World Bulletin of Public Health (WBPH)
Available Online at: https://www.scholarexpress.net
Volume-19, February 2023
ISSN: 2749-3644

FEATURES OF THYROID GLAND FUNCTION IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

Togaeva Gulnora Siddikovna
Samarkand State University Medical University
Assistant of the Department of Endocrinology
E-mail: gulnora.togaeva1981@ mail.ru
Abduganiyeva Malika Bekzod kizi.
Samarkand State University Medical University
faculty of medical 1st year 130 group
E-mail: abduganiyevamalika030329@ mail.com

Article history:

Received: December 8th 2022
Accepted: January 8th 2023
Published: February 10th 2023

Abstract:

Currently, diseases of the thyroid gland (thyroid gland) in their prevalence occupy the first place among endocrine pathology. According to the results of the largest epidemiological studies, the prevalence of hypothyroidism in women is 4-21% and 3-16% in men and is characterized by a significant increase in its frequency among older people [4,5]. In women, subclinical hypothyroidism occurs 2 - 2.5 times more often than in men. The prevalence of subclinical thyrotoxicosis, according to various studies, varies from 0.6% to 3.9%, depending on the sensitivity of the method used to determine TSH and the iodine supply of the region. The prevalence of diffuse toxic goiter in the general population is relatively high and reaches 1-2% [2].

The level of TSH in the blood is an objective reflection of the existing iodine deficiency. Interesting is the research on screening programs conducted in various countries of the world, which can be used to judge the frequency of congenital hypothyroidism and the adequacy of iodine provision. With manifest hypothyroidism, cardiovascular diseases often occur and progress faster. [8]. As is known, the presence of thyropathies in women aged 40-55 increases their risk of developing diabetes mellitus over the next five years, especially in the presence of progressive obesity in combination with hyperglycemia, bilateral ovariectomy and burdened heredity for obesity, hypertension and diabetes mellitus [1]. The thyroid gland itself also suffers from insulin resistance syndrome. Increased circulating insulin levels cause increased thyroid proliferation. Clinical manifestations are a larger volume of the thyroid gland and the formation of nodules. A pronounced relationship between insulinore was revealed.

Keywords: Type 2 diabetes mellitus, thyroid gland, women, glycohemoglobin, atherosclerosis, hormone.

THE PURPOSE OF THE STUDY. To assess the functional state of the thyroid gland in patients with diabetes mellitus.

MATERIALS AND METHODS OF RESEARCH: The study was conducted on the basis of the Department of Endocrinology of SamGosMU. The study included 160 patients aged 20 to 60 years, including 100 women and 60 men. All patients were divided into 2 groups: group 1 consisted of patients with thyroid dysfunction without a diagnosis of diabetes mellitus (73 patients), group 2 – patients with thyroid dysfunction and diabetes mellitus (87 patients). All patients underwent the following studies: to study thyroid function, the level of thyroid-stimulating hormone (TSH) and thyroxine (T4) in the blood were determined. For diabetes mellitus, the following were studied: fasting glycemia level, glycohemoglobin blood lipidogram, waist circumference measurement, and blood pressure measurement.

THE RESULTS OF THE STUDY: The analysis of thyroid function in men and women with the presence and absence of criteria for diabetes mellitus was carried out. In the examined patients with diagnosed type 2 diabetes mellitus, the average TSH levels were 2.7 ± 0.4 mEd/l, which is significantly higher than in men and women without DM, TSH - 1.6 ± 0.1 mEd/l ($p<0.05$). Further, the analysis of the nature of changes in the mean values of TSH, T4, in the presence of individual components of diabetes mellitus was carried out. When assessing TSH, T4 indicators at different values of OT, it was revealed: in men, at any values of OT, the

