



# Anxiety-Depressive Disorders In Patients With Heart Failure: Development And Treatment

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## ABSTRACT

The aim of the study was to determine the presence and severity of anxiety-depressive experiences and to assess their impact on the quality of life in patients with acute heart failure with a history of large-focal (Q-wave) myocardial infarction.

### Keywords:

Acute heart failure, myocardial infarction, anxiety-depressive disorders, depression, anxiety.

**Material and methods:** General clinical studies, psychological testing. Results. A total of 118 patients with acute heart failure were examined. Anxiety and depressive experiences were detected in 46.6% of cases. As acute heart failure progresses, anxiety and depressive symptoms increase. Conclusion. Thus, patients with AHF have psychoemotional changes in the form of anxiety and depressive experiences, which can adversely affect the course of the disease. As acute heart failure progresses, anxiety and depressive symptoms increase.

### Annotation.

The results of the assessment of psychoemotional manifestations in patients with acute heart failure are presented. The characteristics of the levels of anxiety-depressive experiences are given.

### Introduction.

In recent years, much attention has been paid to the problem of comorbidity of psychopathological disorders and coronary

heart disease (CHD). Numerous studies indicate the high incidence of psychopathological disorders and their negative impact on the course and prognosis of CHD. According to the forecast of experts from the World Health Organization, the number of mental illnesses will increase, and by 2025 their share will reach almost 50%, which exceeds the predicted increase in cardiovascular diseases [1]. In general medical practice, the combination of anxiety and depressive symptoms reaches 60-70%, according to some data. It is important to note the close comorbidity of depressive and anxiety disorders. Depression is often accompanied by more or less pronounced anxiety symptoms; in some patients, anxiety acts as a prodromal sign of depression. Anxiety and depressive disorders act as an independent risk factor for the development of coronary heart disease, contributing to an increase in the incidence of cardiovascular complications and mortality among patients with a cardiological profile [2,3,4,5,6]. Depressions comorbid with somatic

diseases significantly aggravate the clinical course of somatic diseases, complicate rehabilitation and secondary prevention, worsen the quality of life of patients and negatively affect the prognosis [7,8,9]. The results of a seven-year prospective study showed that independent predictors of mortality in patients who have suffered an acute myocardial infarction, in addition to the severity of coronary heart disease, were depression, anxiety and lack of social support [10]. Anxiety and depressive symptoms also negatively affect patients' adherence to drug therapy recommended by a cardiologist. It is important that anxiety-depressive disorders are considered an independent risk factor for coronary heart disease. Previously published scientific reviews have shown that depressive symptoms are a factor not only in the future coronary event in healthy individuals, but also in the unfavorable prognosis for those who already suffer from coronary heart disease [11, 12, 13]. Thus, the pathogenetic relationship between coronary heart disease and anxiety-depressive disorders, which is realized both at the organic and functional levels, requires close attention from doctors to patients with coronary heart disease and comorbid anxiety-depressive disorders. Of interest is the presence and severity of anxiety-depressive disorders in patients with acute heart failure (AHF).

**The aim of the study:** to determine the presence and severity of anxiety-depressive experiences and to assess their impact on the quality of life in patients with acute heart failure against the background of a history of large-focal (with Q wave) myocardial infarction.

**Material And Methods :** The study included 118 patients with a history of large-focal (Q-wave) myocardial infarction and clinical signs of AHF. Of these, 12 were women (10.2%) and 106 were men (89.8%). The average age of the patients was  $60.66 \pm 5.32$  years. AHF was diagnosed and its severity was assessed according to the recommendations of the European Society of Cardiology for the diagnosis and treatment of acute heart failure. All studies were conducted with the informed

consent of the patients. Exclusion criteria: acute cerebrovascular accident suffered in the last 6 months, hemodynamically significant heart defects, severe liver dysfunction, complex disorders, and renal pathology. All patients underwent a general clinical examination. Ultrasound examination of the heart. Signs of acute heart failure (with a left ventricular ejection fraction according to echocardiography data of an average of  $52.1 \pm 5.11\%$ ) were determined in 62 (52.5%) patients, signs of acute heart failure (with a left ventricular ejection fraction of  $47.2 \pm 6.61\%$ ) – in 56 (47.5%) patients.

