

CLINICAL AND SOCIO-ECONOMIC EFFECTIVENESS OF INJECTABLE LONG-TERM FORMS OF ATYPICAL ANTIPSYCHOTICS IN SCHIZOPHRENIA

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Abstract. *Since the introduction into practice of Chlorpromazine, a breakthrough in Psychiatry, the range of drugs for schizophrenia has expanded significantly, with atypical antipsychotics being increasingly used in recent times. Despite the advantages of atypical antipsychotics in relation to first-generation antipsychotic drugs, it remains a topic of debate, according to many experts, this is a promising direction of treatment, since this class of drugs has a very pronounced antipsychotic effect in the absence of dose-dependent extrapyramidal and neuroendocrine side effects.*

Keywords: *atypical antipsychotics, schizophrenia, clinical efficacy, antipsychotic effect.*

Introduction. Information about the results of the use of modern psychotropic drugs is especially important in the reform of specialized care, more and more oriented to socially restore the patient and relieve the burden of loved ones, rather than guardianship and isolation - in the context of chronic insufficiency of medical resources "not always adequate" (who) [1-3]. Long-term drug therapy to reduce the severity of psychotic symptoms, achieve remission, prevent relapses has been the main treatment for schizophrenia for over 60 years [4-7]. Since the introduction into practice of Chlorpromazine, a breakthrough in Psychiatry, the range of drugs for schizophrenia has expanded significantly, with atypical antipsychotics being increasingly used in recent times. Despite the advantages of atypical antipsychotics that remain a subject of debate over first-generation antipsychotics [7-11], according to many experts it is a promising area of treatment, since this class of drugs has very pronounced antipsychotic effects in the absence of dose-dependent extrapyramidal and neuroendocrine side effects [11-16]. However, until now, one of the main obstacles to achieving the therapeutic effect of treating schizophrenia is the unsatisfactory adherence of patients to therapy. Violation of the regimen of taking medications increases the risk of negative consequences of the disease, including relapses, re-hospitalization, suicide and, accordingly, increases the socio-economic burden of the disease [17-21].

Lack of commitment can manifest itself both in complete rejection of treatment and in partial failure to follow the therapy regimen prescribed by the doctor (irregular medication intake, dose changes, frequency and duration of administration) [22-24]. About 35% of patients face such a problem as early as the first weeks of therapy, and only 25% of patients adhere to the prescribed regimen for 2 years [25-30]. Violation of adherence to treatment in the mentally ill, on the one hand, is associated with the peculiarities of the disease, for example: insufficient perception of the surrounding world (mania, depression), distorted ideas about the patient's disease, pessimism in

relation to the prospects of treatment, the need to resist any form of pressure, memory impairment, etc. On the other hand, an unfavorable therapy regimen for the patient (the need to take medications long and often, unfavorable forms of use, etc.) also contributes to a violation of the doctor's recommendations and refusal of treatment [31-36]. Therefore, one of the areas of improvement in drug treatment for schizophrenia is the search for more convenient options for taking medications [37-40]. The creation of long-term medications that should be taken or administered less parenterally is a positive factor for increasing patients' commitment to therapy and therefore the outcome of treatment [41-45].

The purpose of the study: is to determine the clinical, social and economic effects of long-term forms of atypical antipsychotics in the treatment of schizophrenia in everyday practice

Materials and methods. A number of naturalistic studies with a "mirror" design (total > 200 patients)-the year and year before standard treatment against the background of long-term forms of atypical antipsychotics (on the example of rispolept const and paliperidon palmitate); mathematical (Markov) modeling of the pharmaco-economic prognosis of long-term (five-year) treatment for paliperidon palmitate. In this Paliperidone study, palmitate was compared with long-term risperidone in an injectable form, as currently only these two injectable atypical long-term antipsychotics are listed on the Russian pharmaceutical market. Long-term risperidone in the form of injections is included in the list of vital and important drugs, which makes it a justified alternative for comparison. Justification of the selection of criteria for assessing effectiveness based on clinical economic (Pharmacoeconomic) Research and types of clinical and economic (pharmacoeconomic) analysis; evaluation of evidence of clinical efficacy and safety of drugs. To confirm the advanced rules of the working hypothesis, to develop the design and structure of the model, the research methodology provides for a comparative analysis of the evidence of clinical effectiveness and safety of schizophrenia pharmacotherapy tutgan.in long-term atypical antipsychotics in the form of Excision.

