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## PSYCHOLOGICAL AND PSYCHOPATHOLOGICAL FEATURES OF PATIENTS WITH HYPERTHYROIDISM IN DIFFERENT CLINICAL CONDITIONS

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### Abstract

The article presented is devoted to the investigation and systematization of psychopathological disorders in the structure of psychoendocrine syndrome in patients with hyperthyroidism. The object: 100 patients with hyperthyroidism treated at the Ukrainian Scientific and Practical Center of endocrine surgery, endocrine transplantation of organs and tissues of the Ministry of Health of Ukraine. The consistent use of anamnestic, psychodiagnostic, clinical-psychopathological and statistical methods revealed a link between the states of compensation and decompensation of the hormonal status and the severity level of psychopathological components of psychoendocrine syndrome in hyperthyroidism.

**Key words: hyperthyroidism, psychoendocrine syndrome, thyroid disorders.**

**The Urgency of the Problem.** Thyroid disorders are one of the most pressing problems of endocrinology, after disorders of carbohydrate metabolism. Psychopathological disorders in hyperthyroidism was described in the nosographic perspective primarily [1–3].

The topical clinical descriptive studies of the psychopathological characteristics of hyperthyroidism actually boil down to describing the clinical psychopathological structure of

thyroid storm, describing pharmacogenetic euthyroidism outside the phenomena beyond the range of productive psychopathological symptoms. Most studies position continual anxiety–depressive states as the main clinical correlate of compensated thyroid hyperfunction [4, 5].

Thyrotoxicosis storms describes polymorphic psychopathological states both of exogenous reactions (mainly in the form of delirious and twilight states) and others, in particular, transient schizophrenomorphic psychoses with the dominance of affective–delusional disorders. Meanwhile, beyond the analytical–descriptive focus, there are the clinical-psychopathological characteristics of emotional-volitional and associative-ideator disorders that form the spectrum of variations of the psychoendocrine syndrome specific for hyperthyroidism.

The main task within the competence of psychoendocrinology is the description of the nosospecific spectrum of variations of the psychoendocrine syndrome (PES), which present in the structure of hyperthyroidism, analysis of the degree and nature of the clinical manifestations of its components, at the depth and actual status of hormonal dysfunction, description of the clinical and psychopathological characteristics of its clinical options in the structure of hyperthyroidism [6, 7].

**The Objective:** psychological and psychopathological analysis and systematization of psychoendocrine syndrome in patients with hyperthyroidism.

**Design:** the research contingent consisted of 100 patients of the Ukrainian Scientific and Practical Center for Endocrine Surgery, Transplantation of Endocrine Organs and Tissues of the Ministry of Health of Ukraine, suffering from hyperthyroidism in the structure of various nosological forms of thyroid pathology. The study was conducted in 2 stages:

1) stationary – a study of patients in the period of decompensation of endocrine dysfunction (by laboratory tests confirmed initial period of stay in a specialized hospital, in the presence of pronounced disorders of the endocrine status);

2) outpatient – a study of patients in the period of compensation of endocrine dysfunction (outpatient stage of therapy, in the presence of a therapeutically induced euthyroidism for >2 weeks, confirmed by laboratory tests )

The exclusion criteria included the following:

- transient (less than 6 months) nature of hyperthyroidism;
- pharmacogenic genesis of hyperthyroidism;
- the presence of comorbid psychopathology of the psychotic level;
- the presence of a diagnosed premorbid personality disorder;

All patients who participated in the study had psychoendocrine syndrome in the structure of the clinical manifestations of the disease. The contingent has a symmetrical gender structure and is formed from patients of adjacent age groups.

**Methods:** anamnestic, psychodiagnostic, clinically-psychopathological (Symptom Check List-90-Revised) and statistical.

**Results:** An analysis of the clinical and psychopathological characteristics of psychoendocrine syndrome in the study group used the symptomatic questionnaire SCL-90-R as a tool for quantification.

An initial study of clinical and psychopathological characteristics was carried out in a period of 1 to 3 days in a specialized department. This stage was aimed at analyzing and systematizing the psychological and psychopathological structure of the nosospecific psychoendocrine syndrome during decompensation of endocrine dysfunction. A re-study was conducted after the patients left the hospital for an outpatient stage of therapy in euthyroidism condition which was confirmed by laboratory tests for >2 weeks. The purpose of the re-study was to establish the nature of the reduction of the psychoendocrine components while normalizing the endocrine status and analyzing the psychopathological structure of the stable components of the psychoendocrine syndrome.

