

VARIATION OF LIFE QUALITY AND SOCIAL FUNCTIONING INDICATION IN PATIENTS WITH SCHIZOPHRENIA ACCORDING TO TREATMENT RESPONSE

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Background: *To conduct a comparative analysis of indicators of life quality and social functioning in patients with schizophrenia according to the received treatment.*

Materials and methods: *The study involved 105 patients with paranoid schizophrenia between 18 and 55 years, who were randomly assigned to 3 groups. The first group included 35 patients treated with sertindole (average therapeutic dose of 18,0 cu chlorpromazine equivalents), the second – 35 patients treated with zuclopenthixol (4,0 arbitrary units), and a third – 35 patients treated with clozapine (2,0 contingent units). The rehabilitation included individual therapy compliance. All patients signed informed consent to participate in the study.*

The study included the use of outpatient and inpatient patient cards and a questionnaire for the assessment of life quality and social functioning of the psychic patients.

Statistical data processing was carried out using the software package «Statistica 6.0».

Results: *Summarizing the results, we can conclude a significance of the subjective assessment of the life quality in the responses of patients with schizophrenia to questions during a questionnaire for determining the level of life quality and social functioning.*

In the study of the variability of indicators of life quality and social functioning of patients with schizophrenia, depending on the treatment, all parameters throughout the course of therapy were higher in the group of patients treated with sertindole.

Conclusion: *Thus, sertindole is the drug of choice for long-term outpatient treatment of patients with schizophrenia, particularly in combination with compliance – therapy.*

Keywords: *life quality; schizophrenia; neuroleptics.*

Schizophrenia is the disease that is characterized by the variety of clinical manifestations, which may cause difficulties in selecting a particular antipsychotic drug as the most appropriate treatment for each case [1].

Currently, the main medical problem after the manifestation and relief of acute symptoms of psychosis is the prevention of its' recurrence. The basic method of preventing relapse of schizophrenia symptoms is supporting neuroleptic drug therapy. Prevention and anti-treatment are the most important components of the community treatment [6].

Nowadays, when the traditional clinical approach no longer meets the needs of psychiatry, studying of the medical treatment of schizophrenia due to «pharmacological resocialization ensure» will conform to modern principles of rehabilitation treatment, which goal is not only the elimination of psychopathology, but also the achievement of acceptable social functioning and life quality level of the patients [6].

In addition to the psychopathological symptoms reduction the researchers considered the social functioning and life quality improvement of the patients as the indicators of treatment and rehabilitation effectiveness. This fact is very important for therapeutic measures in neuropsychiatric clinics [11].

An important criterion for assessment of social functioning and adaptation is life quality. Regarding patients with schizophrenia it can be determined as a measure integrating a large number of physical, psychological, emotional and social characteristics, demonstrating person's ability to adapt to the manifestations of the disease, which is impaired in patients with schizophrenia because of the cognitive and affective components [9].

Life quality is defined by the WHO as «the individuals' perception of their position in life in the context of its' culture and value systems in relation to their goals, expectations, standards and concerns». Over the past two decades there is a growing interest to the life quality of patients with schizophrenia, as schizophrenia is the progressive disorder that leads to severe social and occupational dysfunction. Besides the appearance of atypical antipsychotics with higher efficiency and lower risks of extrapyramidal side effects, compared to typical, caused the increased interest to patients with schizophrenia. Life quality measurement is based on the medical care and intervention principles, taking into account the patient's opinion during the diagnostics and the development of the treatment algorithm. Nevertheless, there are still doubts whether the patients are able to independent assessment of their life quality due to the cognitive deficits and criticism violations [13]. Lehman et al. demonstrated an integrative approach to the perception of life quality between patients and physicians with the recommendations of being careful to the scores reliability made by severe psychic patients [17]. Browne et al. summarized the opinion of several authors and stated that the clinical assessment of life quality obtained from the reports of psychiatric hospital patients is advantageous, since their self-esteem may be influenced by the psychotic symptoms, peculiar attitudes and values of these patients [14]. Skantze et al. showed that patients with schizophrenia are able to communicate about their social deficits which supports the view that life quality can be assessed subjectively [19]. Lehman proved the ability to collect statistically significant data about life quality of patients with mental illness and concluded that the subjective assessment of life quality can be applied to these patients [17]. However the reliability of patient's life quality self-assessment should be discussed in the clinical practice to inform them about all aspects of treatment and assistance services [13].

