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FEATURES OF COGNITIVE DISORDERS IN SCHIZOPHRENIA AND TREATMENT TACTICS

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ABSTRACT

Cognitive dysfunction is a core feature of schizophrenia. Deficits are moderate to severe across several domains, including attention, working memory, verbal learning and memory, and executive functions. These deficits pre-date the onset of frank psychosis and are stable throughout the course of the illness in most patients. Over the past decade, the focus on these deficits has increased dramatically with the recognition that they are consistently the best predictor of functional outcomes across outcome domains and patient samples. Recent treatment studies, both pharmacological and behavioral, suggest that cognitive deficits are malleable. Other research calls into question the meaningfulness of cognitive change in schizophrenia. In this article, we review cognitive deficits in schizophrenia and focus on their treatment and relationship to functional outcome.

KEYWORDS: *Schizophrenia, Cognitive Disorders, Social Maladaptation, Negative Symptoms, Treatment Tactics, Antipsychotics*

INTRODUCTION

Currently, the mental health of the population is in the center of attention of scientists around the world and is one of the priority areas of healthcare in the Republic of Uzbekistan. Today, the features of cognitive disorders and modern methods of treating patients with schizophrenia is an important medical and social problem. Early detection and timely medical intervention can reduce the risk of frequent exacerbations in the future and minimize the negative consequences of psychosis **[2, 5, 6].** Cognitive impairment is observed in the vast majority of patients with a first psychotic episode [5,7].The parameters of cognitive functioning are important indicators of the level of social functioning of patients with schizophrenia, regardless of their clinical status, and predetermine the social prognosis of the disease, the degree of labor and social maladaptation **[1,3].** Cognitive indicators are important indicators of the functional state in patients with schizophrenia and predetermine the social prognosis of the disease, the degree of labor and social maladaptation of patients **[6,8].** Recently, in domestic and foreign studies, there has been an increasing interest in a deeper and more detailed study of neurocognitive deficit, which, along with a deficit in basic cognitive functions, praxis, gnosis, and thinking **[4].** Hneurocognitive deficit increases to a greater extent at the initial stages of the disease and social

consequences join them. The study of these disorders, diagnosis and treatment also, increasing the social competence of patients remains understudied.

Purpose of the study. To determine the features of cognitive disorders in different forms of schizophrenia and to develop modern methods of treatment for this category of patients.

Research objectives. The study of clinical and social factors and their significance in the assessment of cognitive disorders. To substantiate the correlation relationship of clinical and social factors in the diagnosis of the severity of cognitive disorders. To develop new directions of differentiated therapy and tactics for various manifestations of cognitive disorders, taking into account the dynamics of clinical and sociological parameters of the disease. Based on the results obtained, develop an algorithm for diagnosis and treatment, taking into account the severity of cognitive disorders.

Materials and research methods. The study included men and women aged 30 to 50 years with a disease duration of 10 ± 2 years or more, who met the ICD-10 diagnostic criteria for schizophrenia. Examined176patients with schizophrenia. The patients underwent general clinical and functional research methods. Cognitive function in patients was assessed by the Montreal scale (MMSE), which consists of 15 confirmations. For each patient, a questionnaire was filled out with the inclusion of socio-demographic indicators (sex, age, place of residence, education, marital status, employment / disability),anemnestic data.

Results and discussion. The patients were diagnosed according to ICD-10 Continuous schizophrenia, episodic schizophrenia with a progressive defect, episodic schizophrenia with a stable defect. The study included176patients, of which 60 received risperidone, 50 - quetiapine and 66 - olanzapine. Duration of observation - 6 months.In the main group, patients were prescribed AN (risperidone,quetiapine, olanzapine) + nootropics, in the control group, domestic antipsychotics were prescribed without nootropics. Cognitive function was assessed at the beginning and towards the end of the course of treatment. The dynamics of the state of cognitive functions, assessed by the performance of patients showed an improvement in the course of therapy in both groups.

