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Clinical features of depression in women compared with men

Objective: *to study the clinical features of depression in women compared with men.*
Patients and methods. *120 women aged 18-65 years with recurrent depressive disorder (RDD; ICI-10 F33) (a study group) and 67 men of the same age with RDD (a control group) were clinically examined using a specially designed schedule and the Montgomery-Asberg Depression Scale.*
Results. *The clinical picture and the course of RDD have gender differences. The earlier onset of the disease in women with a large number of depressive attacks and lower quality remissions is due to the relationship and mutual influence of menstrual and reproductive function and depression. Such typical symptoms of endogenous depression, as slow thinking, anhedony, decreased sleep duration and early morning awakenings, as well as diurnal swings of mood with its deterioration in the morning, were characteristic for most women and men. The pattern of depression in women is more commonly characterized by anxiety; ideas of self-accusation; suicidal thoughts; avoidance of contacts with others; weakness; fatigue; decreased or increased appetite; sleep onset insomnia; lack of sleep feeling. That in men is more often marked by symptoms, such as melancholy; motor retardation; decreased motivation; somatic symptoms of depression (tachycardia, constipation); comorbid panic attacks; and concomitant diseases of the cardiovascular, respiratory and genitourinary systems. Men more frequently abuse alcohol and other psychoactive substances.*
Conclusion. *The revealed features of depression in women and men will be able to more accurately diagnose and to prescribe adequate therapy.*

Keywords: *depression; gender; sex; depression in women; depression in men.*
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Depressive disorders occupy a leading position among all neuropsychiatric diseases. In the countries of the European Union, they account for about 30% of all neuropsychiatric conditions in women, and 23% in men [1]. It was found that women suffer from depression twice as often as men [2, 3] and have a double risk of developing depression compared with men, beginning from adolescence, i.e. since the beginning of the menstrual cycle [2]. Women more often visit a doctor, and have a higher detection rate of depressive disorders [4, 5]. Men tend to hide their emotions from doctors and other people, considering them a manifestation of socially unacceptable weakness of character. They begin practicing extreme sports, gambling or immerse themselves in work in order to arouse their lost interest in life. Men try to alleviate depressive experiences by abusing alcohol and other psychoactive substances [6]. A higher frequency of depression in women is supposed to be connected with their special position in the family and society, their social role, and negative impact of social, economic, religious, cultural factors on gender and social status. In many countries, women are still unequal to men, despite the fact that women can be highly valued as mothers, wives or professionals [3]. Depression in women can be associated with socio-psychological and family problems, such as loneliness, divorce, infertility, illness and problems in the family, while in men depression occurs more often in the face of trouble and failure at work [3, 7]. A number of studies have noted a strong interrelation between mood and psychosocial factors (stress, physical and mental health) [8]. Many authors note that depressive disorders in women occur in the «critical« periods of neuro-hormonal changes in the body (puberty, pregnancy and the puerperium, perimenopause) [8, 10, 11, 12, 13, 14, 15, 16]. Cyclic changes in the body of a woman due to the menstrual cycle are also reflected in the emotional sphere in the form of premenstrual mood worsening [17, 18, 19]. Thus, the development of depression in women and men is influenced by both sex and social factors which are defined as «gender», as well as purely biological factors, such as menstrual-generative function in women associated with cyclic release of hormones regulated by the neuroendocrine system.

In general, the symptoms of depression are the same in women and men, but there are some differences in their frequency and prevalence. In women, depressive episodes are longer and more frequent than in men [20]. Atypical depression and somatic symptoms of depression occur in women more often [21]. The study by B.Silverstein et al. demonstrated that classical depression in terms of the prevalence of symptoms was comparable

Table 1. *Socio-demographic indicators of the female and male groups*

Characteristics	Women with depression (main group) n=120	Men with depression (control group) n=67	p
Education:			
Primary school	4 (3,3)	2 (3,0)	0,762
Secondary school	1 (0,8)	4 (6,0)	0,106
College	41 (34,2)	18 (26,9)	0,386 0,279
Higher incomplete	6 (5,0)	4 (6,0)	0,955
Higher	68 (56,7)	39 (58,2)	0,960
Marital State:			
Divorced	26 (21,7)	19 (28,4)	0,396
Widowed	9 (7,5)	6 (9,0)	0,944
Married	60 (50,0)	23 (34,3)	0,056 0,306
Single	25 (20,8)	19 (28,4)	0,325
Work:			
Dismissed because of illness	41 (35,0)	21 (31,3)	0,817
Working	44 (37,0)	38 (56,7)	0,013*
Unoccupied	60 (50,4)	25 (37,3)	0,104 0,024*
Retired	15 (12,6)	4 (6,0)	0,244

