Who Are Patients on Conventional Antipsychotics?

by Antoinette M. Valenti, Rajesh Narendran, and Cynthia A. Pristach

Abstract

The advent of atypical antipsychotics presented psychiatrists with an effective way of treating psychosis without the many side effects associated with conventional agents. Given the superiority of atypical antipsychotics, we examined demographic information and treatment histories of patients currently treated with conventional antipsychotics, especially in regard to treatment with atypical agents. Medication histories and demographic information for 276 patients admitted to an urban hospital were obtained by patient/family interviews and review of medical records. Chi-square and logistic regression tests were used to analyze data for possible predictive factors of which patients within the sample were still receiving conventional antipsychotics for treatment. Seventy-eight (28%) patients were currently being treated with conventional antipsychotics. More than half of them had never received a trial of an atypical agent. African-Americans, who are more likely to suffer adverse effects from conventional antipsychotics, and substance abusers were overrepresented in this group. It is unclear to what extent ethnic or cultural bias played a role in determining medication choice. Because conventional antipsychotics are associated with more side effects and greater medication nonadherence, these patients should be evaluated for appropriateness of a trial with an atypical agent even if they are currently stable with a conventional antipsychotic.

Keywords: Schizophrenia, ethnicity, antipsychotics, tardive dyskinesia, substance abuse, affective disorders.


The introduction of a new generation of atypical antipsychotic medications since the early 1990s has given psychiatrists and their patients more treatment options for psychotic disorders. The lower side effect profiles of atypical agents increases the likelihood that patients will adhere to treatment regimens. In this era of atypical antipsychotics, it is important to ask which patients remain on conventional antipsychotics. Factors such as previous adherence to treatment, diagnosis, comorbidity, age, gender, and race may influence prescribing practices. A recent study examining treatment of depression found that depressed African-Americans were statistically significantly less likely to be prescribed selective serotonin reuptake inhibitors (SSRIs) compared to depressed Caucasian patients, despite the fact that SSRIs have fewer side effects and are more easily tolerated (Melfi et al. 2000). More recently, race was also a factor among the population of patients analyzed by Kuno and Rothbard (2002), who found that African-American patients suffering from schizophrenia were more likely to receive conventional antipsychotics in comparison to Caucasian patients within the same population. Issues of mental health treatment toward African-Americans have been reported in the psychiatric literature since the early 1980s but were recently made more accessible to the general public in the 1999 Surgeon General's Report (National Institutes of Health 1999). This report highlighted diagnostic and treatment issues of the mental health care that African-Americans receive. It called for a heightened awareness regarding mental health treatment of African-Americans, an ethnic group more likely than Caucasians to suffer from more physical ailments (U.S. DHHS 2000) and to be of lower socioeconomic status (U.S. Census Bureau 1999)—two factors that are correlated with more severe mental health issues.

The aim of this naturalistic study was 2-fold. The primary aim was to identify any demographic or clinical characteristics that may predict continued treatment with conventional antipsychotics. Second, it sought to deter-
mine whether patients currently treated with conventional antipsychotics were ever given adequate trials of atypical agents.

Methods

As part of a larger study to identify patients with treatment-resistant schizophrenia (Narendran et al. 2003), an administrative record review was conducted. It included all patients admitted to an urban public hospital from July through November 2000. Information regarding demographics, diagnosis, and comorbid disorders of all patients admitted with a diagnosis of a primary psychotic disorder such as schizophrenia, schizoaffective disorder, schizotypal disorder, or psychosis not otherwise specified was collected. Diagnosis was made by the admitting physician. Data were obtained by a research assistant via chart review and patient/family interviews. All available records of medication and diagnosis history were reviewed with patient consent as part of a screening process for a larger study. The medication histories of patients being treated with conventional antipsychotics were reviewed, with particular attention to prior treatment with atypical agents. The criteria for being classified as refractory to atypical antipsychotic treatment was defined by Narendran et al. (2003). Essentially a modification of the Kane criteria (Kane et al. 1988), the criteria included failure to respond to an adequate trial of at least two of the following four new-generation atypical antipsychotic medications at the given dosages: > 300 mg/day clozapine, ≥ 6 mg/day risperidone, ≥ 20 mg/day olanzapine, or ≥ 600 mg/day quetiapine for at least 6 weeks. Adherence to medications had to be documented in medical records. Demographics (race, age, and sex) and clinical variables (diagnosis and substance abuse) that predicted conventional antipsychotic over atypical antipsychotic prescription were analyzed using chi-square and logistic regression tests.

