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FEATURE OF CLINICAL AND NEUROLOGICAL SYMPTOMS OF PATIENTS WITH DISCIRCULATORY ENCEPHALOPATHY ON THE BACKGROUND OF THYROID DYSFUNCTION.

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Abstract: With age, a comorbid background of many chronic diseases joins, this is arterial hypertension, diabetes mellitus, heart failure and renal failure, is no exception, quite frequent, both pronounced and with a slight increase in thyroid hormone - hypothyroidism.

Keywords: chronic diseases, hormone replacement, thyroid hormone.

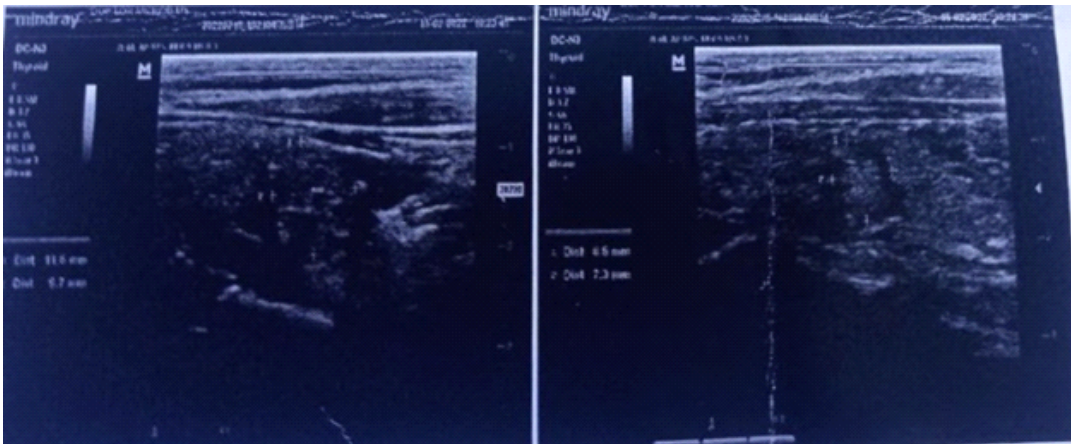
Many literary sources . do not associate a slight elevated level of thyroid hormone (TSH) with clinical changes occurring in old age, believing that the symptoms characteristic of hypothyroidism are similar to those of chronic cerebrovascular accident (4, 3, 5). Doctors in the UK, who conducted a thorough analysis of the treatment of the so-called subclinical forms in the elderly, found insufficiently effective use of therapy as a hormone replacement (levocarnitine , levothyroxine) (Leng O., Razvi S., 2019). Also, there are data that generally do not recommend any concomitant treatment with thyroid hormones, so as not to cause harm to the body (Hennessy J.V. , Epaillab R., 2016). According to statistical indicators, hypothyroidism in people over 65 years of age occurs in the context of 9-20%, among the older population (1, 4, 8). There are features of manifestations associated with thyroid disorders in the elderly. First of all, they are clinically masked and slowly growing, difficult to recognize by clinical signs due to signs of natural aging (2, 7, 9). Difficulty in diagnosis still exists, due to multiorganism with other leading health indicators, high blood pressure, heart failure, etc. (3, 6, 7, 10). The structure of the thyroid gland acquires changes in the form of nodes with age, which requires additional diagnosis, that is, it is not possible to rely only on laboratory parameters of thyroid hormones (Makar R.D., 2007). But the most unpredictable change, in principle, because of which it is worth being interested in detecting hypothyroidism, is its complications on all organs and systems, slowing down the metabolic process, the process of the redox reaction in the body (2, 6, 7, 9). The central nervous system is very sensitive to a deficiency of thyroid hormones where there is a violation of the effect of TSH on the mechanism of neurotransmission (Panchenkova L.A. et al ., 2005). As a result, a decrease in intelligence, memory, attention, astheno -depressive disorders (Mikhailova E.B., 2006). Thus, hypothyroidism in the elderly has a negative impact on health, increasing the risk of developing dementia, and additional research is needed to identify the pathogenetic mechanisms and the interaction of TSH with the age aspect.