p * – statistically significant

in women and men, but anxious depression with somatic symptoms predominated in women and occurred twice as often as in men [22]. A study of 146 Taiwanese patients showed that women with anxious depression had increased appetite, hypersomnia, loss of sensation. They were more willing than men to report disturbances of sexual desire. Women showed a greater frequency of sleep disorders (difficulty of falling asleep, altered sleep duration), somatic complaints (loss of appetite, chest pain, headache), anguish and anxiety. Men reported more episodes of depression accompanied by abuse of alcohol and psychoactive substances [23]. A study conducted by the Canadian Epidemiological Society found that atypical symptoms of depression were noted only in 11% of cases. Women were the predominant majority in both typical and atypical depression groups (77% and 75%, respectively) [23]. In the study of twin pairs, women had a high incidence of atypical symptoms, such as increased appetite, weight gain, hypersomnia, fatigue. These patients also reported having ideas of guilt, tearfulness, diurnal mood swings with a predominant worsening in the morning hours, dormancy. Compared with men, women also showed the onset of depression at a younger age and longer depressive episodes [25].

The authors' data are contradictory and ambiguous, which is probably because of the difference in the samples and diagnostic criteria for depression, and that is the basis for further research.

Table 2. *Characteristic of depression course in women and men*

Characteristics	Women with depression (main group) n=120	Men with depression (control group) n=67	p
Age of depression onset	30,0 [24,0; 44,0]	39,5 [33,0; 48,0]	0,018*
Length of the disease (years)	8,0 [4,0; 16,0]	6,0 [2,5; 12,0]	0,161
Number of episodes	4,0 [3,0; 6,0]	2,0 [2,0; 3,5]	<0,001*
Duration of episodes (months):			
maximal	5,0 [4,0; 7,0]	5,0 [4,0; 6,0]	0,733
minimal	2,0 [2,0; 3,0]	2,0 [2,0; 3,0]	0,086
average	3,5 [2,5; 5,0]	3,5 [3,0; 5,0]	0,747
Severity of depression	27,0 [26,0; 28,0]	27,0 [26,0; 27,5]	0,704
Duration of remissions (months):			
maximal	54,0 [48,0; 84,0]	48,0 [12,0; 102,0]	0,267
minimal	6,0 [6,0; 12,0]	6,0 [4,0; 6,0]	0,004*
average	33,0 [24,0; 45,0]	18,0 [9,0; 32,0]	0,020*
Seasonality (%)	20 (16,7)	13 (19,4)	0,787
Complete remission (%)	58 (48,3)	53 (79,1)	<0,001*

p * – statistically significant

The aim of this work is to study the clinical features of depression in women in comparison with men.

Patients and methods. The study was conducted from 2014 to 2017, in the outpatient and inpatient departments of S.S. Korsakov Clinic of Psychiatry of I.M.Sechenov First Moscow State Medical University. 120 women aged 18 to 65 years with recurrent depressive disorder (FDR) (F 33. ICD-10) and 67 men of the same age and with the same diagnosis were examined using clinical methods and clinical follow-up. Women and men with the first or a single episode of depression, as well as pregnant women, women with decompensated somatic and neurological diseases were not included in the study. A special chart was developed for the study. To assess the severity of depression, the Montgomery-Asberg Depression Rating Scale (MADRS) was used.

The mean age of the patients in the main group was 45.0 [32.5; 54.0] years, the age of patients in the control group was 47.0 [40.5; 54.0] years (p = 0.254). Duration of the disease in the main group was 8.0 [4.0; 16.0] years, in the control group – 6.0 [2.5; 12.0] years (p = 0.161). The severity of depression in the main group was 27.0 [26.0; 28.0] points, in the control group – 27.0 [26.0; 27.5] points by the MADRS (p = 0.704). Thus, the groups did not differ significantly neither in age, no in duration of the disease or severity of depression.

Statistical processing of the results was carried out using the Statistics for Windows 6.0 software (StatSoft Inc.). Qualitative characteristics are presented as absolute and relative (%) indicators.