Results

Of the 276 inpatients screened, 198 (72%) were currently being treated with atypical antipsychotics compared to 78 (28%) patients being treated with conventional antipsychotics. There was no difference in the mean age of patients taking atypical antipsychotics (41.4 ± 11.8) compared to those taking conventional antipsychotics (39.4 ± 10.3). Of the 78 patients on conventional antipsychotics, 46 (59%) patients had never received an adequate trial of an atypical antipsychotic. Twenty-five (32%) patients had failed one trial of an atypical, 5 (6%) had failed two different trials, and 2 (3%) had failed trials of three different atypical agents. Of the 78 (28%) patients on conventional antipsychotics, 20 (26%) were treated with a long-acting intramuscular decanoate preparation, 22 (28%) received a short-acting oral preparation, and 36 (46%) received both. When the treatment histories of the 56 patients who received either decanoate or a combination of decanoate and an oral conventional antipsychotic were compared, the data revealed that 44 (78%) had never received a trial of an atypical, 8 (14%) had failed only a single trial of an atypical, 2 (4%) had failed two trials of atypicals, and 2 (4%) had failed three trials of atypicals. Analysis of demographic and clinical characteristics revealed that age and sex were not predictive of what type of medication was prescribed, but patients currently on conventional antipsychotics were more likely to be African-American (p < 0.05), to be diagnosed with a comorbid substance abuse disorder (p < 0.05), and to have a diagnosis of schizophrenia (p < 0.05) (table 1). The same factors were strongly associated with never having received a trial on an atypical antipsychotic. A logistic regression (table 2) further indicated that the relationship of race with type of medication was significant when controlling for the effects of substance abuse and age. Minorities were more than three times (3.40) as likely to be on conventional antipsychotics than were Caucasians. The data also indicated that the relationship of substance abuse to type of medication was significant when controlling for the effects of age and race. Substance abusers were about two times (2.02) more likely than non-substance abusers to be on conventional antipsychotics. Of the 56 patients who received depot medication, 37 (66%) were substance abusers while 19 (34%) were non-substance abusers.

Discussion

In this study, a large number of patients were treated with conventional antipsychotics. The most significant factor associated with treatment with conventional antipsychotics, including depot preparations, was being African-American, a finding consistent with the previously mentioned study conducted by Kuno and Rothbard (2002). Racial and ethnic bias regarding psychiatric diagnosis has also been reported (Flakerud and Hu 1992) and may influence prescribing practices as well. Prior studies indicate that African-Americans are more likely to be diagnosed with psychotic disorders than are Caucasians (Adieberme et al. 1981; Mukherjee et al. 1983; Strakowski et al. 1993, 1996a; Trierweiler et al. 2000) and to have affective disorders underdiagnosed in primary care and emergency settings (Strakowski et al. 1995, 1996b, 1997). Overdiagnosis of schizophrenia in this population has been reportedly dampened when semistructured DSM-III-R symptom checklists are used (Neighbors et al. 1999). Nevertheless, it has been suggested by Lawson (1996) that such an over-
Patients on Conventional Antipsychotics


Table 1. Demographics and clinical characteristics of patients

<table>
<thead>
<tr>
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<th>Conventional antipsychotics (n=78)</th>
<th>Atypical antipsychotics (n=198)</th>
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<tbody>
<tr>
<td>African-Americans</td>
<td>50 (41.7%)*</td>
<td>70 (58.3%)</td>
</tr>
<tr>
<td>Caucasians</td>
<td>25 (17.9%)</td>
<td>115 (62.1%)</td>
</tr>
<tr>
<td>Other ethnicities</td>
<td>2 (2.5%)</td>
<td>14 (7.5%)</td>
</tr>
<tr>
<td>Males</td>
<td>46 (30.7%)</td>
<td>104 (69.3%)</td>
</tr>
<tr>
<td>Females</td>
<td>32 (25.4%)</td>
<td>94 (47.6%)</td>
</tr>
<tr>
<td>Substance abusers</td>
<td>48 (35.8%)*</td>
<td>86 (44.2%)</td>
</tr>
<tr>
<td>Non–substance abusers</td>
<td>30 (21.1%)</td>
<td>112 (56.8%)</td>
</tr>
<tr>
<td>Diagnosis of schizophrenia</td>
<td>57 (33.9%)*</td>
<td>111 (55.7%)</td>
</tr>
<tr>
<td>Diagnosis of schizoaffective disorder</td>
<td>8 (17.8%)</td>
<td>37 (21.1%)</td>
</tr>
<tr>
<td>Diagnosis of other psychotic disorder</td>
<td>11 (17.5%)</td>
<td>52 (25.5%)</td>
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</tbody>
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Note.—Chi-square tests were used to compare the proportion of African-Americans versus Caucasians, males versus females, and diagnosis of schizophrenia versus schizoaffective disorder and other psychotic disorder in patients receiving conventional antipsychotics. *p ≤ 0.05

