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Гендерные характеристики ремиссии шизофрении

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АННОТАЦИЯ

Обоснование. В настоящее время актуально изучение гендерных характеристик заболеваемости шизофренией, возраста дебюта, особенностей клинической картины и течения заболевания, ответа на лечение и переносимости антипсихотических препаратов у пациентов.

Цель. Изучение клинико-функциональных характеристик ремиссии в зависимости от пола больных шизофренией.

Материал и методы. Обследован 61 амбулаторный пациент с параноидной шизофренией (28 мужчин и 33 женщины) на этапе ремиссии заболевания. Клинико-шкальная оценка проведена с помощью шкал PANSS, PSP, CGI-S, DAI.

Результаты. Ограничение профессиональной деятельности и социальных контактов чаще отмечено у мужчин. Среди больных без инвалидности и пациентов с 3-й группой инвалидности преобладали женщины, со 2-й группой инвалидности — мужчины. Показатель степени тяжести заболевания по шкале CGI-S в период ремиссии соответствовал умеренной степени тяжести у мужчин и лёгкой — у женщин ($p < 0,05$). Выраженность резидуальной продуктивной и, особенно, негативной симптоматики была больше у пациентов мужского пола. Уровень социального и повседневного функционирования по PSP у женщин выше, чем у мужчин. У пациентов обоих полов преобладали заметные нарушения, однако среди мужчин они развивались чаще. Наиболее выраженные различия обнаружены по степени нарушения функционирования в поведенческой сфере. Неблагоприятный в отношении социального функционирования параноидный тип ремиссии преобладал у мужчин. Для женщин наиболее благоприятным с точки зрения комплаенса и социального функционирования оказался тимопатический тип ремиссии. Антипсихотики I поколения чаще назначали при параноидном типе ремиссии и мужчинам, и женщинам, в то время как терапия антипсихотиками II поколения ассоциировалась с наиболее благоприятными вариантами ремиссии как для мужчин (апатический тип), так и для женщин (тимопатический тип), что соотносилось с более высоким уровнем социального функционирования. В целом уровень социального функционирования был выше при назначении антипсихотиков II генерации независимо от пола пациентов с шизофренией.

Вывод. Подтверждена гипотеза о лучшем исходе заболевания в рамках личностно-социального восстановления у женщин.

Ключевые слова: *шизофрения, гендерные особенности, ремиссия, восстановление*.

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Gender characteristics of schizophrenia remission

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ABSTRACT

BACKGROUND. Currently, it is relevant to study the gender characteristics of the incidence of schizophrenia, the age of onset, the features of the clinical picture and course of the disease, the response to treatment and the tolerability of antipsychotic drugs in patients.

AIM. The aim of the study was to study the clinical and functional characteristics of remission, depending on the gender of patients with schizophrenia.

MATERIAL AND METHODS. 61 outpatient patients with paranoid schizophrenia (28 men and 33 women) were examined at the stage of remission of the disease. Clinical and scale assessment was carried out using the PANSS, PSP, CGI-S, DAI scales.

RESULTS. There were more married women than men. Restriction of professional activity and social contacts was more often observed in male patients. Among patients without disabilities and patients with the 3rd disability group, female persons prevailed, while among patients with the 2nd disability group — men. It was shown that the age of onset of the disease was significantly less in men than in women. The indicator of the severity of the disease on the CGI-S scale during remission corresponded to moderate severity in men and mild severity in women ($p < 0.05$). The severity of residual productive and, especially, negative symptoms is greater in male patients. The level of social and everyday functioning according to PSP is higher for women than for men. Noticeable disorders prevailed in patients of both sexes, however, they were observed more often among men, while women more often than male patients had minor difficulties in certain areas of functioning. The most pronounced differences were found in the degree of impaired functioning in the behavioral sphere. The paranoid type of remission unfavorable with respect to social functioning was more often observed in men. For women, the thymopathic type of remission turned out to be the most favorable from the point of view of compliance and social functioning. Antipsychotics of the first generation were more often prescribed for the paranoid type of remission in both men and women, while therapy with antipsychotics of the second generation was associated with the most favorable remission options for both men (apathetic type) and women (thymopathic type), which correlated with a higher level of social functioning. In general, the level of social functioning was higher when prescribing second-generation antipsychotics, regardless of the gender of patients with schizophrenia.

