Differential Prescription of Maintenance Antipsychotics to African American and White Patients With New-Onset Bipolar Disorder

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Background: Antipsychotic medications are commonly prescribed as maintenance pharmacotherapy for patients with bipolar disorder. However, double-blind, placebo-controlled studies have yet to demonstrate a significant prophylactic effect of maintenance antipsychotic use in bipolar disorder, and long-term use of antipsychotics may place the patient at risk for neuroleptic-induced tardive dyskinesia. African American patients may be at increased risk because excess antipsychotic prescription appears to be common in this population, although this issue has not been longitudinally studied in bipolar disorder.

Method: Fifty-eight patients meeting DSM-IV criteria for bipolar I disorder, with manic or mixed episode, were recruited at the time they were admitted for a first psychiatric hospitalization and then received longitudinal follow-up for up to 2 years. Comparisons were made between African American (N = 24) and white (N = 34) patients in medications prescribed and medication compliance after controlling for differences in clinical course.

Results: The African American and white patient groups were similar demographically. After controlling for differences in clinical course, African Americans, compared with white patients, (1) received antipsychotics for a significantly greater percentage of follow-up time ($F = 7.9$, $df = 1,52$; $p < .007$), (2) were more likely to receive antipsychotics during periods without psychotic symptoms, and (3) were significantly more likely to receive conventional antipsychotics ($\chi^2 = 4.0$, $df = 1$, $p < .05$). African Americans also demonstrated poorer treatment adherence, although that finding did not explain the differences in antipsychotic prescription.

Conclusion: Even when demographically similar to white patients, African Americans with bipolar disorder may be more likely to receive maintenance antipsychotic treatment. The specific reasons for this finding are not clear, suggesting that studies are warranted that examine clinicians' rationale for differentially prescribing antipsychotics for African American and white patients during the early course of bipolar disorder.

(J Clin Psychiatry 2002;63:658–664)

Received May 1, 2001; accepted Jan. 3, 2002. From the Bipolar and Psychotic Disorders Research Program, Department of Psychiatry, University of Cincinnati College of Medicine, Cincinnati, Ohio.

Supported by National Institute of Mental Health awards MH58170 and MH56352 (Dr. Strakowski).

Dr. Strakowski has served as a consultant for Bristol-Myers, Janssen, and AstraZeneca; has received grant/research support from Abbott, Lilly, Bristol-Myers, and Janssen; and has received honoraria from and has served on the speakers or advisory boards for Bristol-Myers, Janssen, AstraZeneca, Abbott, and Lilly.

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Antipsychotic medications are commonly prescribed as maintenance pharmacotherapy for patients with bipolar disorder.[1] The use of antipsychotic medications as an adjunct to mood-stabilizing agents has become standard clinical practice in the treatment of bipolar disorder with resistant mania, psychotic features, agitation, or insomnia.[2] Despite the apparent clinical benefit in the short term, double-blind placebo-controlled studies have yet to demonstrate a significant prophylactic effect of long-term conventional antipsychotic use in patients with bipolar disorder. Indeed, some previous studies suggest that conventional antipsychotic medication may worsen the course of bipolar disorder by inducing depression or failing to provide prophylaxis against depressive symptoms.[3,4] Regardless, extended use of conventional antipsychotic medication may place patients with bipolar disorder at risk for neuroleptic-induced tardive dyskinesia or tardive dystonia, indicating that additional care must be taken when prescribing these medications. Recent studies of the newer, so-called atypical, antipsychotic medications suggest that these drugs may have thymoleptic as well as antipsychotic properties, such that they may be preferred over conventional antipsychotic medication in the treatment of bipolar disorder.[3,5,6] However, the long-term efficacy and safety of these medications as prophylactic agents in bipolar disorder are also unknown.[3]

African American psychiatric patients have been reported to more frequently receive antipsychotic medication, and at higher doses, than demographically similar white patients.[7–11] There is no physiologic reason to expect

that African Americans require higher antipsychotic doses, and the excess of antipsychotic prescribing has been attributed to inadequate clinical assessment.[7–12] In particular, African Americans with affective psychoses appear to be at a particularly high risk of both being misdiagnosed with schizophrenia and receiving excess antipsychotic medication relative to demographically similar white patients.[7,13–17] However, to date, there are no prospective studies examining antipsychotic use over time in African American patients with affective illness.