Table 2. Relationship between prescribing practice and race, substance abuse, and age

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds ratio</th>
<th>Significance</th>
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<tr>
<td>Race</td>
<td>3.40</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Substance abuse</td>
<td>2.02</td>
<td>0.014**</td>
</tr>
<tr>
<td>Age</td>
<td>1.01</td>
<td>0.367</td>
</tr>
<tr>
<td>Regression constant</td>
<td>0.10</td>
<td>0.000</td>
</tr>
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* p < 0.001
** p < 0.05

diagnosis of psychotic disorders in African-American patients may lead to inadvertent antipsychotic treatment, thus leading to the higher side effect profiles seen among African-Americans. African-Americans tend to be slower metabolizers (33% of African-Americans compared to 1%-2% of Caucasians) (Lawson 1986; Silver et al. 1993; Strickland et al. 1993), to have quicker response to treatment (Lin and Poland 1995), and to be more likely to suffer from tardive dyskinesia due to antipsychotics than their Caucasian counterparts (Glazer and Morganstern 1994), so it is counterintuitive that they tend to receive neuroleptic medications at higher doses (Lawson 1996) and greater frequency (prn) than Caucasians (Flaherty et al. 1981). Other risk factors for tardive dyskinesia include being female and having a comorbid affective or substance abuse disorder (Wegner and Glazer 1989; Glazer and Morganstern 1994; Jeste et al. 1996; Lopez and Jeste 1997). Therefore, it is disturbing but not surprising that African-Americans and substance abusers were more likely to be prescribed conventional antipsychotics in our study, thus putting them at greater risk for adverse outcomes. Because studies suggest that atypical antipsychotics are more efficacious than conventional antipsychotics, decrease the likelihood for extrapyramidal side effects, and reduce craving for illicit substances compared to conventional antipsychotics (Buckley 1998; Conley et al. 1998), it is unfortunate that the patients most likely to benefit from their prescription do not receive them. Possible explanations for this include the high cost of these newer agents (Lawson 2000), clinician bias, lack of cultural sensitivity training, and inadequate research into the ethnopsychopharmacological treatment of mental disorders. The influence of racial factors on diagnostic inference (Neighbors et al. 1989) and true prevalence rates of mental disorders among African-Americans (Baker and Bell 1999) are also important areas for future study. Unfortunately, African-Americans are frequently underrepresented in clinical trials (Svenson 1989; Tran et al. 1999), making it difficult to study such factors in the African-American population.

Given the potential benefits of atypical antipsychotics, it is disturbing that 59 percent of patients on conventional antipsychotics never received a trial on an atypical agent. Possible explanations for this may be prior nonadherence or substance abuse, because 56 subjects (72%) were on a depot preparation either as monotherapy or in combination with oral conventional antipsychotics, which are commonly used to manage nonadherence (Glazer and Kane 1992).

Unfortunately, adherence histories of our subjects were not obtained. This made it difficult to accurately assess the influence of nonadherence on prescribing practices, which was a major limitation of the retrospective naturalistic design of this study. Future prospective studies will need to further probe the relationship between nonad-
herence and antipsychotic prescribing practices. Moreover, factors such as patient preference and no or limited insurance benefits are valid reasons for patients to remain on conventional antipsychotics. These factors could not be assessed in the study and therefore cannot be ruled out as an explanation for the results obtained.

Our findings reconfirm what has already been introduced in the literature, indicating that the problem of racial and diagnostic bias occurs in many different settings and demands clinicians’ and researchers’ attention. It is unclear to what extent bias toward ethnicity influenced the choice of conventional antipsychotic treatment for African-American schizophrenia patients in our study. In view of the potential for increased efficacy, decreased liability for extrapyramidal symptoms, and decreased craving for illicit substances, atypical antipsychotics should be considered a first-line treatment for psychotic disordered patients with a comorbid substance abuse/dependency disorder.

Conclusion
In conclusion, clinicians should evaluate patients with comorbid substance abuse disorder and schizophrenia for appropriateness of a trial of atypical antipsychotics. In addition, atypical antipsychotic agents should be first-line treatment for African-American patients given the agents’ potential for decreased side effects, including tardive dyskinesia; diminished drug toxicity; and improved efficacy and treatment adherence.

References


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