Target. To study the features of cognitive and psycho-emotional changes in the elderly with identified thyroid disorders.

Material and research. The examination included 58 patients diagnosed with dyscirculatory encephalopathy, whose age exceeded 65 years. Patients received inpatient treatment at the Samara State Medical University for the period 2020-2023. In addition to the standard examination, which included clinical and neurological examination in

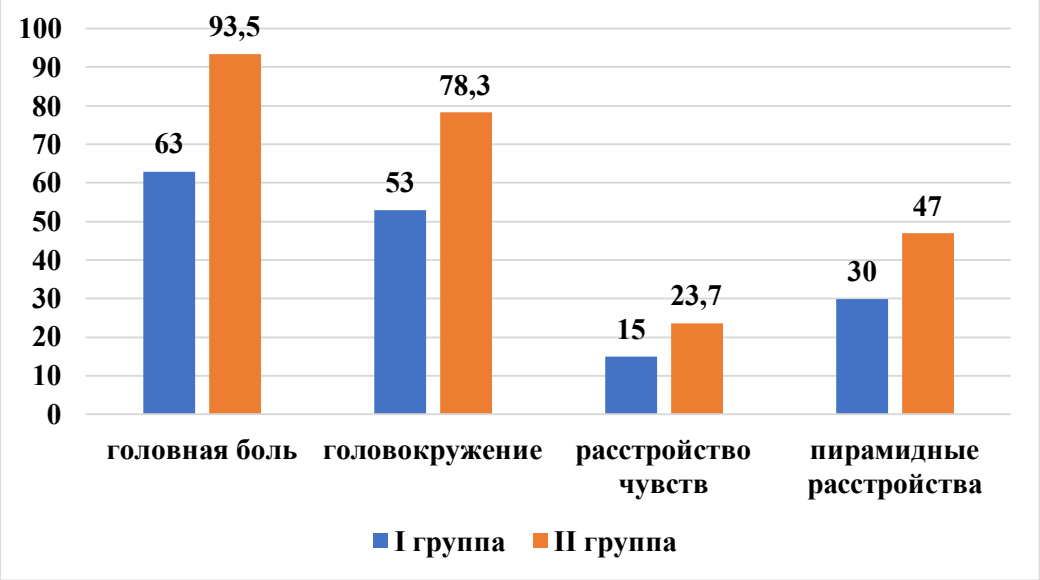
dynamics, paraclinical examinations: blood biochemistry; MRI (MSCT) of the brain, EEG, UzTDG ; the patients were examined by an endocrinologist, an ultrasound examination of the thyroid gland, an analysis of thyroid hormones for the diagnosis of primary hypothyroidism were performed. Neuropsychological examination was used to identify intact or impaired cognitive and mental function (Hamilton score, MMSE , battery of frontal dysfunction). Statistical analysis of the data was processed on an individual computer using traditional Student's t-tests, where p=0.05 significance level.

Research result. As mentioned above, 58 patients over 65 years of age with a diagnosis of dyscirculatory encephalopathy were examined. Initially, the sample was made according to age and corresponding diagnosis (DE). At the second stage, an additional examination was carried out (ultrasound of the thyroid gland, thyroid hormones, consultation with an endocrinologist), which made it possible to separate patients with and without thyroid dysfunction. So, the main collected group was divided into groups I - patients with DE of II degree and without dysfunction of the thyroid gland (32), II - patients with DE of II degree with dysfunction of the thyroid gland (26). For the reliability of the study, a group of volunteers over 65 years of age, with relatively good health, who underwent preventive dispensary examinations at the place of residence (Samarkand), was recruited from outside (on an outpatient basis), 20 people were included in the III control group.



Rice. 1. Patient Memetova Alfiya, born in 1952, nodular goiter with symptoms of thyroiditis. thyroid hypoplasia.

