



Clinical Research

Adverse Drug Reactions and Quality Of Life in Schizophrenia Patients with Chronic Viral Hepatitis

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Abstract

Schizophrenia patients frequently develop somatic co-morbidity, including chronic viral hepatitis. The study of the quality of life in schizophrenia patients with concomitant viral hepatitis in the context of hospital pharmacotherapy, therefore, becomes an important task. We examined 60 schizophrenia patients with chronic viral hepatitis. Diagnosis was based on clinical, psychopathological, psychometric, clinical and laboratory methods, followed by statistical data processing. The features relating to the socio-demographic status, adaptation to work, and the prevalence of co-morbid alcohol and drug abuse were identified in this group. Also, correlations between the severity of psychotic disorders and the development of adverse drug reactions were revealed in schizophrenia patients with concomitant viral hepatitis. Schizophrenia patients with concomitant chronic viral hepatitis are a very difficult-to-treat patient group. Therefore, it becomes essential to create and implement individual treatment and rehabilitation programs in clinical practice, to improve the quality of life and prevention of drug-induced liver disease in such patients. IJBM 2012; 2(1):34-37. © 2012 International Medical Research and Development Corporation. All rights reserved.

Key words: *psychotic disorders, hepatotoxicity, psychopharmacotherapy, adaptation.*

Introduction

Currently, researchers have often observed that schizophrenia patients frequently develop somatic co-morbidity, such as the pathology of the cardiovascular system, type II diabetes, certain forms of cancer [1], as well as viral hepatitis B and C, which reveal severe biomedical and social problems [2-4]. Thus, according to various estimates, the prevalence of hepatitis B in psychiatric patients ranges from 3% [5] to 32.5% [6], and hepatitis C – from 8.2% [7] to 38% [8]. Psychiatric patients often face the problem of being on long-term maintenance therapy. According to several researchers, psychotropic drugs can be considered the most dangerous for the development of side effects, the severity

of which can range from relatively mild to more severe and even life threatening [9, 10]. The development of drug-induced liver diseases is associated with sex, patient age, dosage and duration of drug administration, as well as a background of liver disease. Changes in the drug metabolism due to violations of detoxifying the liver, as well as the high frequency of co-morbid diseases pose additional difficulties in the pharmacotherapy of psychiatric patients with hepatitis. Nowadays, when the goals of pharmacotherapy are not only to achieve symptomatic control but also to provide an acceptable level of social functioning and quality of life in mental patients, an integrative approach involving interdisciplinary collaboration to create a holistic view of the individual in his psychosomatic unity becomes highly imperative [11].

The important task, therefore, is to study the quality of life of the mental patients with concomitant viral hepatitis in the context of pharmacotherapy, and the development of individualized rehabilitation programs to prevent side effects and increase the level of social adaptation in such patients.

The aim of this study is to evaluate the possible adverse drug reactions and quality of life of schizophrenia

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patients with concomitant chronic viral hepatitis.

Methods

This study included 60 patients admitted to the Solodnikov Regional Clinical Psychiatric Hospital, between 2009 and 2011. Diagnoses of paranoid and paroxysmal schizophrenia (F20.0; F25) with chronic viral hepatitis B, C or mixed-hepatitis (B+C) were reliably verified on the basis of the ICD-10 criteria. All the patients gave written informed consent to participate in the study. Clinical, psychopathological methods, psychometric scaling using the Udvalg for Kliniske Undersøgelser (UKU) side effect rating scale [12], quality of life questionnaire [13], mental state on the Positive and Negative Syndrome Scale (PANSS) [14], as well as

clinical and laboratory (complete blood count, urinalysis, blood chemistry) and statistical analysis methods were used in the study. Laboratory parameters were assessed in time intervals of 10 days. Calculations and data analysis were performed using the Microsoft Excel and Statistica 6.0 (StatSoft, Inc.) software packages.

Results

The study involved 60 patients including 31 (52.0%) males and 29 females (48.0). Patient age ranged between 24 and 62 years (mean age 37.9±9.1 years). The average duration of the mental disease was 13±8.6 years (mean number of hospitalizations in history – 9.4±5.7). A list of patient characteristics is presented in Table 1.

Thus, we can consider the low level of social and

Table 1

Characteristics of included patients

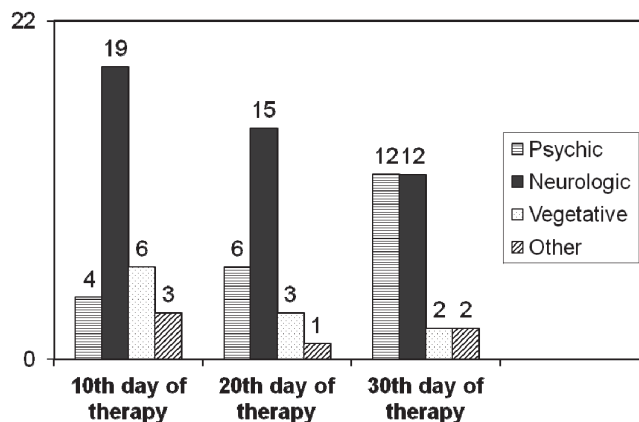
| Parameter | Number of patients: absolute value (n=60) | Percentages (%) |
|--|---|--------------------|
| <u>Gender:</u> | | |
| males | 31 | 51.7 |
| females | 29 | 48.3 |
| <u>Diagnosis:</u> | | |
| paranoid schizophrenia with episodic type of disease | 41 | 68.3 |
| paroxysmal schizophrenia | 11 | 18.3 |
| paranoid schizophrenia with continuous type of disease | 8 | 13.3 |
| <u>Types of chronic viral hepatitis:</u> | | |
| chronic hepatitis C | 47 | 78.3 |
| chronic hepatitis B | 7 | 11.7 |
| hepatitis B+C | 6 | 10.0 |
| <u>Education:</u> | | |
| secondary vocational education | 30 | 50 |
| secondary education | 26 | 43.3 |
| higher education | 2 | 3.3 |
| incomplete higher education | 2 | 3.3 |
| <u>Labor and social status:</u> | | |
| people with psychiatric disabilities (II group) | 41 | 68.3 |
| non-working without disability | 8 | 13.3 |
| working people with disability (III group) | 4 | 6.7 |
| unskilled-labor group | 4 | 6.7 |
| retirement pensioners | 2 | 3.3 |
| private entrepreneurs | 1 | 1.7 |
| <u>Addictive disorders:</u> | | |
| without addictive disorders | 22 | 36.7 |
| alcohol addicts | 20 | 33.3 |
| intravenous drug addicts in anamnesis | 13 | 21.7 |
| combination of alcohol and drug addicts | 5 | 8.3 |

