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ASSESSMENT OF SOCIO-PSYCHOLOGICAL RISK FACTORS FOR CARDIOVASCULAR DISEASES DURING THE COVID-19 PANDEMIC

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Purpose: to study the psychological characteristics of COVID-19 in patients with cardiovascular diseases. Materials and research methods. The study included patients: patients with CVD, in the post-COVID period. Results. The results showed that in patients with CVD after suffering COVID-19, there is an increase in patients with subclinical and clinically significant anxiety compared with patients with previous COVID-19 without CVD. Also draws attention to the increase in the level of depression among the respondents. Thus, the level of clinically expressed depression pronounced changes in the psychophysiological status: according to the HADS scale, subclinical anxiety is determined 4.5 times more often, subclinical depression and clinical anxiety are diagnosed only in this group.

Key words: *COVID-19, cardiovascular diseases, HADS scale, anxiety, depression.*

COVID-19 PANDEMIYASI DAVRIDA YURAK QON-TOMIR KASALLIKLARI IJTIMOIY-PSIXOLOGIK XAVF OMILLARINI BAHOLASH

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Maqsad: *yurak-qon tomir kasalliklari (YQTK) bilan og'rigan bemorlarda COVID-19 ning psixologik xususiyatlarini o'rganish. Materiallar va tadqiqot usullari. Tadqiqot bemorlarni o'z ichiga oldi: COVID-19 dan keyingi davrda yurak-qon tomir kasalliklari bilan og'rigan bemorlar. Natijalar shuni ko'rsatdiki, COVID-19 bilan og'rigandan keyin yurak-qon tomir kasalliklari bilan og'rigan bemorlarda subklinik va klinik jihatdan ahamiyatli xavotirlanish beigilari YQTK bo'lmagan bemorlarga nisbatan solishtirganda ko'paydi. Shuningdek, respondentlar orasida depressiya darajasining oshishiga e'tibor qaratildi. Shunday qilib, klinik jihatdan ifodalangan depressiya darajasi 2 martadan ko'proq oshdi. YQTK bilan og'rigan bemorlarda psixofiziologik holatdagi o'zgarishlar yanada aniqroq bo'ldi: HADS shkalasiga ko'ra, subklinik xavotirlanish 4,5 baravar ko'proq aniqlandi, subklinik depressiya va klinik xavotirlanish faqat ushbu guruhda aniqlandi.*

Kalit so'zlar: *COVID-19, yurak-qon tomir kasalliklari, HADS shkalasi, havotirlanish, depressiya.*

ОЦЕНКА СОЦИАЛЬНО-ПСИХОЛОГИЧЕСКИХ ФАКТОРОВ РИСКА СЕРДЕЧНО-СОСУДИСТЫХ ЗАБОЛЕВАНИЙ В ПЕРИОД ПАНДЕМИИ COVID-19

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***Цель**: изучить психологические особенности COVID-19 у пациентов с сердечно-сосудистыми заболеваниями. Материалы и методы исследования. В исследование включались пациенты: пациенты с ССЗ, в постковидном периоде. Результаты. Результаты показали, что у пациентов с ССЗ после перенесенной COVID-19 наблюдается рост пациентов с субклинически и клинически выраженной тревогой по сравнению пациентами перенесенной COVID-19 без ССЗ. Также обращает внимание рост уровня депрессии среди респондентов. Так, уровень клинически выраженной депрессии вырос более, чем в 2 раза.*

***Заключение**. У лиц с ССЗ имеются более выраженные изменения психофизиологического статуса: по шкале HADS субклиническая тревога определяется в 4,5 раза чаще, субклиническая депрессия и клиническая тревога диагностируются только в этой группе.*

***Ключевые слова:** COVID-19, сердесно-сосудистые заболевания, шкала HADS, тревога, депрессия*

Relevance. The pandemic of coronavirus infection (COVID-19) caused by the new SARSCoV-2 virus has caused concern around the world health system. As a result of COVID-19, the respiratory system is most affected. However, this disease is characterized by high levels of inflammation and thrombotic complications leading to polyorgan damage. When treating patients with COVID-19, it is necessary not only to treat urticaria and respiratory failure, but also to identify in a timely manner the damage to other target organs. An analysis of risk factors associated with severe COVID-19 progression and poor prognosis revealed the importance of comorbid pathology. Cardiovascular disease (CVD), arterial hypertension (AH), coronary heart disease (CHD), chronic heart failure (CHF), ventricular fibrillation (VF), diabetes mellitus (DD), and chronic obstructive pulmonary disease are the leading causes of poor prognosis (COPD), chronic inflammatory bowel disease (CIBD), liver disease are included. Anxiety and its symptoms are associated with stress and have an objective or subjective effect on human life. In the context of the COVID-19 pandemic, the problem of anxiety is significant because: 1) the risk of infection and severity is high in the risk group (patients with chronic diseases) and causes stress in patients with persistent anxiety; 2) the need for isolation, sudden changes in the usual way of life, the risk of deterioration of the economic situation, a sudden decrease in physical activity and insolations are additional sources of stress; 3) the presence of a chronic stress state adversely affects the function of the immune system and worsens the course of chronic diseases, which are risk factors for severe COVID-19. Studies in 2020 showed a negative impact of isolation on human psychology, especially in patients with high anxiety against the background of mental illness [1,2, 10]. However, the dynamics of the mental state of people in continuous quarantine conditions have not been fully studied, including the dynamics of anxiety, which requires

further investigation. Negative dynamics of anxiety levels may provide information on impaired adaptation of a person to the resulting living conditions and are necessary to predict the level of labor activity [7,6]. Therefore, it is necessary to assess the dynamics of anxiety in order to identify and overcome the risks associated with social and psychological maladaptation of the population. The effectiveness of such measures depends on informing the population about the methods of individual prevention of anxiety in a pandemic [4]. Such measures include improving sleep patterns, relieving vitamin D deficiency [3] and omega-3 use [8], restricting intake of sugary foods and simple carbohydrates [10], taking pre- and probiotics, stopping alcohol intake, and increasing physical activity. increase, use of stress management techniques (breathing exercises, meditation, etc.).

