

## TREATMENT ADHERENCE AND SOCIAL FUNCTIONING IN PATIENTS DIAGNOSED WITH SCHIZOPHRENIA AND TREATED WITH ANTIPSYCHOTIC DEPOT MEDICATION

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### *Abstract.*

**Background and aim.** *Some of the most significant problems encountered in the treatment of schizophrenia are non-adherence to the treatment with oral neuroleptics and difficult recovery of social functioning, after its impairment by negative psychotic symptoms and the progression of the disease with episodes of remission and relapse.*

**Methods.** *This study comparatively assesses the parameters "social functioning" and "treatment adherence" in 34 outpatients diagnosed with schizophrenia at the Adult Psychiatry Clinic III and the Adult Mental Health Center of Cluj-Napoca, using the "Medication Adherence Rating Scale" (MARS) and the "Social Adaptation Self-evaluation Scale".*

**Results.** *The two scales revealed that patients on depot medication tend to have better social functioning and social integration rates than patients for whom oral medication was prescribed. Despite the fact that most patients participating in the study had intellectual preoccupations and, to some extent, enjoyed working, 82% of them did not have a job. The percentage of those who did was higher in the cohort of patients on depot medication (63%) than in the cohort of patients for whom orally administered medication was prescribed (53%).*

**Conclusions.** *Treatment adherence in patients with schizophrenia is thus significantly improved by depot medication, whereas treatment effectiveness and the frequency of adverse effects are similar for the two treatment options.*

**Keywords:** schizophrenia, patient compliance, medication adherence, social functioning, injectable antipsychotics.

### **Background**

Schizophrenia is a psychotic disorder which causes social stigma and has heavy emotional and financial impacts [1]. It has a chronic progression, with episodes of remission and relapse often leading to dysautonomia, isolation and financial dependence, the costs of the first and potentially subsequent hospital admissions remaining high [2]. One of the major causes of relapse is non-adherence to the treatment with oral neuroleptics, administered once a day [3,4]. Two of the reasons explaining treatment non-adherence are carelessness in the long-term daily self-administration of the medication and the fear of adverse effects. A more recent alternative to oral medication are depot neuroleptics, which improve treatment adherence due to a longer time interval (two to four weeks) between administrations. Better treatment compliance implicitly

enhances the patients' social and professional reintegration and adaptation capacities [5,6,7].

### **Aim of study**

This study comparatively assesses treatment adherence and aspects related to social functioning in two groups of patients: one on depot medication, the other on oral medication. The working hypothesis is that treatment adherence can be improved by regular long-acting injections, which can positively influence social integration-related factors.

### **Patients and methods**

Thirty-four patients diagnosed with schizophrenia in accordance with the DSM – IV and ICD – 10 criteria and treated in the outpatient unit of the Adult Psychiatry Clinic III and the Adult Mental Health Center of Cluj-Napoca were included in this retrospective study. We mention that patients gave their consent and that we obtained the approval of the Medical Ethics Committee of these institutions.

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All patients had a history of at least two previous hospital admissions and were divided into two groups: 15 patients treated with depot medication and 19 patients to whom oral neuroleptics were prescribed. The depot drugs used were: Risperidone (Rispolept®), Olanzapine (Zypadhera®) and Flupentixol (Fluanxol®). Patients on oral medication were mainly prescribed atypical neuroleptics (Risperidone, Olanzapine, Quetiapine, Aripiprazol, Clozapine), except for one patient who was treated with Haloperidol.

The following scales were used to assess the two treatments:

1. Medication Adherence Rating Scale MARS [10 items]: Whereas a score over 6 points confirms good treatment adherence, a score below 5 points reveals poor compliance to medication.

2. Social Adaptation Self-evaluation Scale (M. Bosc et al. (1997)) [21 items]: for the self-assessment of social functioning, integration and behavior [8].

