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FACTORS OF FORMATION OF DEPRESSIVE SPECTRUM DISORDERS IN PATIENTS WHO HAVE SUFFERED A MYOCARDIAL INFARCTION

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Annotation. Now the problem of depression and somatic diseases, in particular, a cardiovascular profile is extremely actual. In the given research the factors contributing to formation of post infract depression are considered, the characteristic actually post infract is given to depression.

KEYWORDS: a myocardium heart attack, post infract depression, risk factors.

Depression is very often comorbid to other, somatic, diseases, and in such cases, the diseases of two different spheres - mental and somatic-aggravate each other, sometimes leading to severe consequences. This is especially true for diseases of the cardiovascular system.[5] Among patients with cardiovascular diseases, the incidence of concomitant depression is 22-33%.[2] In 17-27% of patients with coronary heart disease undergoing coronary angiography, depression is detected[6,8], and in patients in the post-infarction period, depression is detected in 16-45% of cases.[3, 5] the Presence of depression in patients with cardiovascular diseases not only complicates the course and therapy of these disorders, but also reduces the life expectancy of patients. Comorbid infarction depression determines a three-to four-fold increase in cardiovascular mortality, and also closely correlates with an aggravation of the clinical symptoms of myocardial infarction and a deterioration in the prognosis of this pathology[4] (for example, depression that develops immediately after a myocardial infarction increases the risk of death by 3.5 times[7]). Although the number of studies on depression in post-infarction patients is relatively small, there is some evidence that without treatment, it becomes chronic within a year after a myocardial infarction.[3]

It is clear and predictable that the most pronounced emotional disorders are observed in patients who have suffered a myocardial infarction, since even with a satisfactory state of health, the diagnosis of a myocardial infarction is associated with a threat to life. Severe physical condition, sharp weakness, intense pain, concerned faces of medical staff, urgent hospitalization-all this creates anxiety and fear, leads patients to believe that their lives are in danger. Other psychological factors also affect the mental state of the patient in the first days of the disease. Patients are oppressed by the idea that they have turned from strong, strong, active people into helpless, in need of care, although usually with the improvement of physical health, the fear of death weakens. Along with worrying health concerns, there are dark thoughts about the future, depression, fear of possible disability, and anxious thoughts about the well-being of the family. Without appropriate intervention, these disorders are fixed and persist for one year in 25% of survivors. According to other data, mental disorders were detected in 28% of cases. In 50% of patients, an intensification of neurotic traits was observed.[3]

All of the above, and especially the little-known post-infarction depression in patients not in the long term after a heart attack, but in the first days after an acute attack, determined the purpose of this study, which is part of a larger research work.

The aim of the study is to study the factors that contribute to the occurrence of depressive disorders in patients who have suffered an acute myocardial infarction.

MATERIALS AND METHODS OF RESEARCH

This study was conducted on the basis of the regional cardiology dispensary in the period from 2010 to 2018. The study included 121 patients with an established diagnosis of acute myocardial infarction according to the criteria of ICD-10, who gave their informed consent and did not detect any marked personality changes that hindered the examination.

According to the planned design, the patients were divided into 2 groups. The first group consisted of 88 patients with acute myocardial infarction who subsequently developed depressive disorders, confirmed clinically and using diagnostic scales; the second group

consisted of 33 patients who also had acute myocardial infarction, but did not suffer subsequent symptoms of depression. Clinical and dynamic monitoring of patients in the post-infarction period was performed.

The study included both male patients (52 people (59.1%) in the main group and 27 people (81.8%) in the comparison group) and female patients (36 (40.9%) and 6 (12.2%), respectively). When analyzing the distribution of patients by age at the beginning of the study, it was found that the majority of patients in both the main group and the comparison group are patients aged 61 years and older (50% of patients in the main group and 45.4% of patients in the comparison group); patients under 40 years of age were not found in the studied groups. In all studied patients with depressive disorder was a consequence of myocardial infarction (with clinical catamnestic), that is, the fact of myocardial infarction has become a stressful factor contributing to the emergence of depressive disorders. The study did not include patients with endogenous depression, depressive disorders that developed as a result of another psychotraumatic situation.