TABLE 1 ASSESSMENT OF COGNITIVE FUNCTION BY THE MONTREAL SCALE (MMSE)

Degree of cognitive functioning	Schizophrenia continuous n=60		Episodic schizophrenia with progressive defect n=50		Episodic schizophrenia with stable defect n=66	
	Abs.	%	Abs.	%	Abs.	%
Mild cognitive impairment	25	41,7	nine	eighteen	eight	12.1
Moderate cognitive impairment	sixteen	26.7	thirteen	26	thirteen	19.7
mild dementia	ten	16.6	sixteen	32	eighteen	27.3
moderate dementia	nine	fifteen	12	24	23	34.8
severe dementia	-	-	-	-	4	6.1

Mild cognitive impairment prevailed in patients diagnosed with continuous schizophrenia and amounted to41.7%.Moderate cognitive impairment andmild dementiamet at26%and32%patients diagnosed with episodic schizophreniagrowingdefect, respectively. Severe cognitive impairment predominated in6.1%patients with a diagnosisSchizophrenia episodic with stable defect. The interdependence and combination of internal (pathodynamic) and external (social-environmental) influences on the formation of the severity of cognitive disorders have been established.

Changes in the total mean group score on the MMSE scale were significant in the control group by the end compared to the baseline score, in the main group, a significant improvement was noted already after a month of therapy and persisted until the end of treatment. In 90% of patients, there was an improvement in the distribution of attention. The productivity of visual memory increased, but decreased: the volume of working memory from 7.8 to 7.2 words; stability - from 4.5 to 3.5 words with delayed reproduction, visual memory productivity - from 5.5 to 4.4 points. The ratio of types of dynamics at the same time shows that in half of the subjects, the level of implementation of the methods remained the same. During the first month of risperidone therapy, statistically significant positive dynamics of most cognitive functions was found, with the exception of auditory-speech memory, neurodynamics and voluntary regulation, which improved statistically significantly within 3 months. Non-verbal thinking improved statistically significantly only after 5 months of risperidone therapy. A comparative analysis of the dynamics of cognitive functioning in groups depending on the course of the disease showed that in the main group, changes in the examination results at the end of the course of treatment take a more favorable position in relation to most indicators, and reach a degree of statistical significance.

TABLE2 CHARACTERISTICS OF THE COGNITIVE FUNCTIONING OF PATIENTS

Index of cognitive functioning	Schizophrenia continuous (n=60)			
	Main gr. (n=35) risperidone		Control gr. (n=25) haloperidol	
	Before treatment	After treatment	Before treatment	After treatment
Structural Ability	45.2±17.6	59.3±12.3	46.2±13.6	48.5±11.4
Short-term visual-motor memory	35.1±10.5	58.2±11.7	36.1±13.0	39.7±12.7
Long-term visual-motor memory	33.6±11.4	57.8±12.4	35.7±8.8	37.3±11.9
verbal memory	34.1±11.1	55.2±12.1	33.9±11.1	39.2±12.7
working memory	31.1±12.6	56.6±11.8	35.1±12.2	38.8±11.4
motor skills	45.8±13.4	56.3±12.6	43.5±11.7	46.2±11.8
fluency	34.2±11.8	58.5±14.4	33.0±13.5	39.6±12.8
Planning, problem-solving behavior	38.6±12.5	59.7±11.7	37.6±14.6	38.3±12.6

Violation of cognitive disorders in patients with schizophrenia depends on the clinical forms of the disease, the prevalence of negative or positive symptoms and the optimal ratio of psychopharmacotherapy. Despite the clinical stabilization of the mental state of patients, the features of their cognitive functioning were characterized by severe impairments. The survey results showed that 17.8% of patients with schizophrenia had a comprehensive assessment of cognitive functioning within the normal range.

In most cases, a decrease in the rate of working capacity and the development of a skill, as well as a decrease in working, auditory-speech and visual-motor memory, was found.