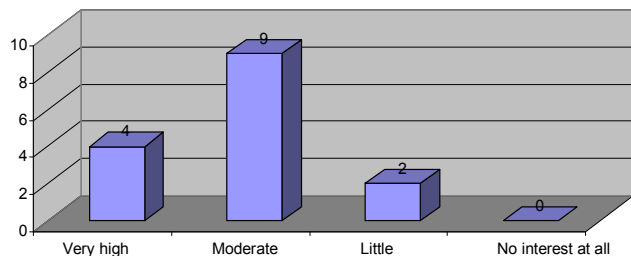
3. Wilcoxon-Mann-Whitney-test

**Results**

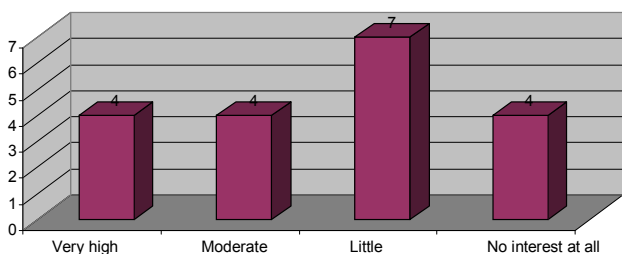
**Social Adaptation Self-evaluation Scale (SASS):**

The two groups were mainly formed of males from rural areas, 82% of whom were unemployed or in early retirement, despite the fact that interest in working was high in both groups. The proportion of employed patients in the group on depot medication was of 47%, slightly higher than in the group on oral medication, where only 37% of the patients had a job.

Patients on depot medication showed moderate to high interest in intellectual activities and the acquisition of scientific, technical or cultural knowledge (Figure 1). Patients on oral treatment showed less intellectual curiosity (Figure 2).

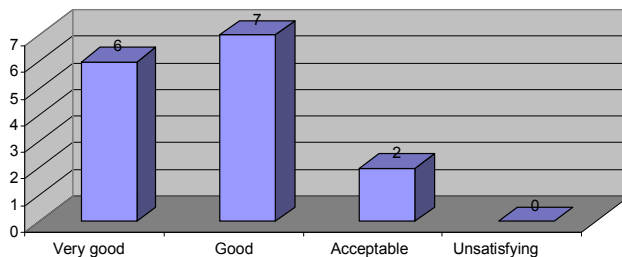


**Figure 1.** Intellectual interest (science, technology, culture) – injectable treatment

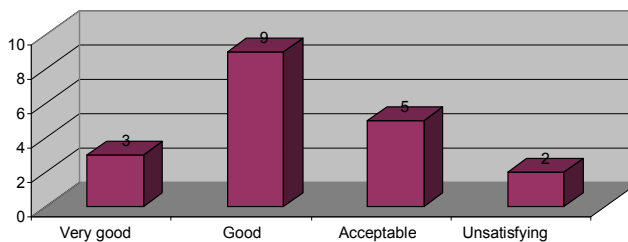


**Figure 2.** Intellectual interest (science, technology, culture) – oral treatment

The frequency of family contacts was higher in the group of patients on depot medication. Also, a larger number of the patients included in this group believed that family relations were either “good” or “very good”, while several patients in the group treated with oral medication assessed their family relations as “acceptable” or “unsatisfying” (Figure 3, Figure 4).



**Figure 3.** Quality of family relations - injectable treatment

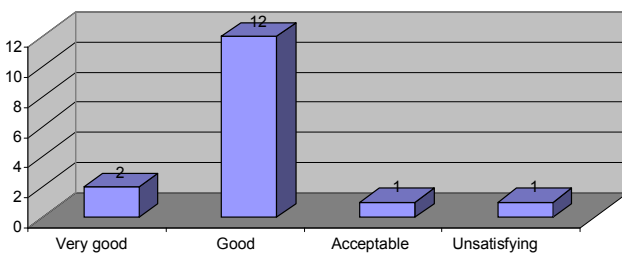


**Figure 4.** Quality of family relations - oral treatment

The number of patients who had hardly any or no interaction at all outside their family was higher in the group on standard medication. Most patients in both cohorts declared interacting with a few people outside their family. More patients from the cohort on depot medication reported diversified active contacts (Figure 5).