CONCLUSION. The hypothesis about the best outcome of the disease in the framework of personal and social recovery in women has been confirmed.

Keywords: *schizophrenia, gender characteristics, remission, recovery.*

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BACKGROUND

The literature indicates that the incidence of schizophrenia is comparable in women and men [1, 2]. Moreover, the risk of lifetime developing schizophrenia in men is 1.5 times higher than that in women [3]. The age range of disease onset varies; schizophrenia manifests itself on average 4 years earlier in men than in women [4]. At the age of 45–54 years, women remain at a high risk of disease occurrence [5], whereas in men, the peak of disease development is registered at the age of 20 years [6]. Hallucinatory, delusional, and affective symptoms in women and negative symptoms in men are predominant in the clinical presentation [7].

Several authors regard the greater severity of negative symptoms in men as a consequence of the different levels of premorbid social functioning between men and women [8]. Several studies have documented lower levels of social functioning in premorbid men, especially in patients having their first psychotic episode and chronic schizophrenia [9, 10]. The consequences of the first diagnosis of psychosis are more severe and disabling in men [6, 11]. Repeated exacerbations in men have a longer duration. Carpiniello et al. assessed rates of clinical remission and recovery by sex in a cohort of outpatients with chronic schizophrenia and schizoaffective disorder, and their results indicated the best outcomes of the disease in women [12].

Hypotheses suggested to explain the difference between men and women with schizophrenia include biological models (genetic, hormonal, and neurodevelopmental), psychological factors (different psychological vulnerabilities), and social factors (cultural characteristics, e.g., different gender role expectations) [13–15].

The sex aspects of clinical and functional indicators of remission and personal and social recovery remain the subject of discussion in light of conflicting data because of methodological differences associated with the criteria for remission and recovery [8, 16, 17].

This study aimed to study the clinical and functional characteristics of remission depending on the sex of schizophrenic patients.

MATERIALS AND METHODS

In all, 61 outpatients with paranoid schizophrenia (F20.0 according to the International Classification of Diseases, 10th revision), including 28 men and 33 women, were examined. The average ages of the male and female patients upon enrollment in the study were 43.8 ± 12.7 and 44.6 ± 12.3 years, respectively.

In accordance with the clinical and functional criteria for remission in schizophrenia [18], all patients were examined at the stage of drug-induced remission. These patients met the international standardized psychometric criteria for remission on the positive and negative syndrome scale (PANSS) [19].

Clinical scale assessment, follow-up, and sociodemographic methods were used in this study. Moreover, the clinical global impression scale—severity (CGI-S), PANSS, personal and social performance scale (PSP), and drug attitude inventory (DAI) were used. In the clinical and phenomenological characteristics of remission, the classification proposed by S.N. Mosolov (paranoid, pseudopsychopathic, thymopathic, asthenic, and hypochondriacal remissions) was used [18].

Descriptive statistical methods were used. For comparison of ordinal variables, the nonparametric Mann–Whitney test (for two samples) and the Kruskal–Wallis test (for three or more samples) were used. Differences were considered significant at $p < 0.05$.

RESULTS

The number of single patients among men and women was comparable (50% of cases). There were more married women than married men (37.5% and 23.6%, respectively). There were more divorced patients among men than among women (26.4% and 12.5%, respectively).

Approximately half of the male patients (52%) had limited social contacts, which was accompanied by a narrowing or loss of social interests. Among female patients, restriction of social contact was less common (36.4%).

Upon inclusion in the study, 23.6% of women and 37.5% of men were working part-time, 45.5% of women and 28.6% of men were predominantly

Table 1. Distribution of patients by sex and presence of a disability

Disability group	Number of patients, n (%)		p
	Men, $n = 28$	Women, $n = 33$	
Group 3	6 (21.4)	11 (32.3)	<0.001
Group 2	20 (71.4)	16 (48.3)	<0.001
Group 1	—	—	—
No disability	2 (7.2)	6 (19.4)	<0.001

Table 2. Incidence of social functioning disorders in both sexes

PSP index, score	Number of female patients, n (%)	Number of male patients, n (%)
41–50 (significant difficulty in two or more fields or severe difficulty in one field)	0 (0)	1 (4)
51–60 (significant impairments in one of the fields)	8 (22)	9 (32)
61–70 (noticeable but not significant impairments)	12 (36)	14 (50)
71–80 (minor difficulties in some fields)	10 (32)	4 (14)
81–90 (good level of functioning)	3 (10)	0 (0)

unemployed (came to work several times a week, had an off-the-books job), 20.9% of women and 12.6% of men were unemployed for a long time (worked occasionally, <3 months a year), and 21.3% of men and 10% of women were unemployed. Thus, the restriction of professional activity was more frequent in men.