Results and discussions. Rispolepta const and paliperidon palmitate are preferable compared to standard therapy (common in everyday practice) for safety (subjective tolerance), clinical effects (strengthening and deepening remission with reduced risk of regospitalization) and resource conservation – from a broad social perspective (personal and social recovery). In the long run, the main cost is to provide the treatment with an improved risk / benefit ratio but no isolation and maintenance medication in the PB. The effect of reducing the risk of relapse (exacerbation) with a simultaneous decrease in the demand for regospitalization during the selection and rational use of Rispolept const and Paliperidone Palmitate is manifested, especially in the context of everyday practice. First, the resource-saving result of long-term treatment with rispolept const and Paliperidone Palmitate is seen in the target group of patients with clinical and social problems (including non-compliance with drugs due to poor tolerance of standard therapy), namely: often (at least once in 3-5 years of follow-up) hospitalized ($\geq 5\%$ among those covered by pharmacotherapy). Rispolept const and paliperidon palmitate (incorrect selection of maintenance doses, irrational polypharmacy with forgetting an individual rehabilitation program), drugs and typical errors that reduce the potential of postmarking patients and their doctors are highlighted. A mathematical model has been developed in the Excel program to identify factors affecting financial costs when providing medical care for patients with schizophrenia.

The concept of the model was to simulate the results of the treatment of the disease, depending on the commitment of patients to therapy. About 90 percent of the cost of providing

medical care for patients with schizophrenia is due to hospitalization due to the exacerbation of the disease. The use of atypical long-term antipsychotics in the form of injections allows patients to increase their commitment to therapy and thus reduce the rate of relapse that requires hospitalization. Based on this, the model included an assessment of two processes: analysis of changes in patient adherence to treatment during the observation period and prediction of the number of relapses that require hospitalization based on adherence to treatment. The time horizon of the modeled period (cycle) was 1 year. Data on adherence to risperidone use therapy is based on local findings from an international multicenter study. It was a prospective follow-up study, with a focus on studying the clinical, social and economic efficacy of using risperidone in the form of injections in a group of patients with schizophrenia and schizophrenia spectrum disorders.

The design of the study was close to the existing Real practice conditions and allowed doctors to prescribe risperidone in the form of injections, regardless of the presence and type of previous therapy. The observation period in the study was 24 months, with assessment of the results at checkpoints: 3, 6, 9, 12 and 24 months later. The medico-demographic characteristics of the cohort are characteristic of patients with schizophrenia covered by therapy, and the number of patients included in the study (2,456 patients) is sufficient for reliable statistical analysis when comparing the results of the study in different cohorts and at all points of evaluation of the results. Clinical and functional evaluation of treatment was carried out every 3 months on measures of total clinical impression-weight (CGI-s) and Total Performance (GAF). During the study, the frequency and causes of discontinuation of therapy were also noted, which made it possible to use the results of this study to create our model. By the end of the first year of the study, 75,7% of patients (1,858 out of the 2,456 included in the study), 24,3% of patients (598) had stopped therapy with risperidone during this period. Analysis of the causes of discontinuation of therapy has shown that in 59,6% of cases, discontinuation of treatment is associated with organizational causes (limited availability of the drug). Other fundamentals of discontinuation of treatment can be roughly divided into the following groups. Since the interruption of treatment in 59,6% of cases is associated with organizational reasons, among patients who did not take the drug under ideal conditions (ensuring the presence of the drug), the reasons for the discontinuation of treatment would be similarly distributed: 214 out of 355 patients stopped treatment for reasons that may be related to the therapy regimen; 78 - with inefficiency, intolerance to As a result, the proportion of patients who stopped treatment with risperidone by the end of the first year for reasons that may be related to the therapy regimen was 14,69% in our model.

These patients were considered to be incapable of treatment, with a high risk of relapse and hospitalization. A decrease in the frequency of injections can theoretically affect a decrease in the proportion of patients who stop treatment.

Patients with unsatisfactory compatibility and patients who have stopped treatment due to the choice of the patient himself and/or his relatives can be considered the most promising group of patients with schizophrenia in this context. We calculated the expected proportion of patients who have stopped treatment with Paliperidone Palmitate (who are not eligible for treatment) on the assumption that with each subsequent injection, the level of commitment will decrease evenly over time. As mentioned above, the decrease in adherence to therapy when using the drug risperidone in 12 months is 14,69%.