Patients treated by oral route tended to adopt a more passive behavior, mainly when it came to interacting with people other than their family. Most patients stated that they moderately and actively tried to interact with people other than their family. The patients on injectable medication were the most active in seeking social interactions (Figure 6).

Patients treated with injectable medication attributed a higher relevance to physical appearance than patients on oral medication, who tended to underrate this aspect (Figure 7, Figure 8).



**Figure 5.** Quality of relations outside the family – injectable treatment

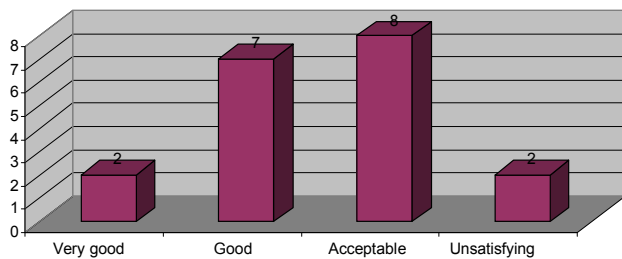


Figure 6. Quality of relations outside the family – oral treatment

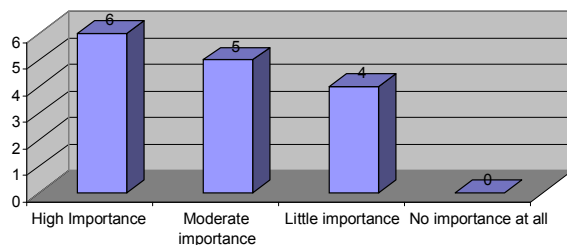


Figure 7. Importance of physical appearance - injectable treatment

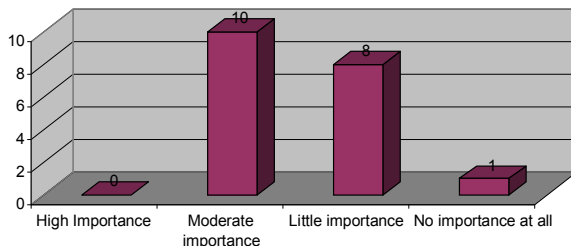


Figure 8. Importance of physical appearance - oral treatment

#### MARS scale:

In both groups, most patients did not discontinue the self-administration of the medication following the occurrence of adverse effects or the alleviation of symptoms. Moreover, most patients did not experience adverse effects such as sedation, negative symptoms or behavioral changes, considered unusual. Both groups of patients acknowledged the effectiveness of the medication, almost all of them stating that they had clearer thoughts and no psychotic symptoms after taking it.

When analyzing treatment adherence, a clear contrast appears between the two groups: most patients treated with oral antipsychotics acknowledged carelessness and forgetfulness in the self-administration of the medication. The percentage of non-compliant patients was very low in the group treated with depot medication, 97% of the patients regularly presenting themselves to receive the treatment (Figure 9).

Patients on depot medication achieved an average of 9.27 points on the MARS scale, while the average obtained by the patients on oral neuroleptics was 6.79 points. Non-adherence to treatment implies scores below 6 points. A  $p < 0.05$  was obtained for the Wilcoxon-Mann-Whitney-test, evidencing that patients on depot medication achieved a statistically significant difference in terms of treatment adherence as compared to the patients in which

oral medication was prescribed (Figure 10).