Table 1 presents the distribution of the examined patients according to the presence of a disability. Women were predominant in group 3, whereas men were predominant in group 2. Women were predominant in the group without disabilities.

Men were younger than women at disease onset (22.7 ± 4.2 and 29.35 ± 8.5 years, respectively; $p < 0.001$). The duration of schizophrenia remission at the time of inclusion was 12.17 ± 0.5 months in men and 11.63 ± 0.5 months in women. On the CGI-S scale, disease severity during remission was 3.2 ± 0.5 points in men and 2.5 ± 0.9 points in women, which corresponded to a moderate degree in men and a mild degree in women ($p < 0.05$).

According to the PANSS clinical scale assessment, the severity of psychopathological symptoms reached 76.5 ± 9.52 points in men and 61.3 ± 6.18 points in women; that of productive symptoms was 18.2 ± 7.2 points in men and 13.1 ± 5.8 points in women, and that of negative symptoms was 27 ± 9.2 points in men and 19.5 ± 10.6 points in women.

The level of social and daily functioning according to PSP was higher in women than in men (69.83 ± 4.86 and 61.7 ± 19.3 points, $p < 0.05$) and corresponded to the level of noticeable disorders but without reaching a significant degree.

In both sexes, noticeable impairments prevailed but did not reach a significant level. Among men, impairments developed more often, whereas women more often had minor difficulties in certain fields of functioning (Table 2).

In this study, 67.3% of men and 52% of women had a marked impairment in socially significant activities, including study and work (PSP-A). In 65.5% of men, a significant impairment in the field of intrafamily and social relations was found. Moreover, 50% of women had marked impairments in relationships with relatives and other social relationships (PSP-B). Self-service (PSP-C) was markedly impaired in 80% of men and weakly impaired in 42% of women. The largest differences between sexes (30% of men and 4.5% of women) were revealed in the frequency of noticeable behavioral disorders (verbal aggression and socially unacceptable behavior; PSP-D).

Table 3. Clinical and scale characteristics of remission in both sexes

Type of remission	Overall indicator of the scale, M ± m				p
	PANSS, score		PSP, score		
	Men	Women	Men	Women	
Paranoid	76.5±5.15	57.3±4.55	61.0±4.95	71.25±7.63	<0.001
Pseudopsychopathic	—	74.5±3.71	—	70.5±6.01	0.118
Thymopathic	—	60.5±4.12	—	74.0±4.72	0.278
Asthenic	—	42.0±6.41	—	65.5±6.41	0.08
Apathetic	69.3±7.44	63.0±3.55	68.7±6.03	67.0±2.70	0.05

