Brief Report

Treatment of Borderline Personality Disorder with Olanzapine

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Borderline personality disorder is one of the most problematic psychiatric disorders with aggressiveness and impulsivity as its two main characteristics. Our objective was to determine the efficacy of olanzapine on 20 patients with borderline personality disorder. Results were found to be affirmative in this respect.

Introduction

Borderline personality disorder (BPD) is a heterogeneous psychiatric disorder. Like any other kind of personality disorders, genetic, biologic, and psychoanalytic factors jointly compose its basis. The prevalence of the disease in the general population is estimated to be about 2%. In mental health settings, its prevalence is 10% in outpatient clinics and about 20% in inpatient units. BPD is much more common among women, who make up about 75% of the cases.1

The term “borderline” has historically been used to describe patients who were on a borderline between neurotic and psychotic disorders. Alterations of central neurotransmission systems, stressful childhood traumas, and genetic predisposition are major etiologic factors for this disorder. Affective unstableness, impulsiveness, and aggressiveness are the major presentations of such morbid personality. Also, recurrent suicidal treats and attempts, assaultiveness, substance abuse or dependence, and low tolerance for frustration are the remarkable characteristics of such patients.

Both psychotherapeutic and pharmacologic modalities have been used hitherto for extenuating these symptoms.2 Serotonin-selective reuptake inhibitors (SSRIs) have been proposed as the first-line treatments for impulsivity.3 Failure to respond to SSRIs should prompt consideration of low-dose neuroleptics.3, 4 On the other hand, long-term administration of neuroleptics to such patients can lead to important neurologic side effects like tardive dyskinesia. Lithium and anticonvulsant mood stabilizers have also been helpful with respect to impulsive aggression.5, 6

Atypical antipsychotic drugs with combined serotonergic and dopaminergic properties seem to offer a fine prospect for the treatment of BPD. In recent studies clozapine,7 olanzapine,8 and risperidone9 have been successfully employed for the management of BPD. The purpose of this study, also, was to determine whether olanzapine could moderate the impulsive-aggressive behavior of patients with BPD.

Patients and Methods

Twenty consecutive patients (all women) from one of the psychiatric wards of Razi Psychiatric Hospital in Tehran, who met the DSM-IV-TR diagnostic criteria for BPD, were enrolled in the study. They had a mean ± SD age of 24.7 ± 4.7 years. Their diagnoses had been certified by at least three psychiatrists, based on face to face interviews, history, observations, and the above-mentioned diagnostic criteria.

Patients were excluded from the trial if they suffered from any major medical or neurologic
illness or if there was any comorbid remarkable mental disorders in axis I, in addition to the aforementioned BPD. All patients, after a complete description of the treatment, offered their informed consents. All of their psychotropic drugs had been withdrawn for at least two weeks, before entering the study. During the medication trial, the patients were receiving no specific psychotherapeutic approach and were only subjected to clinical management (a 30-min medication visit once a week and regular clinical visits twice per week).

Previous pharmacologic treatments, which had been prescribed for them included conventional neuroleptics, SSRIs, mood stabilizers, and benzodiazepines. The patients were treated with open-label olanzapine (Sobhan Co. in Iran) orally for eight weeks. This was started at a dose of 2.5 mg/day, to be taken each evening, and then individually increased by 2.5 mg increments, as needed or tolerated, in weekly meetings, to a maximum of 10 mg by week four. The dose established by week four was held constant up to the end of the study. No concurrent psychotropic medication was allowed.

All patients were assessed by the same psychiatrist at baseline and at the end of the eighth week of the treatment. Principal scales in this research were the Brief Psychiatric Rating Scale (BPRS), the DSM-IV global assessment of functioning (GAF), and the self-rated Buss-Durkee Hostility Inventory (BDHI). Data gathered from this study were compared using the Student’s t test. Statistical significance was set to 2-sided P value <0.05.

## Results

All patients completed the entire eight weeks of the study. The final mean ± SD olanzapine dose for patients was 4.86 ± 0.63 mg/day.

