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COMPARATIVE STUDY OF THE COMPOSITION OF THE NEUROLEPTIC SYNDROME IN PATIENTS WITH SCHIZOPHRENIA

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Abstract
The aim of the study is to compare the side effects of typical and atypical neuroleptics in patients with schizophrenia. The study included 60 patients, divided into three groups: haloperidol, clozapine, and risperidone. Side effects were assessed using ESRS, SAS, UKU scales and body mass index changes. Galoperidol was more likely to cause extrapyramidal disorders, sedative effects, and sexual dysfunction. Atypical neuroleptics, especially risperidone, rarely caused extrapyramidal symptoms, but were associated with increased body weight and hyperprolactinemia. Atypical drugs showed better tolerance and are preferred for long-term therapy.

Introduction

The aim of the study is to compare the severity of side effects of typical and atypical neuroleptics in patients with schizophrenia and the structure of neuroleptic syndrome.

The study involved 60 people hospitalized at the Republican Psychiatric Hospital with a diagnosis of schizophrenia (F 20.0, F 21.3). The main criterion for joining the study was the need for neuroleptic therapy to treat psychoproductive symptoms within the framework of nosological forms of mental disorders.

The study included patients with severe somatic pathology requiring special treatment; cases of organic damage to the central nervous system; patients with substance abuse; Patients under 18 and over 60 years old; women during pregnancy or in the postpartum period were not included.

The fact that patients in this group were not included in the study made it possible to some extent exclude the influence of factors not directly related to psychopharmacotherapy on the obtained results.

Patients in group 1 were prescribed the traditional neuroleptic drug - haloperidol.

Patients in group 2 were treated with an atypical neuroleptic drug - clozalan.

Patients in group 3 received risperidone, a new generation atypical neuroleptic drug.

In the clinical examination, the assessment of tolerance to treatment with neuroleptics was conducted based on objective data (patient examination, instrumental and laboratory indicators).

During clinical interviews, significant attention was paid to spontaneous complaints from patients. Data on patient tolerance to treatment, obtained from relatives, were taken into account. In addition, standardized scales were used to assess side effects.

Extrapyramidal symptomatology was assessed using the ESRS scale and the Simpson-Angus scale (SAS). In addition, the UKU scale of side effects was used to assess adverse reactions in the psychiatric and somatic spheres.

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Particular attention was paid to assessing changes in patients' body mass based on the calculation of body mass index (BMI=weight (kg) /height2 (m2). The patients' condition was assessed as follows: initially, upon inclusion in the study; on days 3, 7, and 15 of the treatment process. Statistical data processing was performed using the Statistica 6.0 program.

At the beginning of the study, all patients were divided into 3 groups (20 patients each) with similar clinical, demographic, and social characteristics (Table. 1, 2, 3).

Table 1. Clinical characteristics of the examined patients.

	Group 1 (N-20)	Group 2 (N-20)	Group 3 (N-20)
Average age	39,4±2,9	37,1±3,1	35,4±2,2
F 20.0	9(44,7%)	12(59, 8%)	10(49,8%)
F 21.3	11(55, 3%)	8* (40, 2%)	10(50, 2%)
Average duration of illness	7,3±1,3	8,2±2,6	6,3±1,3

* p<0,05

Table 2. Marital status

	Group 1 (N-20)	Group 2 (N-20)	Group 3 (N-20)
Married	10 (49,8%)	12 (60,3%)	11* (54,9%)
Resides with relatives	4 (20%)	4 (20%)	4 (20%)
Divorced	5 (25,2%)	4 (19,7 %)	4 (20,1%)
Alone	1* (5%)	0*	1 (5%)

* p<0,05

Table 3. Professional status

	Group 1 (N-20)	Group 2 (N-20)	Group 3 (N-20)
Works	7 (35%)	7 (35%)	10 (50%)
Studying	5 (25%)	4 (20%)	5* (25%)
Retired	0*	1 (5%)	0*
Temporarily not working	3* (15%)	4 (20%)	2(10%)
Mental Disability	5 (25%)	4 (20%)	3 (15%)

* p<0,05

The majority of patients (45 patients - 75%) previously received antipsychotic therapy. 15 patients (25%) were prescribed antipsychotic drugs for the first time. The doses of neuroleptics were selected individually, taking into account the patients' mental state and its dynamics, and varied throughout the course of treatment.

Daily doses of the drugs were: haloperidol from 2.5 to 30 mg (mean dose - 15 mg/day), clozalan from 12.5 to 300 mg (mean dose - 200 mg/day), risperidone from 0.5 to 6 mg (mean dose - 4 mg/day).

With the development of severe neurological side effects, short-term prescription of additional corrective drugs was allowed: immediately after the start of treatment with haloperidol, with a

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daily dose of rispolept - more than 2 mg and clozalin - more than 50 mg, taking into account individual sensitivity to drugs, corrective drugs (cyclodol, tranquilizers) were prescribed.

Research Results

The study groups of patients differed significantly from each other in terms of the spectrum and severity of side effects. The development of side effects was noted in 100% of patients receiving traditional neuroleptics, in 96.6% of patients receiving closalone, and in 85% of patients receiving risperidone (Table 4).

Table No. 4. The frequency of observation of the main side effects.