The scheme for the use of risperidone involves injections once every 14 days – 26 times a year, and paliperidone palmitate is administered once every 30 days – 12 times a year. In terms

of 1 injection, the reduction rate of adherence to treatment is 0,565% (i.e., the proportion of those who continue treatment with each subsequent injection is reduced by 0,565%). It is estimated that the rate of decreased commitment for each subsequent injection is similar for all injectable drugs. According to our assumption, since it is less likely to skip injections, the proportion of patients who have stopped therapy for reasons related to the therapy regimen may decrease. It is estimated that the proportion of such patients in the cohort decreases by 6,78% and is 7,91%, respectively, while the proportion of patients who follow the prescribed therapy regimen when using Paliperidone rises to 82,34%.

Conclusions. The evolution of drug forms that combine the benefits of atypical antipsychotics and Depos corresponds to a change in the paradigm of psychiatric care aimed at meeting and developing the "elastic" needs of patients and their loved ones in the multi-Labor path of psychosocial recovery. The resource-saving potential of drugs (rispolepta const and palipperidon palmitat) makes it possible to fulfill the strategic task of public psychiatry against the background of chronic resource shortages. Pharmacoeconomic analysis serves as a tool of antistigmatization at the systemic level: scientific evidence for fair funding of psychiatry, "Cinderella" – from a broad social point of view.

Although health (and especially psychiatry) cannot justify itself in principle, since strategic goals (social activity, the quality of life of the patient and his loved ones) are implemented outside their paradigm – the social aspect of Drug assessment (on the example of rispolept const and palipperidon palmitate) is especially relevant in our country standard medical cost (psychiatry) services are several times lower than the selling prices of innovative psychotropic drugs. Each additional "disease-free day" (remission) should be saturated with social content, which is possible with brigade (polyprofessional) and interdepartmental approaches (population employment centers, in improving legislation, involving self-help societies). The rational choice of Rispolept const and palipperidon palmitate, based on the patient's interaction with a specific target group, allows the resource-saving potential of the "right drug for the right patient" to be carried out at the highest level, and its regular use in everyday practice emphasizes the shortcomings and reserves of the organization and functions of standard psychiatric services, allows (recovery) patients.

REFERENCES

1. Aleksandrovna S. M. et al. Integrated approach to correcting neurocognitive defects in schizophrenia //Science and Innovation. – 2023. – T. 2. – №. 11. – C. 76-81.
2. Allambergenov A. J. et al. Postcovid syndrome and its neuropsychiatric consequences after covid-19 in patients with alcoholism //European Journal of Interdisciplinary Research and Development. – 2023. – T. 11. – C. 42-46.
3. Anatolyevna S. Y. et al. Protective-adaptive complexes with codependency //Science and Innovation. – 2023. – T. 2. – №. 11. – C. 70-75.
4. Asliddinovich M. O. et al. Psychological characteristics of patients with gastrointestinal diseases //IQRO. – 2023. – T. 3. – №. 1. – C. 225-230.
5. Hamidullayevna X. D., Temirpulatovich T. B. Clinical and psychological features of alcoholism patients with suicidal behavior //IQRO. – 2023. – T. 1. – №. 2. – C. 711-720.
6. Holdorovna, I.M. and Temirpulatovich, T.B. 2023. Optimization of complex methods of treatment of patients in schizophrenia. Journal of education, ethics and value. 2, 8 (Aug. 2023), 59–67.