In modern pharmacotherapy of patients with schizophrenia the studying of methods of life quality assessment plays an important role. Currently, the indicators of patients' life quality, obtained through a

variety of measuring instruments are described or analyzed in the majority of scientific publications devoted to the clinical efficacy of drugs for the schizophrenia treatment. Although there are different specific ways to measure the patients' life quality, none of them take into account the factor of drug exposure. At the same time, there is a significant amount of research devoted to the influence of certain antipsychotic drugs to the life quality indicators in schizophrenia patients. The results of a number comparative studies indicate the higher life quality in patients receiving various atypical antipsychotics than in patients received conventional therapy. The results of these studies suggest that the antipsychotic drugs may influence the life quality of patients with schizophrenia [7].

The problem of social functioning and life quality of patients is one of the most urgent problems of modern psychiatry [4].

Great prospects to improving of life quality are associated with the ability of atypical neuroleptics to reduce negative manifestations, including emotional deficiency, which would contribute to a certain degree of cognitive function normalization [10]. EUFEST study (European First Episode Schizophrenia Trial) has confirmed the benefits of atypical antipsychotics (quetiapine and amisulpride) in the treatment of patients with schizophrenia. The cancel and tolerability coefficients of these drugs were significantly better in comparison with low doses of haloperidol [5].

It is believed that the use of atypical antipsychotics may not only improve the efficiency and safety of treatment in the short term, but also leads to increased patients' therapy compliance, which helps to reduce the frequency and length of hospitalizations. This will decrease the indirect costs associated with premature disability of employable patients and the forced termination of their relatives' employment connected with such issues as auto - and hetero- aggression [12].

The researchers found the differences in the subjective assessments of the life quality of patients with schizophrenia receiving conventional antipsychotics or atypical antipsychotics. In general, at the stage of drug

remission the researchers marked the most consistently high subjective quality of life in the area of social and legal status (kernel module). The most consistently poor performance (poor life quality) was found in patients with schizophrenia in the spiritual realm (specific unit) and the psychological sphere. At the same time, the received pharmacotherapy has the importance. Thus, the authors emphasize the significantly higher subjective indicators of life quality in sub spheres of «Mental life quality» and «Peculiarities of sexual intercourse» in patients receiving atypical antipsychotics compared with those receiving traditional pharmacy [10]. The numerous papers devoted to the study of the life quality of patients with schizophrenia demonstrate the dependence of subjective life quality on the many factors that can be combined into three main groups: psychosocial, medical and procedural factors. The impact of these factors on changes in the life quality individual indicators of patients with schizophrenia may explain 12 to 36% of the variance [8].

One of the methods adopted for the evaluation of life quality is the studying of quality-adjusted life-year-QALY [16]. In the comparative study devoted to the sertindole therapy versus risperidone, olanzapine and aripiprazole the efficiency was defined as the duration of the period without relapse over a five-year period and the QALY. According to this study, the duration of the period without exacerbations and the QALY in sertindole group were comparable to the comparators [18].

Numerous foreign studies of pharmacoeconomic sertindole effectiveness, based on the results of a prospective, randomized and controlled clinical trials have shown that the use of this drug is cost-effective not only because of the relapses frequency and readmissions reducing of patients with schizophrenia, but also because of their social functioning and life quality improving [15].

However, there is no drug that could meet the needs of all patients. Each new antipsychotic may provide additional treatment options, in case when doctors are aimed to treating patients with schizophrenia not only for symptoms relief, but also to restore the proper level of social functioning [7].

In this context the goal of the research was to conduct the comparative analysis of the patients with schizophrenia life quality and social functioning indicators, depending on the received treatment.

The research was conducted from 2015 at the psychiatry, narcology, psychotherapy and clinical psychology department of Saratov State Medical University n.a V.I. Razumovsky and in the Regional Clinical Psychiatric Hospital of St. Sophia.

