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**IDENTIFYING PRIORITY ENVIRONMENTAL PROBLEMS IN ANDIJAN REGION**

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**Abstract:** Changes in heart rate variability, identified using the cardiorythmography method, indicate the severity of autonomic disorders, characterized by a sympathetic-parasympathetic imbalance with a predominance of sympathetic and suprasedgmental autonomic influences, as well as a violation of adaptive mechanisms in patients with HT; these changes are more pronounced in females. In both groups there was a large percentage of patients with such symptoms - 89.1% and 80.7%, respectively, in MG and SG.

**Key words:** brain, cranial nerve lesions, hypothyroid myopathy, myotonic phenomenon.

**Relevance.** Hypothyroidism is defined as a clinical syndrome caused by a persistent borderline decrease in the level of thyroid hormones in the body, when a normal level of peripheral thyroid hormones is determined in combination with an increased level of thyroid-stimulating hormone (TSH) [1,4,8,9,10,11,21,22]. Most cases of persistent hypothyroidism develop as a result of autoimmune thyroiditis (AIT); sometimes the syndrome may have a different etiology [2,3,6,7,18].

Hypothyroidism is a significant socio-medical problem, which is associated with its wide prevalence, increasing incidence, the possibility of developing systemic manifestations and transition to the manifest form of hypothyroidism, decreased quality of life, association with other diseases with their aggravation, adverse effects on the course of pregnancy and the condition of the fetus, prognostically negative long-term consequences, especially cardiovascular ones [19,20,24].

The prevalence of hypothyroidism varies from 4 to 10%, depending on gender, age and other characteristics of the population studied [2,3,6]. According to some data, the frequency of its detection can reach 17% and even 20%, and women are affected several times more often than men [2,5,12,13]. In recent years, there has been a tendency to increase the incidence of FH, including among the population of Uzbekistan, in all age groups.

The prevalence of hypothyroidism in various population groups on the planet ranges from 1.2% to 15% and depends on many factors [19,20,24]. According to epidemiological studies, the prevalence of hypothyroidism in Uzbekistan is higher than in Russia, the USA and Europe - 12-15% versus 4.5-5%, respectively [7,18]. However, the results of individual studies differ significantly from each other. Thus, according to the Wickham study (Great Britain, 2779 patients), the prevalence of HT among those examined was 8% for women and 3.5% for men ( $p < 0.05$ ). In the Colorado study (USA, 25,686 people), the prevalence of SCH in the study group without regard to gender was 9.5%. In the NHANES III study (USA, more than 16 thousand patients) – 4.5%.

The possibility of the appearance of clinical symptoms of hypothyroidism even with minimal thyroid insufficiency has been shown by many scientific works. A large Colorado study of 25,865 participants confirmed a small but statistically significant difference in the presence of symptoms between individuals with hypothyroidism and euthyroidism, especially in such manifestations as dry skin, memory loss, slow thinking, muscle weakness and cramps, fatigue, chilliness, swelling around the eyes, hoarseness, constipation [1,4]. In particular, when comparing patients with hypothyroidism with TSH less than 10 mU/l and healthy individuals, it

was found that patients with minimal thyroid insufficiency complain of fatigue significantly more often [14,15]. The possibility of eliminating subjective manifestations during levothyroxine replacement treatment (LLT) in patients with hypothyroidism remains a subject of debate [16,17,23].

Systemic manifestations of hypothyroidism affect a number of organs and metabolic processes, affecting the nervous, cardiovascular and other systems, as well as hematopoiesis, iron metabolism, oxidative and other metabolic changes.

However, there is still no consensus on the characteristics of nervous system damage in patients with hypothyroidism depending on gender. All of the above shows the relevance of the problem and the advisability of studying it in the clinic.

**Purpose of the study:** To identify the characteristics of damage to the nervous system and the level of quality of life in primary hypothyroidism depending on gender.

**Material and methods.** 78 patients with primary hypothyroidism (HT) were examined. The study included only patients aged from 18 to 59 years, average age  $38.2 \pm 17.6$  years, observed in the department of neurology and endocrinology of the ASMI clinic. All subjects signed informed consent to participate in the study. The duration of hypothyroidism at the time of the initial examination ranged from 6 months to 30 years (patients with hypothyroidism experience of 5 to 10 years predominated). The inclusion criteria for the study were: age from 18 to 59 years, the presence of autoimmune thyroiditis (AIT) and compensated manifest or subclinical hypothyroidism. The average age of women was  $42.1 \pm 11.7$  years, men –  $48.2 \pm 8.3$  years ( $p > 0.05$ ). It is obvious that with age the number of patients with hypothyroidism syndrome increased. The control group consisted of 20 healthy individuals comparable to the main groups by gender and age. During a comprehensive clinical examination of patients, the following were used: generally accepted clinical examination of somatic and neurological status, laboratory, ultrasound and neuroimaging examination methods.