Changes in outcome measures within the study period are displayed in Table 1. The mean score analysis revealed a significant improvement during the period of olanzapine administration. At the end of the study, BPRS total scores showed a statistically significant reduction of 18.63% in comparison with the baseline scores. There was also a 25.20% improvement in BDHI total score, comparing with the baseline levels at the end of the study. Substantial changes in GAF were also observed, with an 11.02 point increase in the mean GAF score. The analysis of specific BPRS subscales revealed significantly lower scores in tension, hostility, suspiciousness, excitement, depressive mood, and anxiety factors, and also a trend towards amelioration in uncooperativeness factor. Other BPRS factors failed to reach statistical significance.

Side effects included weight gain, somnolence, dizziness, dyspepsia, tremor, and constipation. Since the side effects were mild and well-tolerated, no patient dropped out for medication intolerance.

### Discussion

Our results are similar to those of previous studies assessing the efficacy of olanzapine in BPD.

Treatment with olanzapine was followed by substantial improvement in scores assessing affective crisis. Possible mood-stabilizing properties, which have been attributed to atypical antipsychotic drugs could be responsible for the improvements we observed in this regard.

In addition to a decrease in BPD symptoms, during the course of this trial, a substantial improvement in GAF was observed. Therefore,

### Table 1. Mean ± SD of outcome measures before and after the study on 20 patients with borderline personality disorder.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean baseline (SD)</th>
<th>Mean last observation (SD)</th>
<th>Percentage change</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPRS total</td>
<td>49.9 ± 4.45</td>
<td>40.6 ± 6.18</td>
<td>18.63%</td>
<td>0.001</td>
</tr>
<tr>
<td>BPRS anxiety</td>
<td>2.65 ± 0.30</td>
<td>2.23 ± 0.41</td>
<td>15.84%</td>
<td>0.01</td>
</tr>
<tr>
<td>BPRS tension</td>
<td>2.93 ± 0.63</td>
<td>2.12 ± 0.60</td>
<td>27.64%</td>
<td>0.001</td>
</tr>
<tr>
<td>BPRS depressive mood</td>
<td>2.95 ± 0.58</td>
<td>2.54 ± 0.57</td>
<td>13.89%</td>
<td>0.05</td>
</tr>
<tr>
<td>BPRS hostility</td>
<td>3.45 ± 1.85</td>
<td>2.43 ± 1.26</td>
<td>29.56%</td>
<td>0.001</td>
</tr>
<tr>
<td>BPRS suspiciousness</td>
<td>3.76 ± 1.59</td>
<td>2.74 ± 1.21</td>
<td>27.12%</td>
<td>0.005</td>
</tr>
<tr>
<td>BPRS uncooperativeness</td>
<td>1.63 ± 0.24</td>
<td>1.52 ± 0.37</td>
<td>6.74%</td>
<td>0.5</td>
</tr>
<tr>
<td>BPRS excitement</td>
<td>2.93 ± 0.15</td>
<td>2.71 ± 0.16</td>
<td>7.50%</td>
<td>0.001</td>
</tr>
<tr>
<td>GAF</td>
<td>52.8 ± 6.85</td>
<td>63.82 ± 7.43</td>
<td>20.87%</td>
<td>0.001</td>
</tr>
<tr>
<td>BDHI</td>
<td>60.3 ± 7.86</td>
<td>45.1 ± 14.73</td>
<td>25.20%</td>
<td>0.001</td>
</tr>
</tbody>
</table>

BPRS = Brief Psychiatric Rating Scale; GAF = global assessment of functioning; BDHI = Buss-Durkee Hostility Inventory.
this study offers encouraging evidence for the role of olanzapine in the management of this type of personality disorder. Nonetheless, this study must be interpreted with caution due to its small number of subjects and open method of treatment. Certainly, double-blind placebo-controlled studies are needed for better clarification of the efficacy of olanzapine in the improvement of different dimensions of BPD.

References