#### Did you ever forget to take your medication?

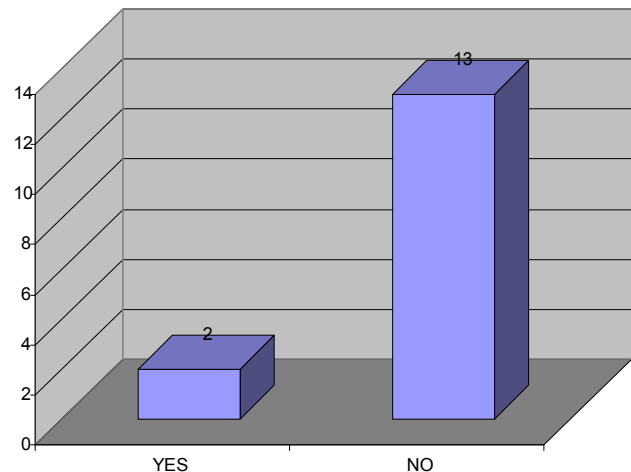


Figure 9. Self-assessment of treatment adherence – injectable treatment

#### Did you ever forget to take your medication?

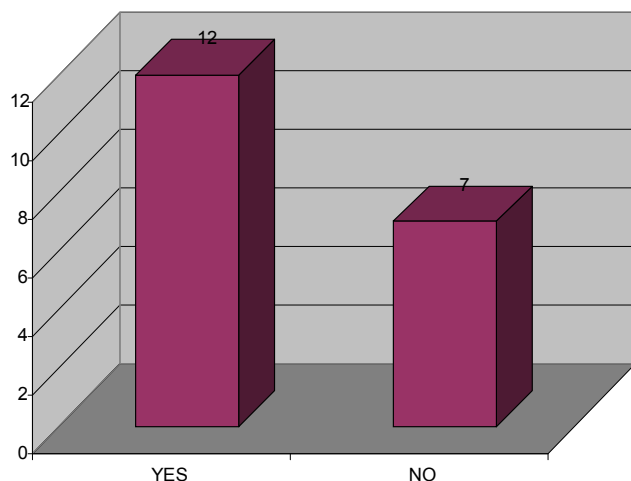


Figure 10. Self-assessment of treatment adherence – oral treatment

#### Discussion

Treatment with depot medication is often considered of last resort for patients with very poor treatment adherence [9]. It is rarely prescribed as first line treatment after a first schizophrenic episode, although its effectiveness and safety are similar to those of oral medication [10]. It is prescribed in all forms of schizophrenia, irrespective of the degree of treatment adherence, prognosis and relapse risk or treatment duration [11].

Studies show better treatment adherence rates for depot medication, despite the fact that its effectiveness and adverse effects are comparable to those of standard treatment.

In order to maximize treatment effectiveness, it is recommended to associate depot medication with

psychotherapy and targeted social integration measures [12].

The interest in improving social functioning highly depends on the number and duration of hospital admissions, subjective professional satisfaction, social integration and an independent and financially autonomous lifestyle [13,14]. Depot medication improves these aspects, provided that an adequate level of accessibility, information and education, as well as social and psychological rehabilitation support are ensured [15]. A better treatment adherence obviously entails a decrease in the number of relapses and hospital admissions, implicitly lowering admission costs for patients who suffer from chronic forms of schizophrenia or who experience relapses [16].

As far as the results in terms of effectiveness, safety and treatment adherence are concerned, our study follows up on a series of former studies which confirm an improvement in treatment adherence at equal effectiveness and adverse effect rates for both types of treatment. However, a problem in terms of statistical relevance is the reduced number of subjects included in this study, the vast majority of the patients treated for schizophrenia being prescribed oral medication, which still represents the standard treatment for this disease. Further studies comparatively assessing the factors influencing complex social functioning could be required.

Apart from the problems concerning the novelty of depot medication, there are still questions concerning the cost-benefit relation, this type of medication still being more expensive than oral treatment. Further studies investigating these financial concerns are required.

### Conclusions

1. Treatment adherence is higher in patients diagnosed with schizophrenia and treated with injectable (depot) medication.

Treatment adherence is low in most patients on oral medication, despite the fact that they are aware of the importance of medication in the alleviation of psychotic symptoms.

2. Social functioning and integration tend to be better in patients treated with depot medication.

3. The effectiveness and the occurrence of adverse effects are similar for the two types of treatment (intramuscular/oral).

4. Although family and social relations are important for most of the patients, they often experience difficulties in expressing their opinion and thoughts as well as establishing social relations.

5. Although most patients present different degrees of intellectual curiosity and some interest in working, the vast majority are unemployed.

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