Research results and discussion. In group I of patients with hypothyroidism (women), polyneuropathy was an almost obligate syndrome and occurred in 81.8% of cases (45 people). In group II, 69.6% of patients had polyneuropathy. This indicator is significantly lower than the indicator in the female group ( $p < 0.05$ ).

It should also be noted that a mild form of polyneuropathy predominated in men - 43.5% of cases, in women this figure was 40.0%, no significance was found. But moderate polyneuropathies were significantly more common in women compared to men: 41.8% versus 26.1% ( $p < 0.05$ ).

Among female patients (group I), tunnel neuropathies were detected in 72.7% of cases (40 people). The average To index in the examined patients was  $2.31 \pm 0.70$  points. In men, clinical signs of this pathology were detected less frequently and amounted to 56.5% (13 people), ( $p < 0.05$ ).

In patients with primary hypothyroidism, carpal tunnel syndrome was generally more common than others. Its clinical manifestations in group I were noted in 69.1% of cases (38 people). The second most common syndrome was Guyon's canal syndrome (54.5%). In all examined patients, this syndrome was observed in 44.8% of cases (45 people). In terms of frequency of occurrence, cubital tunnel syndrome ranked third among tunnel neuropathies in patients with primary hypothyroidism. Of the 78 patients examined, this syndrome was observed in 39.7% of patients (31 people). Tarsal tunnel syndrome was the rarest.

According to the results of a clinical electroneuromyographic (ENMG) study, sensory polyneuropathy in group I patients with MHT was diagnosed in 22 (31.9%) patients, sensorimotor polyneuropathy in 42 (60.9%).

In the group of patients of group II with OHT, sensory polyneuropathy was diagnosed in 15 (26.8%) patients, sensorimotor polyneuropathy in 32 (57.1%).

Comorbid diseases were studied in patients with HT. Among patients with HT in general, 61.5% of patients had concomitant diseases, a significant proportion of the examined patients - 31 (39.7%) - had 3 or more different concomitant pathological conditions. The average number of comorbidities per hospitalized patient was  $2.36 \pm 0.7$ . We have established the dependence of the average number of concomitant diseases among patients with HT on the gender and age of the patients.

In patients of group I, diseases such as hypertension, cerebrovascular diseases, metabolic syndrome, and diabetes mellitus were more common compared with patients in group II - 27.3%, 27.3%, 30.9%, 16.4% versus 21.7%, 17.4%, 26.1%, 17.0% respectively. In group II, there was more often comorbid pathology such as COPD and gastrointestinal diseases 17.4% and 39.1% versus 12.7% and 30.9%, respectively.

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ENMG study in groups of patients revealed a number of disorders, most pronounced in the nerves of the lower extremities. In both groups, a statistically significant, compared to the control, decrease in the amplitude of the M-response and an increase in residual latency were determined. The results of the analysis of motor units in both groups showed that the primary muscle type of lesion was determined in all muscles studied. This was evidenced by a pathological shortening of the duration of the MUAP, with a shift of the duration histogram to the left, towards smaller values. This confirmed the results of the clinical study, in which all patients showed signs of myopathies.

**Conclusions:** The pattern of organic brain damage depends on the form of primary hypothyroidism and gender. In female patients with MHT (neurological symptoms were more pronounced in scores compared to male patients with MHT. Pyramidal symptoms and CN lesions were observed in 41.7% and 61.1% of cases in women with MHT, in men these indicators were 30.8% and 38.5%, respectively ( $p < 0.05$ ). In women with HT, polyneuropathy was an almost obligate syndrome and occurred in 81.8% of cases (45 people). In men, 69.6% of patients had polyneuropathy. This indicator is significantly lower than the indicator in the female group ( $p < 0.05$ ). The predominance of cubital canal syndrome among women was established - 47.2% (26 people), compared with the group of male patients in whom this syndrome was observed in 34.8% of cases (8 people).

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