The 105 patients with paranoid schizophrenia from 18 to 55 years (mean age $35,8 \pm 1,4$ years, 62 women, 43 men) were included in the study. The acute psychotic symptoms at the therapy beginning, expressed personality defect and severe somatic pathology absence were the inclusion criteria. Patients were randomized according to the table prepared by using a computer method for random numbers generating. Thereunder the patients were administered one or another studied antipsychotics. Thus, the patients were randomly divided into three groups. The group 1 consisted of 35 patients who were appointed to treatment with sertindole, the 2nd group consisted of 35 patients treated with zuclopenthixol and the 3d one included 35 patients treated with clozapine. All subjects received study medication in secondary therapeutic doses. The doses were calculated respectively chlorpromazine equivalent. So the dose of sertindole was 18,0 conventional units, zuclopenthixol – 4,0 cu, clozapine – 2,0 cu. The rehabilitation approach was the individual compliance therapy. According to several studies the method of compliance therapy showed a fairly high efficacy in patients with schizophrenia by direct assessment. The further studying of this method on the various factors of compliance for a more complete and comprehensive study of long-term treatment outcomes and a better understanding of mechanisms of action remains actual [2].

All patients wrote the informed consent to participate in the study. There were 95% of patients fully completed the treatment (1 patient did not complete the study due to another city moving).

A survey of patients was carried out in five stages within 1 year: at admission, before discharge from the hospital (2 months after the

beginning of treatment), and ambulatory at 3, 6 months and one year after the discharge. During the treatment period the patients received a complex pathopsychological examination which included the assessment of their clinical and psychopathological state in the dynamics. The scales and questionnaires were used for the data objectification. The research included the use of outpatient and inpatient medical records as well as the questionnaire for the assessment of social functioning and life quality of the psychic patients [3]. In order to detect the statistically significant differences of the study results the comparative analysis of 1 and 5 visits are represented on the figures.

The variation-statistical method of the conducted research results was the use of «Statistica» 6.0 application package using descriptive statistics, correlation and analysis of variance. We used the parametric features of a normal distribution and non-parametric methods, regardless of the type of distribution. The differences were considered statistically significant at 95, 99 and 99.9% probability thresholds.

The analysis of the questionnaire for the assessment of the life quality and social functioning level results (LQ and SF) in patients with paranoid schizophrenia at the beginning and in the end of treatment in all groups obtained such statistically significant indicators as the general well-being; health, food and clothing satisfaction; intellectual productivity and contact with others.

The statistically significant differences in health, food and clothing satisfaction were obtained in sertindole and zuclopenthixol groups before treatment. Health satisfaction rate in sertindole group was $2,92 \pm 0,11$ whereas the same indicator in zuclopenthixol group made up $2,54 \pm 0,099$ ($p=0,023$). Such mark as food satisfaction in sertindole group was equal to $3,53 \pm 0,08$ and in zuclopenthixol group - $2,85 \pm 0,16$ ($p=0,0005$). Clothing satisfaction rate before treatment made up $3,14 \pm 0,13$ and $2,81 \pm 0,096$ ($p=0,02$) in the both groups respectively.

During the similar analysis of the LQ and SF questionnaire results in patients with paranoid schizophrenia before treatment the statistically significant indicators were determined in such spheres as health and

food satisfaction in clozapine and sertindole groups. In the clozapine group the health satisfaction index was $2,53 \pm 0,12$ ($p=0,033$) and the rate of food satisfaction in this group made up $2,63 \pm 0,16$ ($p=0,00002$).

Such indicators as intellectual productivity, general well-being and contact with others before treatment in all treatment groups were statistically insignificant ($p>0,05$). Described data are represented at figure 1.