TABLE 3 CHARACTERISTICS OF THE COGNITIVE FUNCTIONING OF PATIENTS

Index of cognitive functioning	Episodic schizophrenia with progressive defect (n=50)			
	Main gr. (n=30)quetiapine		Control gr. (n=20) haloperidol	
	Before treatment	After treatment	Before treatment	After treatment
Structural Ability	46.1±17.1	54.6±12.1	43.1±13.0	46.5±11.1
Short-term visual-motor memory	36.1±7.8	56.3±13.3	35.2±13.6	39.4±12.2
Long-term visual-motor memory	33.8±11.7	55.5±12.5	34.1±13.0	38.3±11.5
verbal memory	36.4±14.3	53.7±12.5	35.7±8.8	39.7±10.8
working memory	33.8±12.7	52.6±11.6	34.9±11.1	40.3±11.7
motor skills	41.3±14.7	53.3±13.2	40.1±12.2	43.1±11.6
fluency	31.7±13.9	51.5±11.4	32.5±11.7	36.2±12.4
Planning, problem-solving behavior	32.1±11.3	52.7±11.3	33.0±13.5	37.2±12.1

An analysis of the relationship between clinical and psychopathological characteristics and features of cognitive functioning showed that patients with more pronounced residual positive symptoms during the remission period had a greater decrease in cognitive functioning, planning, short-term and long-term memory. Most patients with schizophrenia need reassurance and need help and assistance from healthcare professionals, family members, and friends. Family members caring for a patient have additional daily work and suffer from psychological pain and anxiety.

When treated with atypical antipsychotic drugs with the inclusion of nootropics, the indicators of cognitive functions significantly improved, the intensity of extra pyramidal side effects of antipsychotics decreased.

TABLE 4 CHARACTERISTICS OF THE COGNITIVE FUNCTIONING OF PATIENTS

Index of cognitive functioning	Episodic schizophrenia with stable defect (n=66)			
	Main gr. (n=34) olanzapine		Control gr. (n=32) haloperidol	
	Before treatment	After treatment	Before treatment	After treatment
Structural Ability	42.2±13.6	47.7±11.2	42.8±13.6	45.2±11.1
Short-term visual-motor memory	41.1±13.0	48.5±12.1	39.1±12.5	46.1±11.3
Long-term visual-motor memory	40.7±8.8	44.5±12.4	41.3±12.6	42.7±11.3
verbal memory	39.9±11.1	44.6±12.7	38.7±13.4	37.7±12.5
working memory	40.1±12.2	47.5±11.3	39.5±11.7	42.5±12.4
motor skills	39.5±11.7	52.3±11.4	40.7±11.6	44.5±12.1
fluency	41.2±13.5	47.2±12.2	39.4±12.2	43.0±11.5
Planning, problem-solving behavior	36.6±14.6	50.1±11.3	37.3±12.2	42.5±11.2

We studied the features of the assessment of cognitive disorders and in various clinical forms of the disease, the behavior of patients with various negative disorders. Atypical antipsychotics

regulate and control the state of the psyche, blocking the occurrence of psychopathological disorders. A faster and more pronounced positive dynamics of cognitive activity was observed in the main group of patients who received combined therapy with atypical antipsychotics and nootropics. To a greater extent, not only the manifestation of the disease, but also clinical and social factors play an important role in the development of cognitive impairment. A number of characteristic features of the influence of nootropic drugs on the dynamics of cognitive deficit in schizophrenia have been found. During therapy, all cognitive parameters, motor skills and executive function significantly changed in a positive direction.

Findings: Cognitive deficit is the main feature of schizophrenia, which leads to difficulty in adapting to daily life. Early diagnosis, treatment, family and social support of patients leads to increased cognitive function and improved quality of life. With the combined use of atypical neuroleptics and nootropic drugs, it positively affects cognitive functions and leads to significant, long-term and clinically significant improvements in cognitive functioning.

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