In addition to the clinical descriptive tools, a simultaneous psychodiagnostic monitoring was carried out during the patient examination period, implemented through SCL-90-R.

To qualify the results, we used the score ranges corresponding to the severity of symptoms for each subscale: 0,1-0,4 points – very low level; 0,5-1,4 points – low level; 1,5-2,4 points – moderate level; 2,5-3,4 points – high level; 3,5-4,0 points – very high level.

Received data indicate the presence of a connection between the structural components of psychoendocrine and the clinical nature of endocrine dysfunction in hyperthyroidism.

According to the SOM subscale in the decompensation stage, among the total number of patients, the number of individuals with a very high level of manifestation intensity was 11%, 32% of patients had a high intensity of manifestations, a moderate level – 23%, a low intensity level – 22%, a very low level – 12 %

In the compensation stage: among the total number of patients, the number of persons with a very high level of intensity of manifestations was 6%, a high level of intensity of manifestations had 11%, a moderate level – 25%, low level – 31%, very low level – 27%.

Analysis of the reliability of differences (threshold value of p-test de 0.05) of the signs allowed to determine statistically significant differences between the comparison groups according to SOM subscales at a very low and high level of manifestation of the sign. Somatization in the study population was determined by cardiac disorders associated with persistent autonomic dysfunction associated with the direct effects of high levels of thyroid hormone complex.

According to the O-C subscale in the decompensation stage, among the total number of patients, the number of persons with a very high level of manifestation intensity was 24%, a high intensity of manifestations had 32% of patients, a moderate level – 25%, a low level – 13%, a very low level 6%.

In the compensation stage: among the total number of patients, the number of persons with a very high level of manifestation intensity was 10%, a high level of manifestation intensity was observed in 17% of patients, a moderate level – 26%, a low level – 16%, a very low level – 31%.

Analysis of the significance of differences (threshold value of p-test = 0,05) of signs allowed to determine statistically significant differences between the comparison groups according to the O–C subscale at a high and very high level of manifestation of the trait.

A high level of manifestations of obsessive phenomena was associated with a general accelerated rate of associative processes and was connected with the psychostimulant effect of the thyroid hormone complex.

According to the INT subscale in the decompensation stage, among the total number of patients, the number of persons with a very high level of manifestation intensity was 10%, a high level of manifestation intensity – 17%, a moderate level — 19%, a low level — 22%, a very low level — 32% .

In the compensation stage: among the total number of patients, the number of persons with a very high level of manifestation intensity was 3%, a high level of manifestation intensity was 8% of patients, a moderate level – 16%, a low level – 29%, a very low level – 44%.

Analysis of the significance of differences (threshold value of p-test de 0.05) of the signs allowed to determine statistically significant differences between the comparison groups according to the INT subscale at a very high level of the manifestation of the trait.

Violations of intrapersonal sensitivity were determined by the feeling of inner changes associated with dysprosection and rate acceleration of associative processes.

According to the DEP subscale in the decompensation stage, among the total number of patients, the number of persons with a very high level of manifestation intensity was 4%, a high intensity of manifestations – 7%, a moderate level — 21%, a low level — 36%, a very low level — 32% .

In the compensation stage: among the total number of patients, the number of persons with a very high level of manifestation intensity was 1%, a high level of manifestation intensity was observed in 5% of patients, a moderate level – 27%, a low level – 21%, a very low level – 46%. Analysis of the significance of differences (threshold value of p-test = 0,05) of signs allowed us to determine statistically significant differences between the comparison groups according to the DEP subscale at a very low and low level of manifestation of the trait.

Depressive phenomena in a contingent of research had a nosogenic character, were arranged by anxiety and didn't reach a clinical level. Somatic symptoms of depression didn't manifest, being masked by the autonomic effects of the thyroid hormone complex.

According to the ANX subscale in the decompensation stage among the total number of patients, the number of persons with a very high level of manifestation intensity was 24%, a high intensity of manifestations – 33%, a moderate level – 27%, a low level – 11%, a very low level – 5% .

In the compensation stage: among the total number of patients, the number of persons with a very high level of intensity of manifestations was 9%, a high level of intensity of manifestations had 11% of patients, a moderate level – 21%, a low level – 34%, a very low level – 25%.