The study used clinical-pathopsychological, clinical-catamnestic, mathematical-statistical methods. To determine the psychoemotional state of patients, in addition to the interviewing method, scales for assessing the level of depression and a personal questionnaire were used as auxiliary: Hamilton scales (the level of depression is estimated by the total number of points scored: 7-17 points indicates mild depression, 18-24 points-moderate, 25 or more points - severe depression) and Montgomery-Asberg (mards) (the sum of points from 0 to 15 indicates the absence of a depressive episode, 16-25 points-small, 26-30 points-moderate, 31 or more – about a major depressive episode), MMPI tests-to determine the personality typology.

The obtained data was processed using Microsoft Excel and STATISTICA_6 computer programs.

RESULTS AND DISCUSSION

By the time of the initial examination, 74% of the examined patients (76.1% of patients in the main group and 69.7% of patients in group 2) were initially admitted to a cardiological hospital with a diagnosis of myocardial infarction; all the remaining patients had a repeat case of myocardial infarction.

When analyzing the clinical and dynamic course of the main disease and comparing it in two groups, the following was revealed. There is no reliable correlation between the degree of myocardial damage and the probability of post-infarction depression, although it can be noted that the frequency of transmural infarctions was lower in the comparison group (80.7% in the main group versus 54.5% in the comparison group). It is also not clinically reliable to establish the relationship between the presence or absence of complications after a heart attack, the nature of the acute phase on the one hand, and the frequency of post-infarction depression on the other (table 1). However, there are clear differences among the compared groups when assessing the duration of the actual ischemic attack. Thus, in the group of patients with developed post-infarction depression, almost half of the patients (47.7%) had a duration of pain attack of more than 20 minutes, and in 38.6% of this group, it lasted from 15 to 20 minutes. At the same time, in the comparison group, the vast majority of the examined patients had a duration of ischemic attack that did not exceed 15 minutes (72.7%); the number of those who had this period of 15 – 20 minutes or more than 20 minutes is equal to 15.2% and 12.1%, respectively. Also noteworthy is the fact that in the main group, the overwhelming number of patients (73 people, which is 83%) tried to stop the attack with nitroglycerin (as is known, this is a drug from the group of nitrates that stops angina attacks), but without success, in 4.5% of patients in the main group, these attempts brought some relief, the remaining patients did not use nitroglycerin at all. In the comparison group, the number of patients who did not take nitroglycerin for pain relief exceeded half of all patients in this group (51.2%), this is 4.12 times higher than in the main group; the use of this drug was ineffective in 12.1% of cases (in the main group, this indicator is 6.9 times higher), and only with a minor effect – in 36.4% (table 1).

Table 1.

	Major group (n=88)	**Comparison group (n=33)**
Degree of myocardial damage		
Transmural infarction	71 (80,7%)	18 (54,5%)
Large-focal myocardial infarction	12 (13,6%)	12 (36,4%)
Small-focal heart attack	5 (5,7%)	3 (9,1%)
Presence of complications of myocardial infarction		
No complications	67 (76,1%)	20 (60,6%)
Pulmonary edema	5 (5,6%)	1 (3%)
Arrhythmias, extrasystoles	16 (18,3%)	12 (36,4%)
Character of the acute phase		
Painful	67 (76,1%)	25 (75,8%)
Abdominal	8 (9,1%)	4 (12,1%)
Atypical pain	2 (2,3%)	0

Arrhythmic	10 (11,4%)	4 (12,1%)
Asthmatic	1 (1,1%)	0
The duration of the attack		
Up to 15 minutes	12 (13,6%)	24 (72,7%)
15 – 20 minutes	34 (38,6%)	5 (15,2%)
More than 20 minutes	42 (47,7%)	4 (12,1%)
Attempts to stop the attack with nitroglycerin		
Were undertaken with little improvement	4 (4,5%)	12 (36,4%)
Attempts were made, but without effect	73 (83%)	4 (12,1%)
Not to undertake	11 (12,5%)	17 (51,5%)

From the above data, we can conclude that the possibility of postinfarction depression is influenced by such factors of the main somatic disease as the duration of the ischemic attack and possible attempts on their own (and ineffectively!) stop the attack with a number of nitrates (in our case, nitroglycerin). The latter fact is probably due to the formed fear of the persistence of pain syndrome and a decrease in faith in the provision of assistance.