Table 3. *Clinical features of depression in women and men*

Characteristics	Women with depression (main group) n=120	Men with depression (control group) n=67	p
Predominant affect:			
Anxiety	65 (54,2)	25 (37,3)	0,039*
Apathy	21 (17,5)	4 (6,0)	0,046*
Anguish	34 (28,3)	38 (56,7)	<0,001*
Reduced appetite	95 (79,2)	42 (62,7)	0,023*
Increased appetite	7 (5,8)	0 (0,0)	0,107
Reduced libido	88 (73,3)	40 (59,7)	0,079
Sleep disturbances	112 (93,3)	57 (85,1)	0,115
Shortened sleep	100 (89,3)	65 (97,0)	0,115
Early awakenings	76 (67,9)	55 (82,1)	0,057
Difficulty in falling asleep	67 (59,8)	27 (40,3)	0,017*
Lack of sleep	34 (30,4)	5 (7,5)	<0,001*
Somatic symptoms:			
Tachycardia	45 (43,7)	53 (79,1)	<0,001*
Increased blood pressure	57 (55,3)	39 (58,2)	0,832
Weight loss	65 (63,1)	14 (20,9)	<0,001*
Weight gain	11 (10,7)	0 (0,0)	0,014*
Constipation	17 (16,5)	21 (31,3)	0,037*
Dry skin	20 (19,4)	6 (9,0)	0,102
Panic attacks	26 (23,4)	32 (47,8)	0,001*
Psychiatric symptoms:			
Ideas of self-accusation, etc.	102 (85,0)	36 (53,7)	<0,001*
Reduced motivation	82 (68,3)	63 (94,0)	<0,001*
Anhedonia	111 (92,5)	61 (91,0)	0,944
Avoidance of contacts	82 (68,3)	34 (50,7)	0,026*
Suffering from loneliness	47 (39,2)	19 (28,4)	0,186
Slow thinking	89 (74,2)	52 (77,6)	0,728
Fatigue	98 (83,8)	44 (65,7)	0,009*
Change in motor activity (retardation/ dormancy)	63 (55,3)	60 (89,6)	<0,001*
Change in motor activity (excitement)	51 (44,7)	7 (10,4)	<0,001*
Suicidal thoughts	42 (35,0)	4 (6,0)	<0,001*
Diurnal mood swings	92 (77,3)	35 (52,2)	<0,001*
Worsening of mood in the morning	85 (93,4)	67 (100,0)	0,085

p * – statistically significant

Analysis of the correspondence of value distribution of characteristics to normal distribution was carried out using the Kolmogorov–Smirnov method. As most of the quantitative characteristics did not correspond to the laws of normal distribution, they were described by means of the median (Me) and quartiles (Me [25%, 75%]), and nonparametric statistical methods were used to estimate the statistical significance of differences between the groups: when comparing two independent groups by quantitative indicators – the Mann–Whitney method; more than two independent groups – the Kraskel–Wallis method. When comparing independent groups by qualitative indicators, the was applied and if necessary, the two-sided Fisher's exact test.

The confidence level of results was assumed to be sufficient for p <0.05; in the case of multiple comparisons, the Bonferroni correction was used, in which case p was defined as p = 0.05/n, where n is the number of pairwise comparisons on the same data set.

Table 4. *Concomitant diseases in women and men with DDR*

Somatic diseases	Women with depression (main group) n=120	Men with depression (control group) n=67	p
Absent	75 (63,6)	50 (74,6)	0,826
Diseases of gastrointestinal tract	32 (26,4)	17 (25,4)	0,964
Cardiovascular diseases	19 (15,8)	23 (34,3)	0,006*
Metabolic and endocrine disorders	6 (5,0)	0 (0)	0,152
Skin diseases	1 (0,8)	4 (6,0)	0,106
Pulmonary diseases	3 (2,5)	10 (14,9)	0,004*
Genitourinary diseases	9 (7,5)	17 (25,4)	0,002*

p * – statistically significant

Results and discussion. When comparing the two groups of subjects – patients of the main group (women) and patients of the control group (men), a number of significant differences were found. In assessing socio-demographic indicators (Table 1) there were more married women than married men, and slightly more divorced and unmarried men than women of the corresponding status. The number of working men was significantly higher, which was probably due not only to the disease, but also to the social status of women as housewives and earlier retirement age. The level of education was approximately the same in both groups and was not statistically different. Thus, men are more engaged in work, but worse adapted in terms of family life.