Drug treatment is represented by beta-blockers, angiotensin-converting enzyme inhibitors or angiotensin receptor antagonists, antiplatelet agents, statins, and diuretics. The presence and severity of anxiety-depressive disorders was assessed using the Hospital Anxiety and Depression Scale (HADS). Anxiety and Depression Scale). The result of 0-7 points was assessed as the absence of reliably expressed symptoms of anxiety and depression, 8-10 points – subclinically expressed anxiety/depression, 11 points and above – clinically expressed anxiety/depression. All studies were conducted on the basis of the RRCEM. Statistical analysis was carried out using generally accepted methods of mathematical statistics using the statistical software package STATSOFT STATISTICA 6.0 for Windows (USA), MS EXCEL XP.

The results are presented as the arithmetic mean (M) and standard deviation (SD). To compare the quantitative indicators of two independent groups with a normal distribution of the feature, the Student's criterion (t) was used. Differences were considered reliable at  $p < 0.05$ .

To identify the strength and direction of the relationships between the studied variables, correlation analysis was used with the calculation of the Pearson parametric correlation coefficient.

**Study Results:** Psychological testing revealed that according to the HADS scale, the average values of anxiety ( $5.89 \pm 2.12$  points) and depression ( $4.76 \pm 2.59$  points) did not differ

from the normal level. However, when examining individual questionnaires, it turned out that anxious and depressive experiences were detected in 56 (46.6%) examined patients. Signs of isolated depression were determined in 21.2% of cases, anxiety - in 25.4% of cases. Moreover, signs of clinically expressed anxiety and depression were determined in 4.3% and 6.8% of patients, respectively, signs of subclinically expressed anxiety and depression - in 16.9% and 18.6% of patients. It should be noted that all patients under observation had insufficient physical activity. The average distance covered by patients per day was  $4.08 \pm 1.81$  km at a speed of  $76.41 \pm 8.71$  steps per minute. All these features leave an imprint on the quality of life, which is 1.5 times worse in patients with concomitant anxiety and depressive experiences than in patients with normal psychoemotional status. It was also found that 10.2% of patients suffer from both depression and anxiety, the quality of life in this group is 1.6 times worse than in patients without anxiety and depression. At the same time, positive relationships were found between the quality of life and the level of depression ( $r=0.45$ ,  $p < 0.001$ ), the quality of life and the level of anxiety ( $r=0.59$ ,  $p < 0.001$ ), as well as between the levels of depression and anxiety ( $r=0.46$ ,  $p < 0.001$ ).

Patients showed a significant difference in the level of depression depending on the class of acute respiratory failure ( $p < 0.01$ ).

Thus, in the group of patients with AHF class II according to Killip, anxious-depressive experiences were detected in 41.9% of patients, among them 9.6% of patients suffered from both anxiety and depression. Signs of isolated anxiety and depression were determined in 27.4% and 14.5% of cases, respectively. The quality of life in this group is worse than with isolated anxiety or depression ( $p < 0.01$ ). In this group, the correlation dependencies between the studied parameters are weakly expressed. In the group of patients with AHF class III according to Killip, anxious-depressive experiences were detected in 51.8% of cases, signs of isolated anxiety and depression were determined in 23.2% and

28.6% of cases, respectively. The severity of anxiety and depression in patients with AHF class III according to Killip exceeds normal values on the HADS scale by 1.4 and 1.6 times, respectively. The quality of life in patients with concomitant anxiety-depressive experiences is 1.6 times worse than in patients with normal psychoemotional status. In 10.7% of patients, signs of both anxiety and depression were detected, in this group it is significantly worse than with isolated anxiety or depression ( $p < 0.01$ ).

**Discussion:** According to the obtained results, the frequency of detection of anxiety-depressive experiences in patients with ASD in our study reaches 46.6%.

It is alarming that as acute heart failure progresses, anxiety-depressive symptoms increase: the worsening of acute heart failure is combined with an increase in the number of patients with anxiety-depressive disorders, and in AHF class II according to Killip, anxious experiences prevail, while in class III according to Killip, depressive experiences dominate. It is obvious that anxiety is a prodrome of depression or its debut in AHF, and the presence of anxious-depressive experiences can lead to the progression of the disease, which can lead to fatal consequences. Thus, it is obvious that anxiety-depressive disorders worsen the condition of patients with AHF, and can probably aggravate the course of the disease. The data obtained in the study dictate the need for timely recognition and treatment of anxiety-depressive disorders in this category of patients.

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