In group II (DE II with thyroid dysfunction), primary hypothyroidism due to chronic autoimmune thyroiditis, diffuse nodular goiter, as well as subclinical (hidden) hypothyroidism, where the TSH value had a range of 6.3 ± 1.9 μIU / ml, were detected. On average, the TSH value in group II was within 10.5 ± 1.0 μIU / ml, T3 level - 4.1 ± 1.5 pmol / l, T4 - 6.8 ± 1.4 pmol / l. Examination by an endocrinologist revealed symptoms characteristic of hypothyroidism : fatigue, sleep disturbance (frequent waking up, intermittent, poor falling asleep), swelling of the face in the morning, weight gain. The nature of the complaint for dizziness, cephalic pain, tinnitus, emotional lability (not controlled). From the listed subclinical signs, it can be seen that they coincide in their diversity with a sign of chronic cerebrovascular accident (DE), that is, in group I (DE II degree without thyroid dysfunction), the same pattern can be traced according to the signs: dizziness, headache, asthenoneurotic syndromes. What is the difference? The difference in the brightness of the manifestations of certain syndromes in group II , and the frequency is higher. So in group I headache occurred in 63%, in group II 93.5%; vestibulo -atactic signs 53% and 78.3%, respectively; sensitivity disorder 15% and 23.7%, respectively; pyramidal syndromes in group I in 30%, and in group II 47%. The ratio between the groups showed that neurological manifestations in the form of chronic circulatory failure prevails in patients with hypothyroidism.



Rice. 2. The nature of clinical signs in the examined patients (%)

The results of a neuroimaging study indicate a significant role of thyroid insufficiency in the process of progression in the brain. In cases of MRI (or MSCT), a difference is found between the comparison groups. The expansion of the lateral ventricles and the expansion of the subarachnoid space in group I is 19.9%, in group II 29.5%; small-focal changes of dyscirculatory nature in group I - 30.5%, and in group II - 35.5%, respectively; indicators of leukoryosis in group I 15.7%, in group II 18%; signs of subtrafiya of the substance of the brain in group I 20%, in group II 31.5%, respectively. As can be seen, changes in the structure of the brain in accordance with the stage of dyscirculatory encephalopathy, by age, the worst indicators in patients with a background of hypothyroidism.

Table 1

The level of cognitive and emotional disorders in the examined patients

No.	Indicators	Group I n=32	II group n=26	P
1	MMSE	26.0±1.0 points	24.0±0.5 points	< 0.05
2	Frontal dysfunction battery	17.2±0.2 points	13.9±0.1 points	
3	Alarm level	11.5±1.5 points	13.5±0.5 points	< 0.05
four	Level of depression	12.5±1.0 points	16.1±0.5 points	
five	Hamelton scale	39.1%	68%	< 0.05

An identical picture of changes is noted during the examination of the main main vessels of the head on UzTDG . So, in group II , a thickening of the intimamedia by 2 times is clearly seen . At the same time, stenosis in the vertebral arteries in both groups does not have a big difference, in group I in 23.3%, in group II 25.3% of cases, which reliably confirms the assumption that hemodynamics in the vertebral arteries directly proportionally depends on the parameters of the cervical displacement of the vertebrae that are structurally altered in elderly patients (but this requires a separate examination).

Interesting and important were the studies of the neuropsychological status, with the identification of cognitive impairments. Taking into account the fact that the survey

group (in the general cohort) included patients with DE II degree, the level of cognitive impairment reflects mild and moderate cognitive dysfunction.