The purpose of the study. To study the psychological changes caused by Covid-19 infection in patients with cardiovascular disease.

Materials and methods of research. Patients with Covid-19 and non-Covid-19 were included in the study. Eligibility criteria: Patients aged 18–75 years with cardiovascular disease (ischemic cardiomyopathy, heart failure NYHA I-III, AH, stable angina, ventricular fibrillation) and moderately severe COVID-19 confirmed by PCR. Criteria for rejection: patients with severe course of the disease, patients with IV FC CHF on NYHA, grade III respiratory failure.

All patients were divided into 2 groups: the first group - patients with COVID-19, without concomitant diseases, the second group - patients with COVID-19, patients with CVD. Disease and life history of patients, information on CVD were collected, the characteristics of COVID-19 transmission were fully studied. After questioning, the following scales were provided for completion: the HADS hospital scale for anxiety and depression, and the DS-14 questionnaire to determine personality type. All patients underwent general clinical examinations, biochemical blood tests, ECG examinations. Excel (Microsoft Office 2016-2019 software package) and Statistica 8.0 software package (Statsoft Inc., USA) were used for statistical analysis

Results and analysis. Anxiety is an independent risk factor for the development of cardiovascular complications and consequent death. Patients with AIDS have a 1.6–2.2-fold increased risk of adverse events when symptoms of depression are observed [9]. Table 2 shows the prevalence of symptoms of anxiety and depression in patients with COVID-19 who have had COVID-19 and who have had COVID-19 who have not had COVID-19. The assessment score on the HADS-A anxiety scale was 7.6 ± 5.2 points, and on the HADS-D depression scale it was 7.9 ± 3.8 points. Different levels of anxiety were observed in 52.4% of patients, of which 18.2% had highly significant symptoms. Different degrees of depression were observed in 57.6% of patients, of which 19.2% had highly significant symptoms. The co-occurrence of clinically significant anxiety and depressive symptoms (> 11 on both HADS scales) was detected in 8.3% of patients. The results showed that subclinically and clinically significant anxiety symptoms increased in patients who underwent COVID-19 and those who underwent COVID-19 but who did not have COVID-19 (Table 1). It is also noteworthy that the level of depression among respondents has increased. Thus, the rate of clinically expressed depression increased more than 2-fold. Concerns were more specific to women: the HADS-A score was 7.9 ± 4.2 points in women and 6.8 ± 4.0 points ($p < 0.001$) in men. There was no significant difference in the symptoms of depression between women and men: on the HADS-D scale, the score was 7.5 ± 3.8 points in women and 7.2 ± 3.8 points in men ($p < 0.01$). Anxiety symptoms were clinically significant in 52.1% of women and 34.6% of men ($p < 0.001$),

28.7% of women, and 17.3% of men (p <0.001). A similar situation was observed in terms of depression: 43.8% of women with AIDS and 39.1% of men had different degrees of depression (p <0.05), 17.2% of women and 13.8% of men had depression. was significant. Concomitant cases of anxiety and depression were observed in more women (32.5% of women, 21.7% of men; p <0.001).

Table №1

Anxiety and Depression Symptoms on Hospital Scales of Anxiety and Depression in Patients with CVD. Symptoms of anxiety and depression.

Symptoms of anxiety and depression	Patients with CVD who underwent COVID-19 (n = 62)	Patients without CVD who underwent COVID-19 (n = 50)
Average score on HADS-A	7,6±5,2	6,4±3,7
Signs of clinical concern (HADS-A> 11 points), %	18,2	16,5
Signs of subclinical anxiety (8–10 points according to HADS-A), %	34,2	27,6
Average score on HADS-D, average ± OB	7,9±3,8	7,7±4,2
Clinically highly expressed depressive symptoms (HADS-D ≥11 points), %	19,2	14,8
Symptoms of subclinical depression (8-10 points on HADS-D), %	38,4	
Concomitant symptoms of anxiety and depression (≥8 points according to HADS), %	12,3	10,7
Co-occurrence of clinically significant anxiety and depressive symptoms (≥11 on both HADS scales), %	8,3	6,5

More subclinical and clinically significant depressive symptoms were observed in patients with CVD. Anxiety symptoms were also observed in women (Table №2).

Recently, new data on the role of psychosocial risk factors in the origin of NCDs are emerging. In addition to certain factors (family and work stress, low socioeconomic status, anxiety, depression), the recent European Recommendations on CVD Prevention has identified a personality factor that increases the risk of developing CVD and worsens the prognosis – type D personality (EACPR, 2012)

In our study, in the analysis of the DS-14 questionnaire, the “distressor” type of personality type D was found in one-third of patients in group 1, which was 2.7 times higher than in group 2. In addition, AG was found to be more pronounced in non-type D individuals than in non-CVD patients on the NA (negative affect) and SI (social depression) scales. It is known that in the D types of personality, the develop-

ment of deeper experiences in stress is observed, compared to those who do not have a type D personality.

Conclusion. Significant changes in psychophysiological status were observed in patients with CVD: 4.5 times more subclinical anxiety was observed on the HADS scale, and subclinical depression and clinical anxiety were detected only in this group. Individuality was found to be 2.7 times higher in patients with type D CVD.

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