When assessing the course of depression, it was found that in women, depression usually begins at an earlier age, compared with men (Table 2). In 71.7% of women, depression manifests during the periods of hormonal adjustment (puberty, postpartum period, menopause). The disease duration in the main group was 8.0 [4.0, 16.0] years, in the control group – 6.0 [2.5; 12.0]. The number of depressive episodes in women was significantly higher than in men. The average duration of depressive episodes in men and women was not significantly different, however, the duration of remission was significantly longer in the group of women, which, together with a greater number of episodes, may be connected with an earlier onset of depression. However, complete remission was more often achieved in men (79.1%, compared to 48.3%), which may be explained by the presence of premenstrual syndrome in 65% of patients, which aggravated the symptoms of depression. The severity of depression by the MADRS scale, the presence of seasonality did not significantly differ in the compared groups. However, seasonality of depression in women was significantly more frequent in those patients (20.9%), who developed manifestations of depression without any association with the periods of hormonal adjustment.

When comparing the clinical picture of depression in women and men, it was found (Table 3) that in women the leading affect significantly more often was anxiety, while in men it was anguish. Apathetic depressions were rarely seen in both groups, but significantly more often in women. Decreased appetite, the presence of daily mood swings with worsening (in the overwhelming majority of cases) in the morning hours, suicidal thoughts, lack of strength, energy, constant feeling of fatigue were more common in women than in men. Increased appetite was quite rarely seen and only in women. Inhibition of motor activity was typical of men, whereas excitement – of women. A decreased libido was represented approximately equally in the main and control groups; sleep disturbances often seen in depression (early awakenings, shortened sleep) were also equally present in the structure of depression in women and men. However, women more often complained of difficulty in falling asleep and lack of sleep awareness. In women, ideas of self-accusation and self-deprecation, avoidance of contact with other people were significantly more frequent. Reduced motivation was significantly more often observed in men. Anhedonia and suffering from loneliness were approximately the same in both groups.

With regard to the somatic symptoms observed during depression, women reliably less frequently complained of constipation and tachycardia. Men were characterized by panic attacks along with other somatic symptoms.

Concomitant alcohol abuse was significantly higher in the group of men, compared with women (34.3% versus 10.0%, $p < 0.001$).

When evaluating the associated somatic diseases, men were found to have a significantly greater number of cardiovascular, pulmonary diseases and diseases of the urogenital system (Table 4). The prevalence of concomitant cardiovascular and pulmonary diseases in men may be the result of significantly greater presence of bad habits, compared with women (74.6% versus 22.7%, $p < 0.001$ *).

Thus, the data obtained in the study indicate that the clinical picture of recurrent depression and its course have certain gender differences, which is consistent with the opinion of a number of authors. The earlier onset of the disease in women [2, 25], a greater number of episodes [20] and lower quality of remissions (due to the presence of premenstrual deterioration in the period of remission and the presence of «precursors of the disease» as a part of premenstrual syndrome) [16], are determined by interrelation and interaction of the menstrual-generative (reproductive) function and depression. Typical symptoms of endogenous depression, such as slow thinking, anhedonia, early morning awakenings, diurnal mood swings with worsening in the morning hours, reduced sleep duration were observed in most women and men, which confirms the idea that classical depression is comparable in women and men as far as the most prevalent symptoms are concerned [22]. Depression in women more frequently comprises anxiety [22, 23], ideas of self-accusation, suicidal thoughts, avoidance of contact with others, weakness, lack of energy, loss of appetite, disturbed sleep, and lack of feeling of sleep. Increased appetite was observed only in women, usually in the context of anxious depression combined with agitation, disturbed sleep and ideas of guilt, but there was no dormancy [25], hypersomnia and decreased sexual desire, as in other studies [23]. In men, symptoms such as melancholy, motor retardation, reduced motivation, somatic symptoms of depression (constipation, tachycardia), comorbid panic attacks, and concomitant diseases of the cardiovascular, respiratory, and genitourinary systems were observed more often. Men more often abuse alcohol and psychoactive substances, as it was also reported by other authors [23].

The data obtained in the study indicate that there are certain differences in the frequency of some symptoms and in the dynamics of the disease as a whole, which may be viewed as a result of the influence of various factors, both biological and socio-psychological.

Thus, the study of the gender characteristics of depressive disorders remains an issue requiring further research. Nevertheless, the identified gender features of the clinical picture and the course of recurrent depression will allow to make more accurate diagnoses and administer appropriate therapy.

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