

**DEPRESSION, ANXIETY AND QUALITY OF LIFE IN PATIENTS
WITH ATRIAL FIBRILLATION**

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ABSTRACT

When studying anxiety-depressive disorders in 112 patients with various forms of atrial fibrillation, it was found that 55.4% of patients have anxiety-depressive disorder, including 13.4% of clinically pronounced depression of mild and moderate severity (in combination with anxiety in 10.7% of patients), subclinically pronounced depression in 15.2% (in combined with anxiety of 10.7%), anxiety – in 26.8%. Anxiety-depressive disorders prevail in patients with a recurrent form of atrial fibrillation, worsen the clinical picture of the disease, lead to persistent atrial fibrillation, reduce the quality of life.

Keywords: quality of life, anxiety, depression, atrial fibrillation

Introduction

Epidemiology, clinic, effectiveness and cost of various methods of treatment of atrial fibrillation (AF) are the subject of numerous studies, at the same time little attention is paid to patient-dependent characteristics, especially their psychological state and quality of life. It is known that cardiac factors and especially atrial myocardial damage in various pathological processes play a leading role in the origin of AF. However, extracardial influences are also of significant importance in the occurrence and progression of AF. These include personality traits, the emotional state of the patient, the presence of a traumatic situation (acute, chronic stress). In some patients, the mental factor may be decisive in the pathogenesis of AF, without which its appearance is impossible; in others, the paroxysms of AF themselves are stress, severe mental trauma, which worsens their mental state. In addition, they cause deterioration of general and central hemodynamics, causing such changes in the brain, which in turn lead to pathological cerebral effects on the myocardium, forming a kind of "vicious circle". Thus, AF negatively affects the mental state of patients, contributes to the development of secondary psychovegetative disorders, the progression of arrhythmia. It is obvious that the urgency of the problem of psychosomatic disorders observed in

patients with AF is determined not only by their prevalence and maladaptive influence, but also by the fact that timely diagnosis and treatment of these disorders in many cases becomes a crucial condition for effective therapeutic care. To date, there are isolated publications that address the TDR of patients with AF. Studies of TDR in patients with AF cover groups that are heterogeneous in age (including elderly patients), the number of patients, concomitant diseases, and in some studies only patients with paroxysmal AF were studied.

Some studies have shown that patients with AF have a significantly lower quality of life (QOL) compared to the healthy population, the general population and other patients with cardiovascular diseases. But we have not found a simultaneous study of QOL in patients with comorbid AF with TDR in the available literature.

The aim of our study was to study the prevalence of anxiety-depressive disorders in patients with AF, their impact on the clinical picture, prognosis and quality of life of patients.

Materials and methods

A survey of patients with AF who are being treated at a cardiological dispensary and signed an informed consent was conducted. Patients with progressive angina pectoris, myocarditis and pericarditis, rheumatic heart disease, and other severe somatic diseases were excluded from the study. The study included two stages: the inclusion stage (initial examination – upon admission to the hospital) and the prospective follow-up stage (after 2 weeks (upon discharge from the hospital) and after 1 year). The “patient card” that the doctor filled out together with the patient, it contained information about his main socio-demographic and physical characteristics, the presence of traumatic events during the last year and the level of chronic psychoemotional stress; the regularity of taking the recommended medication, taking psychotropic drugs. All patients underwent a cardiological examination, which established the forms of AF (paroxysmal, persistent, permanent), the prescription of occurrence, the frequency of relapses in the recurrent form of AF. To assess the mental status of the patient, the following psychometric scales adapted for use in a therapeutic hospital were used: Hospital Anxiety and Depression scale (Hospital Anxiety and Depression Scale – HADS, A.Zigmond, R.Snaith, 1983) – adapted Russian version (A.V.Andriushenko, M.Y.Drobizhev, A.V.Dobrovolsky, 2003) for screening diagnostics, Montgomery-Asberg Depression Scale (MADRS) to determine the severity of a depressive episode and its dynamics in the future, Spielberg's questionnaire to determine personality traits (anxiety). To assess the quality of life the "Short questionnaire for health status assessment" was used (the official Russian version of the 36-Item MOS Short-Form Health Survey (MOS SF-36), to study the effect of arrhythmia on the daily life of patients, the questionnaire "Life of patients with arrhythmias" ("JBA") was used (the higher the score on the questionnaire, the

worse the quality of life). The corresponding keys were used for the questionnaires. The obtained results were processed using a package of applied statistical programs (MS-Office 2007) on a personal computer using the t criterion Student. The presented results are presented in the form of n (%), $M \pm \delta$. The prospective follow-up stage included 1 telephone interview (after 1 year) with the patient, which was conducted according to a specially developed "Prospective Follow-up Card". It included information about the dynamics of the patient's health status; possible complications of cardiovascular diseases: myocardial infarction, cerebral stroke, dynamic disorders of cerebral circulation; the occurrence of other diseases, visits to medical institutions and hospitalizations during the follow-up period; taking medication recommended for AF, hypertension and /or coronary heart disease (compliance).