labor adaptation of this group of patients that could be an adverse factor, affecting both the quality of life and perspectives on a further course of the disease. Several admissions among those surveyed indicate non-compliance treatment on an outpatient basis. Also, a high prevalence of co-morbid disease was revealed in patients with heavy alcohol and drug dependency, generally characteristic of patients with viral hepatitis.

Some adverse drug reactions were observed in 37 (61.7%) patients examined during their hospital stay. All the reactions were regarded as mild or moderate (on a UKU scale). Psychiatric side effects were observed in 4 patients on the 10th day of therapy, in 6 patients on the 20th day, and in 12 patients on the 30th day. Thus, the maximum intensity of the mental side effects of pharmacotherapy was observed after a month of starting

treatment. Excessive sedation was the most frequent side effect. Neurological side effects were observed in 19 patients on the 10th day of therapy, in 15 patients on the 20th day, and in 12 patients on the 30th day; therefore, they were considered the commonest adverse drug reactions. Autonomic side effects were observed in 6 patients on the 10th day of therapy, in 3 patients on the 20th day, and in 2 patients on the 30th day. Dry mouth, urinary retention and constipation were the most frequent among the autonomic side effects. Other side effects were observed in 3 patients on the 10th day of treatment, in 1 patient on the 20th day, and in 2 patients on the 30th day. The dynamics of adverse drug reactions is seen in Fig. 1.

Figure 1.
Dynamics of adverse drug reactions.



The increase in serum transaminases in several patients during treatment in most cases remained at the sub-clinical level, not reaching the severity of the syndrome cytolysis. Only one patient, on the 20th day of therapy, showed a marked rise in the liver enzymes (ALT=157 U/L, AST=81 U/L) accompanied by subicteric skin and sclerae which necessitated withdrawal of the antipsychotic therapy and the use of hepatoprotectors.

Correlation analysis was carried out to identify the links between the socio-demographic factors, development of certain adverse drug reactions, level of serum transaminases and quality of life. On calculating the Spearman correlation coefficient, some statistically significant correlations were found ($p < 0.01$) between patient age, duration of the underlying disease and autonomic side effects on the 10th day ($r=0.37$ and $r=0.36$, respectively), the amount of common psychopathological syndromes (on PANSS) on admission and psychiatric side effects on the 20th day ($r=0.37$), the amount of productive syndromes on admission and neurological side effects on the 30th day ($r=0.35$), the amount of common psychopathological syndromes on admission and autonomic side effects on the 30th day ($r=0.38$). The results show the negative impact of long-term experience of the disease on the pharmacotherapy tolerance. Furthermore, the connection between the side effects with productive and general psychopathological syndromes on admission may indicate that patients with more severe

disorders in the acute phase of the disease received higher doses of psychotropic drugs when compared with patients with less difficult symptoms.

The AST levels on day 20 act as an indicator and is correlated with the severity of autonomic side effects on day 30 ($r=0.36$). Other links between laboratory parameter changes and adverse events were observed.

On calculating the Spearman correlation coefficient, no statistically significant correlations were noted between certain characteristics of the quality of life and severity of adverse drug reactions. However, negative correlation was found between the duration of the underlying disease and specific emotional characteristics associated with communication ($r=-0.37$, $p < 0.01$). This indicates deterioration in the quality of life for a parameter such as the ability to maintain full communion in patients with long-term experience of mental disease.

Discussion

The results obtained suggest a low level of social and labor adaptation in schizophrenic patients with concomitant chronic viral hepatitis. The high prevalence of co-morbid alcohol and drug abuse, lower socio-economic level, normally typical of patients with severe mental disorders, like factors predisposing the patient to infection with viral hepatitis, contribute to the disruption of the treatment regimens, more frequent hospitalizations and poor prognosis. High frequency of the neurologically adverse events suggests the use of mostly typical antipsychotic medications in hospitals. Statistically significant correlations among disease duration, patient age and severity of side effects support the view regarding the complexity of treatment in patients with long experience of the disease with the development of drug resistance and possible drug-induced liver injury.

Limitations of the study include the small sample size of the patients and absence of a comparison group. Also, the duration of chronic viral hepatitis was not taken into account. For a more detailed consideration of the relationship between adverse drug reactions, drug-induced liver injury and quality of life of the patients, further studies are warranted in schizophrenia patients without concomitant somatic pathology, which will form the comparison group. New studies will provide important information on the socio-demographic, clinical, psychiatric and somatic and laboratory predictors of the tolerance of pharmacotherapy, as well as individual rehabilitation programs designed to improve the quality of life in schizophrenia patients with concomitant chronic viral hepatitis.

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