So, in group II patients with DE II degree with hypothyroidism, mild cognitive impairment was detected in 40%, and moderate impairment in 60% of cases; in group I , the tendency to mild cognitive dysfunction is higher than in moderate impairment; mild cognitive impairment in group I 38%, and moderate cognitive impairment 36%, and lower than in group II . The MMSE scores in group II were 24.0±0.5, and in group I 26.0±1.0 points, that is, more pronounced disorders in the group with hypothyroidism. For a more complete analysis of cognitive dysfunctions in the examined patients, it was proposed to examine patients for the test "Battery of frontal dysfunction", where the analysis of the results showed that in group I the scores had a range of 17.2 ± 0.2, in group II 13.9 ± 0, 1 point; manifestation of the spatial process were lower in patients with hypothyroidism. In accordance with the complaints made about uncontrolled emotional lability, and the task of the study was to identify the emotional sphere in the examined patients, the results of the scales were evaluated by the level of anxiety and depression in points. The result was as follows, the average score for the level of anxiety in group II was 13.5 ± 0.5, in group I 11.5 ± 1.5, the scale of depression is presented in numbers in group II 16.1 ± 0.5, in group I 12 .5±1.0, respectively. That is, anxiety and depression are more often expressed in group II , in patients with hypothyroidism, already at stage II of DE. The Hamilton scale revealed the same indicators, the worst in patients with hypothyroidism, in group II depression was found in 68%, and in group I 39.1% of cases, where the total score was $p<0.05$.

EEG (electroencephalography) indicators in the examined groups turned out to be insignificant and insignificant. So, in patients of group I , bioelectric activity was detected in 40% of cases, and in group II in 45% (practically no difference between the comparative indicators). But in group II , paroxysmal activity was noted in 5 patients, which was not registered in group I. These indicators are confirmed by the data of literary sources (Dubossarskaya Yu.A., 2014; Karr F. _ et . al 2015, Amonova Z.K. _ et al. 2022)

Thus, hypothyroidism in the elderly is manifested by similar clinical-neurological, neuroimaging , neurophysiological and psychological parameters in persons of identical age, but without hypothyroidism . At the same time, it has its own characteristics, depending on the duration of hypothyroidism, the neurological clinic is more pronounced in terms of symptoms, which aggravates the process of chronicization of the brain structure. The difficulty of clinical diagnosis lies in the blurred picture of the manifestation, which requires doctors to conduct an extended diagnostic analysis of the assessment of patients in the elderly, the need to include a thyroid gland examination in the standard program of elderly patients, at the level of blood pressure or blood sugar control.

Used literature.

1.Petrova M., Pronina E. Hypothyroidism in the elderly // Zh. Vrach., 2015, No. 6, p. 27-29

2.Amonova Zakhro Kahramon Kizi , Djurabekova Aziza Takhirovna , Shomuradova Dilnoza Salimovna , Mamurova Mavlyuda Mirkhamzaevna Clinical and neurological hormonal features of hypotolamohypophysical system imbalance in patients with epilepsy // International Journal of Early Childhood Special Education (INT-JECS) , Vol 14, Issue 03 2022, p . 10071-10075

3.Shomurodova Dilnoza Salimovna , Dzhurabekova Aziza Tahirovna , Dzhurabekova Surayyo Tahirovna , Amonova Zahro Kahramonovna Clinical features of neurological syndromes in the elderly with thyromonic deficiency // Web of Scientist: International Scientific Research Journal (WoS), Volume 3, Issue 4, April., 2022, p . 9-17

4.Mozerov S.A., Erkenova L.D. Hypothyroidism and Mental Health // Bulletin of Medical Internet Conferences 2011. Volume 1. No. 7, p. 29-31

5.Dementia loves hypothyroidism // https://esculap-med.ru/post/demenciya-lyubit-gipotireoz

6.Makar R.D., Makar O.R. Thyroid diseases in the elderly: features of the clinical course, diagnosis and treatment // International Journal of Endocrinology, 2007, No. 6(12)

7.Petunina N.A. Features of the course of thyroid diseases in the elderly

8.Leng O., Razvi S. Hypothyroidism in the elderly // Journal of ENDOCRINOLOGY: news, opinions, training. 2019, Volume 8, No. 2, p. 118-129

9.Zhukova L.A., Gulamov A.A., Andreeva N.S., Tregubenko E.V. Evaluation of nosological manifestations of subclinical hypothyroidism and conditions with a high level of thyroid-stimulating hormone // Modern problems of science and education. - 2017. - No. 5.

10.Shomurodova DS, Dzhurabekova AT Clinical and neurological aspects of thyroid function disturbance in the elderly.// European Journal of Interdisciplinary Research and Development, (2022), 2, 1-6.