With these considerations in mind, we prospectively and longitudinally examined the prescription of antipsychotic medications for African American and white patients with bipolar disorder following a first psychiatric hospitalization. By studying first-hospitalized patients, we were able to examine antipsychotic medication as a newly prescribed treatment rather than a continuation of previous treatment. We predicted that African American patients would be prescribed antipsychotic medication for a greater percentage of follow-up in general, and in the absence of psychotic symptoms specifically, as compared with white patients.

METHOD

Subjects

Patients for this study were recruited as part of the University of Cincinnati First-Episode Mania Study, initiated in June 1996 and described in detail in previous publications.[18–20] For the present analysis, inclusion criteria were (1) meeting of DSM-IV criteria for bipolar I disorder, manic or mixed episode, (2) age 15 to 45 years, (3) no prior psychiatric hospitalizations, (4) less than 1 month of prior psychotropic medication, (5) ability to communicate in English, and (6) living within 50 miles of Cincinnati, Ohio. Patients were excluded if psychiatric symptoms (1) were entirely due to acute medical illness as determined by examination or (2) resulted from acute intoxication or withdrawal from drugs or alcohol as determined by symptom resolution within the expected period of acute intoxication or withdrawal[21] or (3) included diagnosed mental retardation (i.e., IQ < 70). Additionally, only white and African American patients were compared, since patients from other ethnic groups are too infrequent in our population to permit analysis.[16] After complete description of the study to the subjects, written informed consent was obtained. This study was approved by the University of Cincinnati Institutional Review Board.

The present study evaluates the first 58 consecutively enrolled patients who completed at least 4 months of follow-up. During this time, 66 patients who were eligible for this analysis consented to the study. One Asian American patient was excluded by entry criteria. The remaining 7 patients were lost to follow-up (11%; 5 white, 2 African American; $\chi^2 = 0.44$, df = l, p > .5).

Index Clinical Assessment

The diagnosis of DSM-IV bipolar disorder, manic or mixed episode, was established by board-certified or board-eligible psychiatrists or Ph.D.-level psychologists using the Structured Clinical Interview for DSM-IV, Patient Edition (SCID-I/P).[22] These investigators are experienced with this instrument and demonstrate good interrater reliability ($\kappa > 0.90$).[18–21] Psychiatric symptoms were assessed by these same investigators using the Young Mania Rating Scale (YMRS),[23] the 17-item Hamilton Rating Scale for Depression (HAM-D),[24] and the Scale for the Assessment of Positive Symptoms (SAPS).[25] Patients were rated for the worst period of the current episode, which typically occurred at the time of hospital admission. The investigators demonstrate good interrater reliability for these symptom measures (intraclass correlation coefficient [ICC] > 0.70 for most individual symptoms and all total scores).[18–21] A total psychosis score was calculated by summing the SAPS global hallucinations, delusions, and thought disorder items.[19]

The age at onset of bipolar disorder was defined as the age at which the first affective episode began (ICC > 0.90), and the duration in weeks of the current manic/mixed episode was also estimated. For all patients, this was the first affective episode that required psychiatric hospitalization or treatment. For 27 patients (47%), this was the first lifetime affective episode. Twenty-three patients (40%) had 1 (N = 13) or more (N = 10) prior untreated depressive episodes. Five patients (9%) had 1 prior untreated episode of hypomania or mild mania, and 3 patients (5%) had a combination of prior depressive and hypomanic episodes. There was no racial difference in rates of previous episodes ($\chi^2 < 0.01$, df = l, p > .9).

Substance use disorders were assessed by research assistants, who had received extensive training, using the Substance Use Disorders module of the SCID-I/P in conjunction with the Addiction Severity Index[26] to determine both current and past histories of alcohol and drug use disorders.