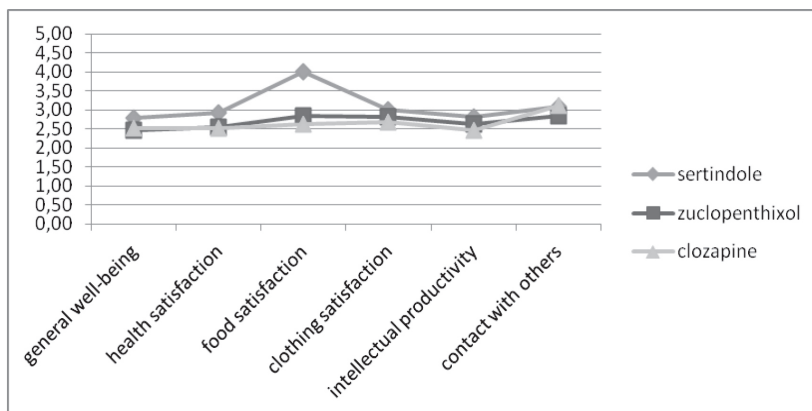


Fig. 1. The comparative dynamics of LQ and SF questionnaire results before treatment

At the comparative analysis of similar indicators in patients with paranoid schizophrenia at the end of therapy in addition to health, food and clothing satisfaction the differences in general well-being, intellectual productivity and contact with others were also marked in the sertindole and zuclopenthixol groups. In sertindole group the general well-being was $3,11 \pm 0,1$. In zuclopenthixol group it made up $2,73 \pm 0,1$ ($p=0,007$). Health satisfaction in both groups was equal to $3,11 \pm 0,08$ and $2,73 \pm 0,09$ ($p=0,003$) respectively. Such index as food satisfaction in sertindole group was $3,50 \pm 0,08$ and in zuclopenthixol group it made up $2,85 \pm 0,16$ ($p=0,0007$). Clothing satisfaction at the end of treatment was $3,17 \pm 0,12$ and $2,85 \pm 0,09$ ($p=0,02$) respectively in both groups. Intellectual productivity in sertindole group made up $3,06 \pm 0,14$ and in zuclopenthixol

group – 2.58 ± 0.18 ($p=0.026$). The average score for contact with others was 3.19 ± 0.13 and 2.88 ± 0.13 ($p=0.045$) respectively.

At the end of the therapy (at visit 5) the statistically significant differences in health, food and clothing satisfaction were determined in clozapine and sertindole groups. The dynamics of these parameters at the end of sertindole treatment was described earlier. As for clozapine group the health satisfaction rate made up 2.84 ± 0.09 ($p=0.035$), food satisfaction was equal to 2.68 ± 0.17 ($p=0.0001$) and clothing satisfaction was 2.53 ± 0.18 ($p=0.003$).

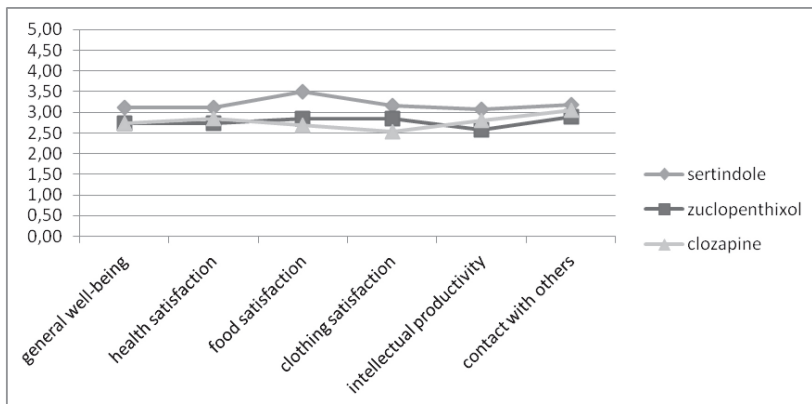


Fig. 2. The comparative dynamics of LQ and SF questionnaire results before treatment

Summarizing the research results we can conclude the significance of the subjective component in the responses of patients with schizophrenia while the questionnaire for the assessment of social functioning and life quality assessment. We may also say that the variability of the life quality and social functioning indicators in patients with schizophrenia depends on the treatment variant. Thus, all the parameters throughout the therapy course were higher in the sertindole group. The received study results may suggest that sertindole is the drug of choice for the long-term outpatient schizophrenia treatment, especially in conjunction with compliance-therapy.

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