Results and their discussion

The study included 112 patients (49 women, 63 men, average age 53.33 ± 6.74 years). In 39, a persistent form of AF was detected, in 45 – paroxysmal, in 28 – permanent. Based on the results of the scales (HDRS, MADRS): TDR was diagnosed in 62 patients (55.4%), including clinically pronounced depression of mild and moderate severity was diagnosed in 15 patients (13.4%), in combination with anxiety in 12 patients (10.7%), subclinically pronounced depression in 17 patients (15.2%), in combination with anxiety in 12 (10.7%); anxiety – in 30 patients (26.8%). The distribution was carried out into groups: group 1 (with depression), group 2 (with anxiety), group 3 (without TDR). The results presented in Table 1 confirm the statistical difference in the indicators of the HADS scale in the groups of patients with TR and without DIFFICULTY. Further, the groups were compared according to etiological, clinical features, and the course of AF. The compared groups did not differ in age; TDRS were equally common in men and women. The data presented in Table 2 indicate that with the same frequency of AF it developed against the background of coronary heart disease or arterial hypertension. Thus, angina pectoris of tension I-III FC was diagnosed in 77.4% of patients with TDR versus 78% without TDR, arterial hypertension, respectively, 82.3% versus 80% of patients, respectively. It was noted that with an increase in CHF FC (based on a 6- minute walk test), the prevalence of TDR increases, which is consistent with the literature data, which also indicates that the presence of depression in itself makes it heavier FC HSN. Analyzing the TDR depending on the clinical variant of AF, it should be noted that the latter prevailed in patients with recurrent AF: depression in 71.8% and anxiety in 80% of patients, which may be due to the nosogenic nature of these conditions.

Also noteworthy is the high frequency of AF attacks per year in the recurrent form of AF in combination with TDR, on average 17 versus 5.8 times per year for patients without TDR. To solve the question of whether anxiety in the examined patients was a personality trait or this condition was the response of the psyche to the disease, a

questionnaire was used Spielberg-Khanin. According to its results the level of anxiety at the time examination (upon admission to the hospital) increased (>30 points for each scale) in the respondents of groups 1 and 2: reactive 32.97 ± 9.60 in group 1 and 32.91 ± 9.12 in group 2, personal 33.64 ± 7.62 and 34.23 ± 8.03 , respectively, upon discharge from the hospital, reactive anxiety decreases in most patients with anxiety - 26.23 ± 6.04 , in contrast to personal anxiety, which is a personality trait - 30.97 ± 6.01 , while in group 1 patients with a downward trend, both reactive and personal anxiety remain elevated – 30.53 ± 8.05 and 30.91 ± 7.41 , respectively. A decrease in scores on the HADS(T) scale (6.8 ± 1.9) and reactive anxiety (26.23 ± 6.04) in group 2 (with anxiety) at discharge may indicate the presence of situational anxiety in this group as a natural reaction of the patient to the onset of an attack AF and admission to the hospital. At the same time, the lack of dynamics of indicators of the Spielberg-Khanin scales and on the scale HADS(D) (10.1 ± 1.8) in group 1 (with depression) most likely, it indicates the pathological nature of TDR, the presence of which requires medication and non-drug measures. As can be seen echocardiographic parameters, the lipid spectrum indicators in the studied groups do not differ statistically, and the latest data do not agree with the literature data, according to which atherogenic dyslipidemia is noted in depression, which is one of the links of the pathogenetic relationship between depression and cardiovascular diseases. The absence of atherogenic dyslipidemia can be explained by the appointment in the hospital and the reception of statins by patients. When studying the QOL of patients with AF according to the results of SF-36, it was found that patients with AF comorbid with depression compared with the group without TDR have statistically significantly ($p < 0.001$) lower indicators on all scales of the questionnaire (physical and social functioning, role-based functioning due to health and emotional state, pain intensity, general health, vital activity, mental health, i.e. have statistically significant lower physical and mental components health. Patients of group 1 have a statistically higher score ($p < 0.001$) according to the disease-specific questionnaire "ZHBA" (Table 3) – 45.64 ± 8.62 compared with patients of group 3 – $25,20,20 \pm 8.05$. When studying the causes of a decrease in QL according to the "ZHBA" questionnaire, it was found that the most pronounced effect on its level was exerted in patients with depression compared with patients without TDR: 1) involuntary fixation of attention on the work of the heart, waiting for heart palpitations, interruptions in the work of the heart; 2) the appearance of concern for your health, life, destiny; 3) additional material expenses related to treatment, purchase of medicines; 4) the need to limit your physical efforts, mental work; 5) the need to avoid situations leading to emotional overstrain; 6) deterioration of sleep; 7) change in attitude with loved ones. In patients with anxiety, in contrast to other groups, the following also have a negative impact on QOL: 1) the need to be constantly treated, take medications, periodically stay in the hospital; 2) the need to limit yourself to your

favorite food. This may be due to the fact that in group 2 patients, anxiety is caused by restriction normal life activity in a sudden stressful situation. Factors related to the clinical picture of arrhythmia have an equally negative effect on QOL in all groups: 1) palpitations, interruptions in the work of the heart; 2) shortness of breath attacks; 3) general weakness and fatigue; 4) pain behind the sternum and in the heart area.

Conclusions

1. Anxiety-depressive disorders occur in 55.4% of patients with various forms of atrial fibrillation, including clinically pronounced depression of mild and moderate severity was diagnosed in 13.4% (in combination with anxiety in 10.7%), subclinically pronounced depression in 15.2% (in combination with anxiety in 10.7%), anxiety – in 26.8%.

2. Patients with comorbid atrial fibrillation with both depression and anxiety have a significantly higher level of personal and reactive anxiety compared to the group of patients without TDR.

3. TDR prevails in patients with a recurrent form of AF: in the paroxysmal form of AF – depression (46.8%), in the persistent form of AF – anxiety (53.3%), which may be due to the nosogenic nature of these conditions.

4. TDR worsen the clinical course of AF, which is confirmed by a significant increase in AF attacks per year in relapsing form in patients with TDR compared with patients without TDR.

5. In patients with comorbid AF with TDR, compared with patients without TDR, a significantly ($p < 0.001$) lower QOL was found for mental and physical health components (questionnaire SF-36).

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