The analysis of the reliability of differences (threshold value of the p-criterion de 0.05) of the signs allowed to determine statistically significant differences between the comparison groups according to the ANX subscale at a very low, low, high and very high level of manifestation of the sign.

The high levels of anxiety in the study contingent were associated with an accelerated rate of association, their plot varied within the limits of the nosogenic psychotraumatic factors and the somatic manifestations of the disease.

According to the HOS subscale in the decompensation stage, among the total number of patients, the number of persons with a very high level of manifestation intensity was 14%, a high intensity of manifestations – 31%, a moderate level – 23%, a low level – 19%, a very low level – 13% .

At the stage of compensation: among the total number of patients, the number of persons with a very high level of manifestation intensity was 4%, a high level of

manifestation intensity – 6%, a moderate level — 20%, a low level — 26%, a very low level — 34%.

High levels of hostility were associated with an accelerated rate of association and irritability phenomena.

The analysis of the reliability of differences (threshold value of the p-test = 0,05) of signs allowed to determine statistically significant differences between the comparison groups according to the HOS subscale at a very low, high and very high level of manifestation of the trait.

According to the PHOB subscales in the decompensation stage, among the total number of patients, the number of persons with a very high level of manifestation intensity was 4%, a high intensity of manifestations – 17%, a moderate level – 36%, a low level – 20%, a very low level – 23% .

In the compensation stage: among the total number of patients, the number of persons with a very high level of manifestation intensity was 1%, a high level of manifestation intensity was observed in 9% of patients, a moderate level – 21%, a low level – 34%, a very low level – 35%.

Analysis of the significance of differences (threshold value of the p-test = 0,05) of the signs allowed to determine statistically significant differences between the comparison groups according to the PHOB subscale at a low and moderate level of manifestation of the trait.

Phobic experiences were associated with anxiety and cardiac disorders. Obsessive fears of loss of consciousness, cardiophobic experiences were noted.

According to the PAR subscales in the stage of decompensation among the total number patients with very high the level of intensity of manifestations was not found, 7% of patients had a high level of intensity of manifestations, a moderate level – 11%, a low level – 21%, a very low level – 61%.

In the compensation stage: among the total number of patients with a very high level of intensity no manifestations were found, 7% of patients had a high intensity of manifestations, a moderate level – 17%, a low level – 31%, a very low level – 45%.

Analysis of the significance of differences (threshold value of the p-test = 0,05) of the signs allowed to determine statistically significant differences between the comparison groups according to the PAR subscales at a very low level of manifestation of the trait.

According to the PSY subscale in the decompensation stage, among the total number of patients, the number of persons with a very high level of manifestation intensity was 9%,

10% of patients had a high intensity of manifestations, a moderate level – 13%, a low level – 37%, a very low level – 31% .

In the compensation stage: among the total number of patients with very high intensity levels – no manifestations were found, 7% patients had a high intensity intensity, a moderate level – 11%, a low level – 24%, a very low level – 58%.

Analysis of the significance of differences (threshold value of the p-test = 0,05) of signs allowed to determine statistically significant differences between the comparison groups according to the PSY subscale at a very low, low and very high level of manifestation of the trait.

High levels of paranoia and psychoticism in the studied cohort were associated with a sense of inner changes and an accelerated rate of association.

**Conclusions:** The received data indicated the dependence of the structural components of psychoendocrine syndrome in patients with hyperthyroidism.

Based on a consistent psychological and psychopathological analysis of the semiotic structure of psychoendocrine syndrome in hyperthyroidism, in both conditions of decompensation and compensation, a significant differences in the number of heavy forms of somatization was found ( $p(\chi^2) = 0.0003$ ); moderately heavy ( $p(\chi^2) = 0,0137$ ) and heavy ( $p(\chi^2) = 0,0084$ ) forms of obsessive compulsive disorders; heavy forms of violations of intrapersonal sensitivity ( $p(\chi^2) = 0,0447$ ); moderately severe ( $p(\chi^2) = 0,0002$ ) and severe ( $p(\chi^2) = 0,0043$ ) forms of anxiety; moderate ( $p(\chi^2) = 0,0135$ ) and heavy ( $p(\chi^2) > 0,0001$ ) forms of hostility; severe forms of psychoticism ( $p(\chi^2) = 0,0021$ ).

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