7. Holdorovna, I.M. and Temirpulatovich, T.B. 2023. The Role of the Family in the Formation of Internet Addiction. *Scholastic: Journal of Natural and Medical Education*. 2, 7 (Jul. 2023), 10–15.
8. Murodullayevich K. R., Holdorovna I. M., Temirpulotovich T. B. The effect of exogenous factors on the clinical course of paranoid schizophrenia // *Journal of healthcare and life-science research*. – 2023. – T. 2. – №. 10. – C. 28-34.
9. Murodullayevich K. R., Temirpulatovich T. B., Holierovna K. H. Social assistance in patients with phobic anxiety disorders // *Iqro jurnali*. – 2023. – T. 2. – №. 2. – C. 408-413.
10. Nikolaevich R. A. et al. Social, socio-cultural and behavioral risk factors for the spread of hiv infection // *Science and Innovation*. – 2023. – T. 2. – №. 11. – C. 49-55.
11. Ochilov U. U., Turaev B. T., Zhumageldiev N. N. Peculiarities of the formation and course of alcoholism in persons with character accentuations and personality disorders // *Bulletin of Science and Education*. – 2020. – №. 10-4. – C. 88.
12. Temirpulatovich T. B., Hamidullayevna X. D. Clinical and labarator changes in patients with alcoholism who have undergone covid 19, with various pathologies in the liver // *Open Access Repository*. – 2023. – T. 4. – №. 2. – C. 278-289.
13. Temirpulatovich T. B., Hamidullayevna X. D. Neuropsychiatric disorders that develop in a complication of covid-19 to alcoholism // *European Journal of Interdisciplinary Research and Development*. – 2023. – T. 11. – C. 47-51.
14. Temirpulatovich T. B., Murodullayevich K. R. Characteristic features of postkovid syndrome in patients with alcoholism, the presence of various liver diseases // *Open Access Repository*. – 2023. – T. 4. – №. 2. – C. 266-277.
15. Temirpulatovich T. B., Murodullayevich K. R., Uzokboyevich T. A. The Interrelationship of The Covid-19 Pandemic with Alcohol Abuse // *Eurasian Medical Research Periodical*. – 2022. – T. 8. – C. 137-139.
16. Temirpulatovich T. B., Sabrievna V. A. Effects of the Covid-19 Pandemic on the Frequency of Alcohol Abuse and Clinical and Psychopathological Features // *Eurasian Medical Research Periodical*. – 2022. – T. 8. – C. 68-71.
17. Temirpulatovich T. B., Uzokboyevich T. A. Biochemical Changes in the Liver After Covid-19 Disease in Alcohol-Dependent Patients and Their Effects on the Course of Alcoholism // *The Peerian Journal*. – 2023. – T. 15. – C. 28-37.
18. Turaev Bobir Temirpulatovich, Ochilova Nigina Ulug'bek qizi. "Study of the dominant signs of a manifest attack of schizophrenia with the use of psychoactive substances". *Iqro jurnali*, vol. 2, no. 2, Apr. 2023, pp. 388-94.
19. Turayev B. T., Ochilov U. U., Kubayev R. M. Distribution of anxiety and depression in affective disorders of somatized depression // *International medical scientific journal*. – 2015. – C. 60.
20. Turchaninova V. N. et al. Formation of rehabilitation motivation in the conditions of the medical and rehabilitation department of a psychiatric hospital // *Science and Innovation*. – 2023. – T. 2. – №. 11. – C. 82-89.
21. Turchaninova V. N. et al. Opportunities for comprehensive psychometric assessment of anxiety states in late-age dementia // *Science and Innovation*. – 2023. – T. 2. – №. 11. – C. 90-96.

22. Turgunboyev Anvar Uzokboyevich, Turaev Bobir Temirpulatovich, Kholmurodova Hulkar Holierovna 2023. Clinical and psychological analysis of the risk of second admission of patients with psychoses of the schizophrenia spectrum to a psychiatric hospital. *Iqro jurnali*. 2, 2 (Apr. 2023), 380–387.
23. Usmanovich O. U. et al. Detection of adrenaline and stress conditions in patients using psychoactive substances with hiv infection //CUTTING EDGESCIENCE. – 2020. – С. 42.
24. Usmanovich O. U. et al. The main forms of aggressive manifestations in the clinic of mental disorders of children and adolescents and factors affecting their occurrence //Science and Innovation. – 2023. – Т. 2. – №. 11. – С. 42-48.
25. Usmonovich, O.U. and Temirpulatovich, T.B. 2023. The influence of the presence of mentally ill children in the family on the psyche of parents. *Journal of education, ethics and value*. 2, 8 (Aug. 2023), 68–75.
26. Vadimovich A. S. et al. Association of dopaminergic receptors of peripheral blood lymphocytes with a risk of developing antipsychotic extrapyramidal diseases //Science and Innovation. – 2023. – Т. 2. – №. 11. – С. 29-35.
27. Shernazarov Farrukh ORGANIZATION OF DIGITALIZED MEDICINE AND HEALTH ACADEMY AND ITS SIGNIFICANCE IN MEDICINE // SAI. 2023. №Special Issue 8. URL: <https://cyberleninka.ru/article/n/organization-of-digitalized-medicine-and-health-academy-and-its-significance-in-medicine> (дата обращения: 20.11.2023).