World Bulletin of Public Health (WBPH)
Available Online at: https://www.scholarexpress.net
Volume-19, February 2023
ISSN: 2749-3644

average values of TSH, T4 did not significantly differ, in women with abdominal obesity, T4 was significantly higher at values of >88c m (97.4 ± 2.1 nmol/l) than at <88 cm (89.9 ±1.9 nmol/l) (p=0.01). In women, a positive correlation was determined between OT and T4 g = 0.170*, (p<0.05), no such data were obtained in men. No correlation was found between the TSH level and blood pressure indicators in the correlation analysis. The absence of a correlation between TSH levels and blood pressure levels is probably due mainly to the euthyroid state of the majority of the examined. When analyzing the average values of TSH, T4 and OHS indicators, the average TSH level at OHS >6.0 mmol/l was 2.3 ± 0.3 mEd/l, and at OHS levels - <5.0 mmol/l (1.3 ± 0.2) (p =0.046). In the group of examined patients with the level of OHC >6.0 mmol/l, the average index4 was 90.6±1.4 mEd/l, than at the level of OHC - 5.0 - 5.9 mmol/l (96.2 ± 2.2 mEd/l) (p= 0.025). When assessing the average values of TSH, T4 levels, according to the levels of TG, LDL-C, HDL-C, it was found that at TG levels >1.7 mmol/l, the TSH content in the blood averaged 2.6 ± 0.5 mEd/L, which is significantly higher than in individuals with TG levels <1.7 mmol/l - 1.6 ± 0.3 mEd/l (p=0.03). The correlation analysis revealed a weak positive relationship between the level of OHS and TSH g = - 0.127* (p<0.05). There is a weak negative relationship between OHS and T4 g = - 0.12* (p<0.05). Between the level of HDL-C and T4 g = -0.147* (p<0.05). In the study of glycemia, the average T4 values in individuals with blood glycemia >7.1 mmol/l (97.8 ± 2.9 nmol /L), with blood glycemia <8.1 mmol/l (91.7 ± 1.4 nmol/l) (p < 0.05). There are also significant differences in T4 indicators (95.7 ± 1.7 nmol/l) in both sexes with blood glycemia >5.6 mmol/l and in the group without increased blood plasma glycemia (92.1 ± 1.3 nmol/l) (p <0.05). We have analyzed all possible combinations of the other two components of diabetes mellitus. The highest average TSH values were found in combinations of +LDL-C+ TG; + AG + TG and + TG + HDL-C, which significantly differed from the average TSH values in patients without DM. The average TSH values in the presence of these combinations were in the range of 2.6-3.1 mEd/l. At the same time, the highest indicators.

CONCLUSIONS. Thus, summing up our study, we came to the conclusion that in patients suffering from diabetes mellitus, the average TSH level is higher than in people of the same age without type 2 diabetes mellitus, and with an increase in the number of components of diabetes mellitus, there is a decrease in the functional activity of the thyroid gland. The data obtained may recommend the determination of TSH levels in patients with type 2 diabetes mellitus to exclude functional pathology of the thyroid gland.

REFERENCES:

1. Abrarova D. L., Negmatova G.Sh., Togaeva G.S. "Clinical and functional course in patients with type 2 diabetes mellitus with autonomic neuropathy". // The American Journal of Academic research. // Volume 2. (5) Pp. 409-415. 2022
2. Narbaev A.N. Togaeva G.S. "The Use of daily continuous glucose monitoring in clinical practice". //The American Journal of medical sciences and pharmaceutical research. // Volume 2. Issue 9. 2020.Pp. 82-85
3. Oripov F.S., Togaeva G.S. "Prevalence of diabetic foot in patients with type 2 diabetes mellitus in the Samarkand region" //Biomedicine va amaliyot journal. Gild 7. Dream 5. pp. 143-147. Toshkent 2022
4. Toshpulatova N., Togaeva G.S., Narbaev A.N. "The disease and condition associated with iodine deficiency are one of the main problems faced by the world of medicine." // Achievements of science and education.// 3(44). Pp. 86-88. 2019.
5. Davranova A.D., "Specificity of menstrual cycle disorders in adolescent girls with thyroid pathology B'lgan". // Eurasian Journal of Medical and Natural Sciences / / Tom 2. № 8. STR 113-115.2022
6. Togaeva G.S., Juraeva Z.A.."The functional state of the pituitary-adrenal system in obese young men". // Eurasian Journal of Medical and Natural Sciences // Volume 2. No. Pp. 182-185. 2022
7. Negmatova G.Sh., Togaeva G.S., Davranova A.D., Muminov O.B. "Features of autoimmune thyroiditis in an iodine-deficient region". //Scientific progress // Volume 3. No. 1. Pp. 356-359. 2022
8. Khamraeva A.S., Togaeva G.S., Kurbanova N.S., Karimova N.A. "Autoimmune thyroiditis in a hot climate".//Actual aspects of medical activity//. Pp. 246-249. 2020