	Group 1 (N-20)	Group 2 (N-20)	Group 3 (N-20)
Mental	9 (45%)	11 (55%)	11 (55%)
- difficulties with concentration	4 (20%)	6 (30%)	2 (10%)
- drowsiness\sedation	3*(15%)	9 (45%)	7 (35%)
- prolonged sleep duration	5*(25%)	11 (55%)	11(55%)
Neurological:	20(100%)	3*(15%)	8 (40 %)
- rigidity	11 (55%)	0*	2 (10%)
- hypokinesia	7(35%)	0*	3 (15%)
- tremor	8 (40%)	0*	3(15%)
- acatisia	10(50%)	3*(15%)	8 (40%)
- hyperkinesia	3 *(15%)	0	0
Vegetable:	15(75%)	18(90%)	9* (2 5%)
- hypersalivation	3 (15%)	13*(65%)	2(10%)
- feeling dry in the mouth	8 (40%)	6(30 %)	2*(10%)
- constipation	10(50%)	12(60%)	2*(10%)
-orthostasis	0*	7(35%)	4 (20%)
- heart rate acceleration	2 (10%)	5(25%)	4 (20%)
Others:	8 *(40%)	12(60%)	16 (80%)
- weight gain	8*(40%)	14(70%)	16 (80%)
- sexual dysfunction	14 (70%)	16(80%)	11* (55%)
- galactorrhea	5 (25%)	0*	10 (50%)
- menstrual cycle disorders	6 (30%)	3*(15%)	8 (40%)

* $p<0,05$

Among the somatovegetative side effects, along with hypersalivation, constipation, a feeling of dry mouth, orthostatic changes in blood pressure, and tachycardia were frequently encountered. Patients receiving haloperidol were more likely to experience constipation (50%) and dry mouth (40%).

In patients receiving closalan, constipation (60%) and a feeling of dry mouth were noted almost throughout the entire therapy period.

Furthermore, in the first two weeks of treatment, orthostatic changes (35%) and tachycardia (25%) were observed more frequently, which disappeared with adaptation to the drug. The least somatovegetative side effects were observed in the group of patients treated with risperidone (10-20%). In more than half of patients who received atypical antipsychotics, there was an increase in body weight (risperidone - 80%, clozalane - 70%).

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During treatment with traditional antipsychotics, this phenomenon was observed significantly less frequently (40%) and was less pronounced. In all groups, weight gain was noted from the beginning of observation and was most pronounced in the first three months of the treatment process. During the observation period, the greatest increase in body weight was observed during risperidone administration.

Based on the subjective attitude of patients towards the identified side effects, these disorders were divided into 2 groups. The side effects included in group 1 (extrapiramidal disorders, sedative effects, hypersalivation, weight gain, and sexual dysfunction) were subjectively severely perceived by the patients, with numerous complaints about these side effects arising, necessitating a change in treatment.

When using traditional antipsychotics, one of the most common subjective side effects was extrapyramidal disorders (100%). These neurological disorders in patients were manifested by all the clinical symptoms described in the literature (acute dystonia, acatisiya, parkinsonism).

When using clozalan and risperidone, extrapyramidal symptoms developed relatively less frequently. During treatment with closalan, mild acatesia (15%) was observed very rarely, and even without corrective medications, these disorders quickly recovered. When risperidone was prescribed at a standard dose of 4 mg or more, mild manifestations of parkinsonism and acatisia (40%) were observed, and these disorders were quickly resolved with small doses of corrective drugs.

Manifestations of neurological disorders were observed to the greatest extent in all patient groups in the first weeks of treatment, and an increase in the dose of neuroleptics exacerbated this condition. Following the appointment of corrective drugs, their severity significantly decreased.

The occurrence of neurological disorders was subjectively perceived by patients as severe. However, in most cases, patients only reported complaints during inpatient treatment, which necessitated the active use of psychotherapy aimed at explaining the transience of unpleasant feelings and the need for continued treatment.

Most weight-bearing women, regardless of the type of obesity, turned to a doctor with a request to change their treatment. Although no cases of drug rejection were observed in patients during the study, the majority of women who had gained weight stopped taking neuroleptics regularly.

Complaints of sexual dysfunction were mainly expressed by young patients with a short period of onset of the disease, without significant personality changes. Elderly women with long-term illness and patients with severe personality disorders did not complain of this condition, and the presence of sexual disorders was only detected in a targeted interview.

Changes in sexual function were caused not by prolactin levels, but by the sedative effect of neuroleptics. Hyperprolactinemia clinically manifested as menstrual cycle disorders (amenorrhea, dysmenorrhea) and galactorrhea. Elevated serum prolactin levels in women were observed when receiving haloperidol - in 4 patients (20%), during treatment with risperidone - in 7 cases (35%), while no such changes were observed during treatment with clozalan.

Conclusion

1 A comparative study of the side effects of traditional (galoperidol) and atypical (closalan, risperidone) neuroleptics in the treatment of mental health disorders in women revealed the development of side effects in each of these drugs, but the composition and individual symptoms of neuroleptic syndrome manifested differently. In conclusion, it should be noted that patients are

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more resistant to the side effects of atypical neuroleptic drugs compared to traditional neuroleptics, which is important for long-term treatment.

2. Traditional neuroleptics often lead to motor impairments (muscle rigidity, tremor, acatisia), sleepiness, inhibition, sexual dysfunction, and the development of cholinolitic effects. The specific side effects of clozalin are sedative effects, reduced sexual desire, somatovegetative (hypersalivation, constipation, feeling dry in the mouth, orthostatic changes, tachycardia), and metabolic-endocrine (increased body weight) disorders. When receiving risperidone, extrapyramidal and somato-vegetative manifestations were less pronounced, but metabolic and endocrine disorders (increased body weight, impaired galactorrhea, and menstrual cycle) were more pronounced.

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