ASIAN JOURNAL OF PHARMACEUTICAL AND CLINICAL RESEARCH

INNOVARE ACADEMIC SCIENCES
Knowledge to Innovation

Vol 11, Special issue 1, 2018

Online - 2455-3891
Print - 0974-2441

Research Article

THE DIFFERENCES SCORE OF POSITIVE AND NEGATIVE SYNDROME SCALE NEGATIVE SCALE BETWEEN SCHIZOPHRENIC PATIENTS THAT RECEIVED RISPERIDONE AND RISPERIDONE WITH FLUOXETINE

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Received: 15 October 2018, Revised: 06 February 2018 and Accepted: 14 February 2018

ABSTRACT

Objective: Negative symptoms are relatively common with a recent study finding that nearly 58% of outpatients had at least one negative symptom, negative symptoms are better predictors of functioning than positive symptom. Antidepressants have been a natural and common choice for the treatment of negative symptoms considering the conceptual proximity of their mode of action and the etiological hypotheses involving related neurotransmitters. This study examined differences negative symptoms scale score between patient that received only risperidone and risperidone with fluoxetine.

Method: The sample consist of 44 patients with a diagnosis of schizophrenia according to ICD-10 (International Statistical Classification of Diseases), male, age ranged was between 30 and 50 years, signed informed consent before entering into study which had been conducted at the Prof. Dr. M Ildrem Mental Health Hospital Medan Sumatera Utara Indonesia. The study was designed for 4 weeks, open-label, divided into two groups of 22 each, (1) receiving 4 mg/day risperidone with 20 mg/day fluoxetine and (2) receiving only 4 mg/day risperidone. Negative symptoms were assessed using positive and negative syndrome scale (PANSS).

Results: The primary finding of the trial was a significant reduction in score ofnegativescale in patients receiving risperidone with fluoxetinecompared to patients receiving only risperidone at the end of 4 weeks. All the subscales of PANSS negative symptoms scale demonstrated significant improvement.

Conclusions: In patients with schizophrenia, treating negative symptoms with adjunctive to fluoxetine appears to carry the benefit of improving negative symptoms.

Keywords: Negative symptom, Risperidone, Fluoxetine, Positive and negative syndrome scale.

 DOI: http://dx.doi.org/10.22159/ajpcr.2018.v11s1.26563

INTRODUCTION

Schizophrenia, which afflicts approximately 1% of the population, usually begins before age 25, persists throughout life, and affects people of all social classes [1].

Patients with schizophrenia struggle with many functional impairments, including performance of independent living skills, social functioning, and occupational educational performance and attainment [2].

Schizophrenia's symptoms are classified into three groups: Positive symptoms, such as hallucinations and delusions; negative symptoms, such as apathy and social withdrawal; and cognitive symptoms, such as poor executive functioning and working memory [3].

Research suggests that the negative symptoms of schizophrenia, including problems with motivation; social withdrawal; and diminished affective responsiveness, speech, and movement, contribute more to poor functional outcomes, and quality of life for individuals with schizophrenia than do positive symptoms [2].

Recent attention has focused on the development of pharmacological agents that have a specific activity in treating negative symptoms that can be added to an antipsychotic medication [4].

The heterogeneous nature of schizophrenia symptoms complicates the process of determining relative risks and benefits of using antidepressants in schizophrenia management [5].

Many reports are currently available involving trials of antidepressants in treating the negative symptoms of schizophrenia [6].

Several classes of antidepressants have been studied as potential treatments for negative symptoms [7]. A number of studies have demonstrated that adding SSRI antidepressants to antipsychotics can improve negative symptoms resistant to antipsychotic alone [8].

The response is in negative symptoms primary to the illness, requires a serotonergic mechanism, and can be detected within 2 weeks of starting augmentation. Several SSRI antidepressants inhibit cytochrome P-450 enzymes, mainly CYP1A2 and CYP2D6 isozymes,

which are metabolizers of antipsychotic drugs. Adding an SSRI antidepressant drug often results in an increase in plasma levels of the antipsychotic, which could underlie the superior efficiency of the augmentation treatments [8].

Several characteristics of the SSRI antidepressant - antipsychotic combination makes it a useful paradigm for studying therapeutically effective synergistic drug interactions in schizophrenia. First, the clinical effect is specific for a particular subset of clinical symptoms (negative symptoms), one that constitutes a core dimension of the illness, with a response detectable within 2 weeks. Second, it is dependent on the serotonergic action of the SSRI but not due to a general antidepressant effect. Third, the molecular mechanisms cannot be explained by the known actions of the individual drugs [8].

A pilot study showed that fluoxetine added to neuroleptics improves both positive and negative symptoms in treatment-resistant schizophrenic patients [9]. Several clinical reports have dealt with a combination of risperidone and fluoxetine [10].

