



ORIGINAL ARTICLE

The effect of bupropion on sexual function in patients with Schizophrenia: A randomized clinical trial

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KEYWORDS

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Sexual Function;
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Abstract

Background and objective: About one percent of the world's population are affected by Schizophrenia. It is assumed that antipsychotic drugs cause sexual dysfunction, but the main mechanism of it, is not specified. Few researches that have addressed this issue showed that there is a relationship between neuroleptics and sexual dysfunction. A number of studies found that bupropion could improve the sexual dysfunction. So the purpose of this study is to investigate the effect of bupropion on sexual function of the patients with Schizophrenia.

Methods: This randomized clinical trial was performed on 40 schizophrenic patients admitted to Kamrani psychiatry clinic in Tehran during 2015–2016. Participants were randomly divided into two experimental and control groups. The experiment group was taken bupropion tablets 150 mg/day and the control group were given placebo for one-month. The sexual performance of participants was studied before and after the intervention by the sexual functioning questionnaire (SFQ). Obtained data were analyzed using the SPSS software with student t-test and chi-square tests.

Results: 40 patients older than 18 year old participated in the study. Before treatment the two groups did not have significant difference based on a general score of SFQ questionnaire, but There was a significant difference between two groups after the intervention. Experiment group (bupropion) showed significant improvement in sexual function. Using bupropion in the experiment group led to significant change in the score of sexual desire, erection and orgasm, but it had no effect on sexual arousal and ejaculation. The associations of ejaculation and orgasm were significance. Using the bupropion changed the erection and orgasm in the two groups of control and experimental.

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Conclusion: This study shows that 150 mg/day dose have considerable effect on sexual dysfunction of patients that are under treatment with anti-psychotic drugs. Also, this drug does not have any special side effects.

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Introduction

More than 21 million people are affected by Schizophrenia around the world.¹ Schizophrenia is a mental disorder that its main characteristics are considerable dysfunctions in thought process, educational and occupational performance, disturbed sexual function, hallucinations, delusions, disorganized behavior and the weak emotional responses.¹⁻³ Symptom onset occurs at the adolescence and its prevalence is about 1 percent of the general population and its diagnosis is based on patient-reported experiences and observed behaviors.^{3,4} Schizophrenia prevalence in men is 1.4 times more than women.⁵ Patients with Schizophrenia have the 50% more risk for suffering diseases such as major depression, anxiety disorder and substance use disorder during their lifetime.⁶

Bupropion with commercial name of Wellbutrin and Zyban is an atypical antidepressant drug that usually is used to help quit smoking.⁷ Causing less sexual dysfunction and weight gain, bupropion can compete with many other regular antidepressant medications. This drug has a good impact on cognition and improves sexual function. Patients taking bupropion have better feeling and can endure it better than other antidepressant medications.^{8,9} Bupropion is prescribed for treatment of depression and nicotine addiction and its showed effective outcomes.^{7,10} In patients with Schizophrenia, sexual dysfunction will occur as a result of depression, Anti-cholinergic and adrenergic side effects of antipsychotic drugs and smoking.¹¹⁻¹³ Incidence of disorders in sexual desire and in the psychophysiological changes related with the sexual response cycle in men and women is defined as Sexual dysfunctions.¹⁴ The studies showed that sexual dysfunction prevalence in these patients is twice of the general population.¹¹

Due to the considerable prevalence of Schizophrenia and the need for treatment of this disease with Antipsychotic drugs, evaluation and management of sexual dysfunction of these patients is an important matter that could improve their quality of life and plays a significant role in patient's adherence to treatment regimen. So, in this study the effect of bupropion on sexual function of the patients with Schizophrenia is studied.

Material and methods

This double blind, randomized clinical trial was performed on chronic Schizophrenia patients admitted to Kamrani psychiatry clinic in Tehran during 2015–2016. The inclusion

criteria of participants were: having sex partner, being male, more than 18 years old age, being involved with Schizophrenia or its relapse in the past few years, not having a mood disorder, according to the DSM-IV-TR criterion, no change in patient medications in the last two months of the study start time, not having any other acute illness. Severe medical illnesses, like diabetes, hypertension, severe organ failure and other disorders affecting sexual performance, history of epilepsy and mental retardation were the exclusion criteria.

40 schizophrenic patients participated in the study, were randomly divided into two experimental and control groups based on the two right digits of their medical record number. This numbers were accessible only to authorized individuals who were not involved in the conduct or analysis of the study, until the time of un-blinding. The study designed blinded at the start of the study in the medication dispensing and each scheduled visits. Participants in the experiment group were taken bupropion tablets 150 mg daily and placebo tablets with the same size and color that were indistinguishable with the matching bupropions were given to the control group for one-month period of observation. Also all participants were to remain blinded to study until ending of the double-blind clinical data. The sexual performance of participants was studied before and after the intervention by the sexual functioning questionnaire (SFQ) which its purpose is to assess the effects of medication treatment on sexual function that after factor analysis and validity and reliability in Persian was divided into 5 groups of sexual desire, sexual arousal, erection, ejaculation and orgasm. Cronbach's alpha values were above the 0.70 threshold for all domains demonstrated high level of internal consistency reliability. *R* values for Pearson's correlation coefficient were from 0.81 to 0.91.¹⁵ Obtained data were analyzed using the SPSS software with student t-test and chi-square tests.

Results

40 patients with different stages of the disorder, older than 18year old participated in the study. The different stages did not influence on the final results. The patients divided into control and experimental groups and compared based on the sexual function questionnaire. Before treatment the two groups did not have significant difference based on a general score of Sexual Functioning Questionnaire (SFQ) questionnaire. There was a significant difference between two groups after the intervention. Experiment group (bupropion) showed significant improvement in sexual function (Table 1).

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