The analysis of the personal profile of patients, as well as their social characteristics, revealed the following.

Table 2.

	Major group (n=88)	**Comparison group (n=33)**
Hereditary burden		
On mental illness	12 (13,6%)	0
For diseases of the cardiovascular system	68 (77,3%)	23 (69,6%)
On mental diseases and diseases of the cardiovascular system	8 (9,1%)	0
Not burdened	0	10 (30,3%)
Pernicious habits		
Smoking	36 (40,9%)	0
Use of alcohol	20 (22,7%)	9 (27,2%)
Use of surfactants	0	0
Smoking+ alcohol consumption	24 (27,3%)	12 (36,4%)
No	8 (9,1%)	12 (36,4%)
Level of education		
Elementary	4 (4,5%)	0
Average	12 (13,6%)	6 (18,2%)
Medium-special	40 (45,5%)	3 (9,1%)
Higher	32 (36,4%)	24 (72,7%)
Distribution of patients by personality type		
Emotional instability.	11 (12,5%)	1 (3%)
Hyperthymic	0	7 (21,2%)
Alarming	46 (52,3%)	0
Psychasthenic	17 (19,3%)	1 (3%)
Demonstrative	1 (1,1%)	2 (6,1%)
Excitable	2 (2,3%)	2 (6,1%)
Cycloid	3 (3,4%)	1 (3%)
Schizoid	6 (6,8%)	3 (9,1%)
Balanced	2 (2,3%)	16 (48,5%)

According to the data shown in table 2, it is obvious that individuals with hyperthymic features and balanced individuals (21.2% and 48.5%, respectively) adapt most favorably to the state after a myocardial infarction, and depressive disorders were more often registered in anxious and psychasthenic individuals (52.3% and 19.3%, respectively). There is an inverse correlation between the probability of post-infarction depression and the patient's level of education: the higher the level of education, the lower the probability of forming depressive disorders. This is probably due to the higher level of medical literacy of people with higher education, their greater compliance with medical professionals, and their greater discipline regarding the need to comply with

the treatment regime. It can also be said that people with a severe inheritance for mental diseases are more at risk of forming post-infarct depression; it is possible that severe somatic suffering to some extent serves as a trigger, provoking mechanism for the development of depressive disorders as manifestations of mental pathology that are genetically determined by heredity.

Describing the actual depressive disorder (patients of the main group), we can highlight the following key points:
A) in 63 patients (71.6%), post-infarction depression was assessed as moderate severity using diagnostic scales.
B) in 69 patients (78.4%), the formation of depressive disorders began in the first 7 days after the ischemic attack.
C) the predominant component of the classical depressive triad in the case of post-infarction depression in our study was affective (48 patients, which was 54.5%).
D) among melancholic, anxious and dysphoric affects, anxiety dominates (59 cases, which is 67%).
E) 50 patients reported persistent suicidal thoughts (56.9%).
Thus, given the clinical characteristics of a depressive episode, it can be considered appropriate to prescribe antidepressant therapy in the first week of the post-infarction period, and, probably, preference should be given to antidepressants with a pronounced anxiolytic effect. This will prevent the formation of severe depressive disorders and avoid the appearance of the most dangerous result of depression – suicidal thoughts and attempts.

CONCLUSIONS

1. The Probability of postinfarction depression increases with the duration of the ischemic attack and increases if the patient's history indicates unsuccessful attempts to stop the attack with nitroglycerin.
2. Post-infarct depression is more likely to Occur in people with a low level of education, burdened by heredity for mental diseases, and with anxiety and psychasthenic personality types.
3. It is advisable to Conduct antidepressant therapy in the first week after a myocardial infarction; preference should probably be given to drugs with a pronounced anxiolytic effect.

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