In this study, we examined differences negative symptoms scale score between patient that received only risperidone and risperidone with fluoxetine.

Table 1: Baseline characteristics of sample

Variable	Risperidone group	Risperidone+fluoxetine group	p
Total N			
Age (years)			
Mean±SD	34.41±3.59	34.27±3.35	0.89*
Ethnic, n (%)			
Batak	10 (45.5)	11 (50.0)	0.76**
Non batak	12 (54.5)	11 (50.0)	
Level of education, n (%)			
Primary-junior high school	11 (50.0)	10 (45.5)	0.76**
Senior high school-college	11 (50.0)	12 (54.5)	
Duration of illness			
Mean±SD	9.23±2.79	9.59±3.34	0.91 ***
Body mass index			
Mean±SD	22.28±2.05	21.67±1.93	0.31 *
PANSS negative			
Mean±SD	31.36±1.62	31.64±1.96	0.61*

*Independent sample t-test, **Chi-square test, ***Mann–Whitney test

Table 2: Differences in negative symptoms scale score at the time of last visit (after 4 weeks)

Patient group	n	Mean (SD)	p
Risperidone group	22	28.59 (1.68)	0.001*
Risperidone+fluoxetine group	22	24.59	(2.32)

*Independent sample t-test

We hypothesize effect of adjective fluoxetine to risperidone treatment on negative symptoms partly reflect a significant reduction in negative symptom scale.

METHODS

Study population

Participants were recruited from Prof. Dr. M Ildrem Mental Health Hospital Medan Sumatera Utara Indonesia, with a diagnosis of schizophrenia according to ICD-10 (International Statistical Classification of Diseases) predominant negative symptoms with negative symptom score each item ≥4, age ranged was between 30 and 50 years, male, outpatient setting, were on a stable dose of risperidone for at least 4 weeks, and a written informed consent was obtained from participants or their legally authorized representatives before the initiation of study procedures.

Potential participants were excluded if they met clinical diagnosis of chronic medical illness had active substance abuse or dependence which (except caffeine and nicotine).

Study treatments

The study was designed for 4 weeks, open-label, divided into two groups of 22 each, (1) receiving 4 mg/day risperidone with 20 mg/day fluoxetine and (2) receiving only 4 mg/day risperidone. Subjects were instructed to take their study medication at the same time each day.

Assessments

Screening evaluations included the Mini-Structured Clinical Interview for DSM-IV axis 1 disorders. After informed consent was signed, we obtained psychiatric and medical history, documented vital signs and physical examination. Negative symptoms were assessed using the positive and negative syndrome scale (PANSS). Negative symptoms assessments were done during study visits at weeks 1 and 4th.

RESULTS

There were 22 patients in group that received risperidone only and 22 in group that received risperidone with fluoxetine (Table 1). The groups did not differ at baseline in demographic characteristics, body mass index, and PANSS negative symptoms scale. There were no significant differences between the two groups.

We compare PANSS negative score at the last available visit (Table 2). The patients in the risperidone with fluoxetine group had significantly lower scores on the PANSS negative symptoms scale. The results, described in Table 2, show that the PANSS negative component (composed of items measuring blunted affect, emotional withdrawal, poor rapport, passive, apathetic, social withdrawal, lack of spontaneity, and motor retardation) was significantly lower (i.e., significantly improved) in the risperidone with fluoxetine group.

DISCUSSION

To study how augmenting antipsychotic medications with anti-depressants impacts negative symptoms of schizophrenia, we analyzed data from a clinical trial comparing patients treated with risperidone with fluoxetine to those treated with risperidone alone. To the best of our knowledge, this is the first study in middle-aged with schizophrenia assessing effects of adding SSRIs to antipsychotic medications on schizophrenia symptoms in Prof. Dr M. Ildrem Mental Health Hospital Medan Sumatera Utara.

We noted that fluoxetine augmentation appears to improve negative symptoms that may impair social functioning - rapport, flow of conversation, spontaneity, apathy, and social withdrawal. It also appears to improve motor retardation. Since negative symptoms have been associated with worse functioning and quality of life, improving this important.

The dimension of schizophrenia with antidepressants may produce a cascading chain of benefits resulting in improved functioning and quality of life. It is noteworthy that these benefits were obtained without simultaneous worsening of positive symptoms. Our finding that fluoxetine augmentation did not worsen positive symptoms is consistent with recent reports. Fluoxetine 20 mg/day has been reported to significantly increase steady-state serum risperidone concentrations [11].

CONCLUSION

In patients with schizophrenia, treating negative symptoms with adjunctive to fluoxetine appears to carry the benefit of improving negative symptoms.

ACKNOWLEDGMENT

None.

CONFLICTS OF INTERESTS

None.

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