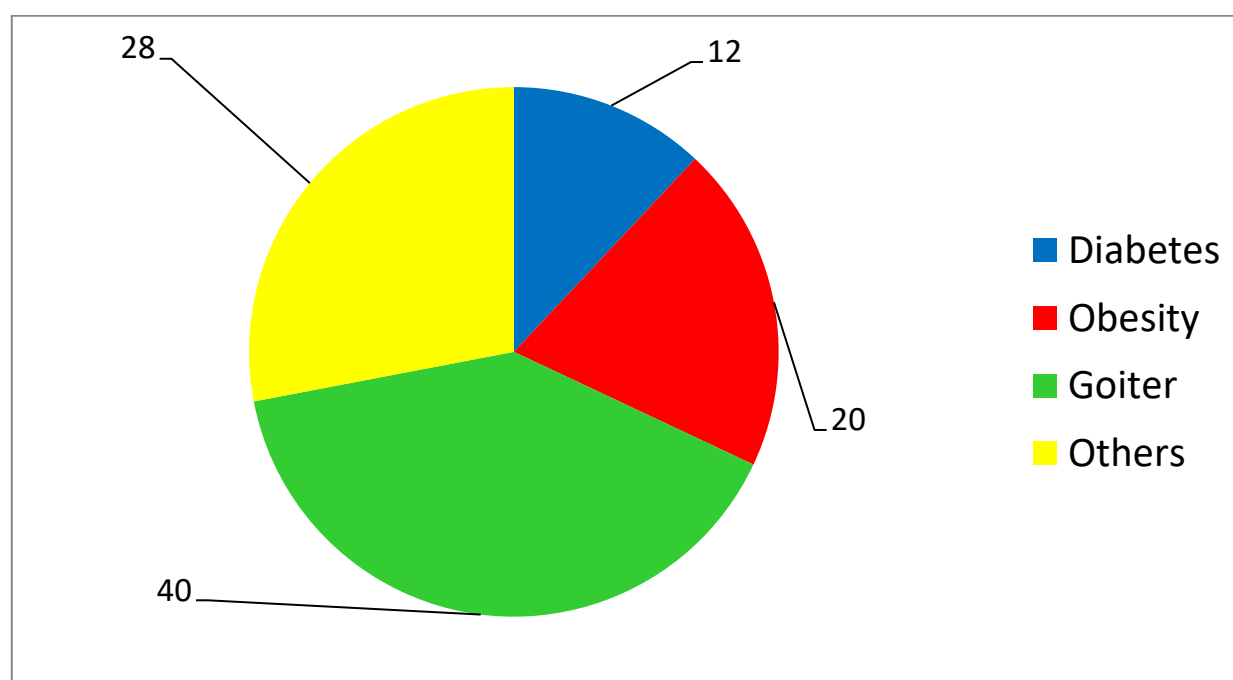

Fig-1.1. Structure of endocrine diseases in children of Tashkent

Diabetes

Among the diseases of the endocrine system the most important medical and social problem of modern society is diabetes mellitus (DM). This is due to the progressive increase in the number of patients,the threat of early disability and a decrease in life expectancy due to the development of severe vascular complications, no hematogenetic methods of treatment and prevention. The DM remains a heavy burden for the national health services of all countries of the world. Despite the adoption of most of the national programmes to combat diabetes, the prevalence rate is increasing annually by 6-10% among the population of different age groups.

WHO estimates that the incidence of diabetes is escalating into a global epidemic. In the world registered 177 million people with diabetes, including 10 million children and adolescents; the number of new cases is doubling every 15 years. By 2025, according to forecasts of experts, due to increased longevity, obesity, sedentary lifestyle, changes in the nature of nutrition, the number of patients can reach 250 million. Many researchers believe that these data are underestimated, as about 50% of patients with diabetes remains undiagnosed, and therefore, these people do not receive any sugar-lowering therapy, as a result they develop ironic hyperglycemia and dyslipidemia, which creates favorable conditions for the development of vascular complications of diabetes.

More than 90% of children and adolescents with diabetes suffer from type 1 diabetes mellitus (DM1). The smaller part of the disease diabetes mellitus type 2nd (DM1) with an unusual beginning in childhood or adolescence. Even less common are other rare conditions.

In high-risk regions, the incidence of new cases of DM1 is higher among males. In addition, seasonal fluctuations in the incidence rate were recorded in these regions. The highest frequency of newly detected cases of DM1 falls on the autumn winter-spring months, which coincides with the maximum incidence of viral infections. There are two age peaks of morbidity. One peak occurs at the age of 10-12 years, and the smaller peak occurs at 5-7 years. In regions with high incidence observed tendencies increase the frequency of diseases of children at an early age (0-5 years).

According to the results of epidemiological studies of the incidence and prevalence of T1DM in children and adolescents on 1.01.2014 g. the average of the Republic of Uzbekistan, the prevalence of T1DM accounted for 55.3 (24,9–90,6), the incidence of 9.2 (3,4–14,1), the mortality of 0.08 (0-0,26) per 100 thousand of child population of respective age. The morbidity rate increased by overgrowth and was the highest among children aged 10-14(12.45 per 100 000 children). The incidence was high among the rural population (10,3 against 8,9 per 100 thousand children). In General, the main epidemiological indicators for RUz were close to average in the world.

The prevalence of diabetes among the population of Tashkent increases, as well as adults, and among children and adolescents. Thus, if the incidence in 2015 in children was 6.52, in 2020 this figure increased to 9.66 per 100,000 children of the appropriate age.

In 2021, the prevalence of type 1 diabetes in Tashkent was 1,546.0 (per 1,000 population 0.5 cases).

Tab-1
In 2020, the prevalence of diabetes in Tashkent

	Diabetes type 1		Diabetes type 2		Total	
	Abs.	Per 100 thousand population	Abs.	Per 100 thousand population	Abs.	Per 100 thousand population
Children	116	14,52	-	-	116	17,52
Teenegers	47	17,62	-	-	47	17,62
Adults	1383	77,177	11 760	654,75	13 143	731,75
Total	1 546	109,317	11 760	654,75	13 306	765,57

The Diabetes type 1 has caused more deaths in the last 10 years than in all wars (WHO, 2006). The main cause of death of patients with diabetes before insulin was comatose state (47.7%) and vascular lesions (22.6%). Insulin therapy changed this ratio: the 1st place as the cause of death were late complications of diabetes-mainly microangiopathy and macroangiopathy.

Mortality among children with Diabetes type 1 varies from 0 to 0.2 per 100 000 children in different countries. On average, 30% of all deaths are due to acute complications (comatose States), late diagnosis of diseases, or improper treatment. National research on the causes of death at Diabetes type 1,conducted in England, showed that the greatest number of patients aged 1-4 years. Precieusement the majority of children (83%) were hyperglycemic coma ketoatsidoticheskaya in 8% of cases –hyperglycemic coma. In 70% of children aged 12 years, the death occurred due to swelling of the brain (incorrect treatment tactics).

Who experts cite that the average life expectancy of patients with Diabetes type 1 is less than half of the average life expectancy of a healthy person. According to epidemiological studies, life expectancy is about 30 years on average, i.e. 50% of the population in the case of the development of childhood ADHD. In patients with later onset of diabetes (after 20 years) life expectancy is about 70% of such a healthy person.

Studies have shown that endocrine diseases are now more common among children, the need to take active measures to improve the living conditions of children, first of all, to develop targeted measures aimed at increasing the medical activity of families in protecting and strengthening the health of children.

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