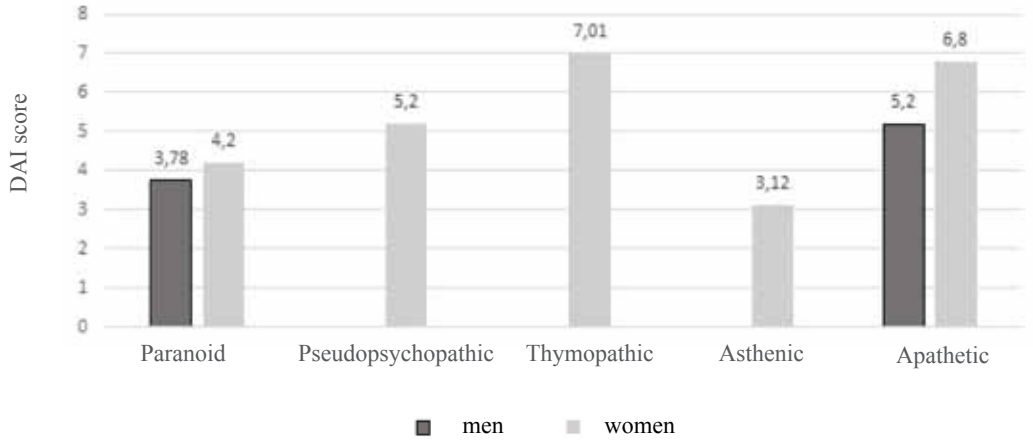

Рис. 1. Уровень комплаенса при разных типах ремиссии в зависимости от пола по шкале оценки отношения к лекарственным препаратам (DAI)

The distribution of patients according to the type of remission depending on the sexes was as follows: Paranoid remission was established in 65.5% of all male patients and 53.5% of all female patients. An apathetic variant of remission was identified in 34.5% of cases in men and 13.29% of cases in women. Pseudopsychopathic, thymopathic, and asthenic types were detected in 18.9%, 7.14%, and 7.14% of cases in women, respectively, while these types of remission were not registered in men.

Table 3 presents a comparative assessment of different variants of remission type, depending on sex, according to the PANSS and PSP scales.

Table 3 shows that the greatest severity of residual symptoms in women was with pseudopsychopathic remission, whereas the least was with asthenic remission. In men, the mental state differed for the worse with paranoid remission and for the better with apathetic remission.

In paranoid remission, the social functioning of women was higher than that of men. In apathetic remission, the indicators did not differ between men and women (68.7 and 67.0 points, respectively). In men, apathetic remission was more favorable than paranoid remission in terms of psychosocial functioning. In women, thymopathic remission turned out to be the most favorable, whereas asthenic remission was the least favorable (74 and 65.5 points according to PSP, respectively).

The level of compliance was generally higher in women than in men (7.4 and 5.8 points, according to DAI, respectively). Women with paranoid and apathetic remissions tended to have a higher level of compliance. The most favorable compliance was noted with thymopathic remission in women (7.01 points). In men, the level of compliance was higher in those with apathetic remission than in those with paranoid remission (Fig. 1).

Patients received maintenance therapy with long-acting injectable first- and second-generation antipsychotics. Moreover, 42.7% of men and 51.3%

Table 4. Types of antipsychotic therapy for different types of remission depending on sex

Remission type	Men		p	Women		p
	First-generation antipsychotic drugs, n (%)	Second-generation antipsychotic drugs, n (%)		First-generation antipsychotic drugs, n (%)	Second-generation antipsychotic drugs, n (%)	
Paranoid	12 (43.0)	4 (14.2)	<0.05	6 (18.1)	4 (11.1)	<0.05
Pseudopsychopathic	—	—	—	3 (9.4)	2 (6.0)	0.081
Thymopathic	—	—	—	4 (12.1)	9 (27.2)	< 0.05
Asthenic	—	—	—	1 (3.0)	1 (3.0)	0.574
Apathetic	4 (14.3)	8 (28.5)	p <0.05	2 (6.0)	1 (3.0)	p =0,321

Table 5. Relationship between the level of social functioning and type of antipsychotics depending on sex

Remission type	PSP, score		p	PSP, score		p
	Men			Women		
	First-generation antipsychotic drugs, M ± m	Second-generation antipsychotic drugs, M ± m		First-generation antipsychotic drugs, M ± m	Second-generation antipsychotic drugs, M ± m	
Paranoid	52.1±4.52	60.3±6.70	<0.05	59.2±3.47	67.5±5.64	<0.05
Pseudopsychopathic	—	—	—	63.4±4.87	65.2±2.91	0.321
Thymopathic	—	—	—	68.1±5.31	74.6±7.87	<0.05
Asthenic	—	—	—	57.1±3,55	59.3±4,36	0.42
Apathetic	64.2±8.36	68.4±2,52	<0.05	60.2±4.62	66.7±2.25	<0.05

of women received injectable long-acting second-generation agents.

Table 4 indicates that first-generation antipsychotics were prescribed significantly more often in men and women with paranoid remission ($p < 0.001$). Second-generation antipsychotics were used more frequently in men with apathetic remission and women with thymopathic remission ($p < 0.001$). In women with pseudopsychopathic, asthenic, and apathetic remission types, no differences in the frequency of prescribing different generations of antipsychotics were found ($p = 0.081$, $p = 0.574$, and $p = 0.321$, respectively).

A significantly lower score of social functioning was associated with prescribing first-generation antipsychotic drugs in men and women in paranoid remission, whereas a higher score was associated with prescribing second-generation antipsychotics in women in thymopathic remission and both men and women in apathetic remission (Table 5).

In general, the level of social functioning was higher when second-generation antipsychotics were prescribed, regardless of the sex of the patients with schizophrenia.

DISCUSSION

The study results confirm that women are characterized by a later disease onset and a lower severity of negative symptoms than men [1–3]. The severity of residual, productive, and negative symptoms was greater in men. In women, the best premorbid adaptation was noted, which corresponds to literature data [15, 21].

Paranoid remission, which is unfavorable in relation to social functioning, was more often registered in men. For women, thymopathic remission was the most favorable in terms of compliance and social functioning. In general, women have a higher quality of remission, which correlates with the findings of other authors [6, 12, 18].

The evidence of a higher level of social functioning in women with schizophrenia than in men is consistent with available data [9, 22]. Evidence shows

that the social functioning of women with a disease duration of <5 years is higher than that of men, and the incidence of disability among men is higher [22]. According to our data, women predominated among patients without a disability and patients in disability group 3, whereas men predominated among patients in disability group 2. The restriction of professional activity and social contacts was more common in men.

Significant impairments predominated in patients of both sexes; however, among men, they were more common, whereas women predominantly had minor difficulties in certain aspects of functioning.

The most pronounced differences were detected in the degree of behavioral dysfunction. According to this study, women's social functioning is higher in the fields of socially useful activities, including study and work, family and social relations, and self-service. Meanwhile, men are characterized by a higher frequency of noticeable behavioral disorders, such as verbal aggression and socially unacceptable behaviors.

First-generation antipsychotics were more commonly prescribed for paranoid remission in both men and women, whereas therapy with second-generation antipsychotics was associated with the most favorable remission options in both men (apathetic type) and women (thymopathic type), which correlated with a higher level of social functioning. In general, the level of social functioning was higher when prescribing second-generation antipsychotics, regardless of the sex of patients with schizophrenia. These results are consistent with data on the resocializing properties of new-generation antipsychotics [23–25].

CONCLUSIONS

1. The data obtained indicate sex differences in remission states in patients with schizophrenia. Women tend to have a higher quality of remission and indicators of social functioning in remission.

2. The study results emphasize the need to develop individualized approaches to psychosocial rehabilitation, taking into account sex factors and confirming the hypothesis of a better outcome of schizophrenia in the context of personal–social recovery in women.

ДОПОЛНИТЕЛЬНО

Финансирование. Исследование не имело спонсорской поддержки.

Конфликт интересов. Авторы заявляют об отсутствии конфликта интересов.

Вклад авторов. *Серазетдиновой В.С.* подготовлен текст, обработан анализ последних актуальных исследований на представленную тему, проведено клиническое наблюдение и экспериментально-психологическое обследование больных, разработана структурированная карта динамического наблюдения; *Петровой Н.Н.* осуществлены анализ представленного материала и оценка значимости проведённого исследования, отредактирован текст рукописи; *Серазетдиновой Л.Г.* разработана структура исследования с организацией рабочего процесса; *Глускиной Л.Я.* выполнены подбор и оценка клинико-катамнестических данных.

Conflict of interests. The authors declare no conflicts of interests.

Contribution of the authors. *Serazetdinova V.S.* prepared the text, processed the analysis of the latest topical studies on the topic presented, carried out clinical observation and experimental-psychological examination of patients, developed a structured chart of dynamic observation; *Petrova N.N.* analyzed the material presented and evaluated the significance of the study, edited the manuscript; *Serazetdinova L.G.* developed the study structure the organization of the workflow; *Gluskina L.Y.* selected and evaluated the clinical and category.

Выражение признательности

Предоставляется возможность выразить слова благодарности тем, чей вклад в исследование был недостаточен для признания их соавторами, но вместе с тем считается авторами значимым (консультации, техническая помощь, переводы и пр.).

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