Demographic Variables

Demographic information was obtained from direct patient interviews and review of medical records. This information included sex, ethnicity, years of education, current age, and employment status prior to the onset of the index affective episode (rated on an 9-point scale with higher scores corresponding to lower levels of employment).[18]

Follow-Up Assessments

After hospital discharge, patients were evaluated at 1 month and 4 months, then every 4 months subsequently. Follow-up in this study is ongoing. For this analysis, the maximal follow-up period analyzed was 2 years (104 weeks).

Table 1. Clinical Characteristics of 58 Patients With Bipolar Disorder Followed Prospectively for up to 2 Years After Hospitalization for a First Manic Episode, According to Ethnicity[a]

Characteristic	White (N = 34)	African American (N = 24)	All Patients (N = 58)
Index episode duration prior to hospitalization, wk	7 (9)	9 (9)	8 (9)
Index YMRS total score	34 (4)	37 (9)	35 (9)
Index HAM-D total score	15 (8)	15 (8)	15 (8)
Index SAPS total score	7.4 (3.7)	8.5 (3.5)	7.9 (3.6)
Mixed state, N (%)	11 (32)	9 (38)	20 (34)
Lifetime alcohol use disorder, N (%)	18 (53)	9 (38)	27 (47)
Lifetime drug use disorder, N (%)	19 (56)	10 (42)	29 (50)
Follow-up period, wk (range, 16–104 wk)[b]	63 (34)	83 (30)	72 (33)
With psychosis, % of follow-up[c]	17 (32)	34 (38)	24 (35)
In remission, % of follow-up[d]	60 (34)	41 (33)	52 (35)
No. of mental health contacts per month	1.3 (1.2)	1.5 (1.6)	1.4 (1.4)
Subjective rating of medication helpfulness[e]	1.9 (1.0)	1.8 (1.2)	1.9 (1.1)

[a]Values shown as mean (SD) unless otherwise noted. Abbreviations: HAM-D = Hamilton Rating Scale for Depression, SAPS = Scale for the Assessment of Positive Symptoms, YMRS = Young Mania Rating Scale.
[b]Significant difference between groups: t = 2.4, df = 56, p = .02.
[c]Nonsignificant difference between groups: t = 1.8, df = 56, p < .08.
[d]Significant difference between groups: t = 2.2, df = 56, p = .04.
[e]Mean rating at each follow-up by patients on a 5-point scale: 1 = very helpful, 5 = unhelpful.

The general study design was based on the National Institute of Mental Health Collaborative Depression Study (CDS).[27,28] At each follow-up visit, the investigators reviewed, week by week, the prior interval. Particular attention was paid to times of symptom or treatment changes as with the CDS[27,28] and our previous work.[21,29] This review included each item of the symptom rating scales (YMRS, HAM-D, SAPS) in conjunction with the SCID-I/P for that interval. From these ratings, week-by-week assessments were made of the presence of psychosis (defined as a SAPS delusion or hallucination global item score > 1) and whether symptomatic remission was achieved. Symptomatic remission was defined as at least 1 week in which criteria for a DSM-IV affective syndrome were not met, no syndrome criterion was scored more than "mild," no SAPS global item score was > 1, the YMRS total score was ≤ 5, and the HAM-D total score was ≤ 7. The use of these symptom scales for longitudinal research has been described elsewhere.[18–20] From these assessments, we calculated the percentage of each patient's follow-up that was spent in symptomatic remission and with psychotic symptoms (Table 1). The investigators who performed the index and follow-up clinical assessments are all white.

Treatment Assessments

Although this is a naturalistic study, the treatments that patients received during follow-up were monitored and recorded. Information regarding treatment was obtained by direct patient interview, review of medical records, and, when necessary (for unreliable informants), contacting clinicians and asking patients to bring medication bottles to follow-up visits. Medication levels were not obtained. The amount and type of medication prescribed were recorded week by week for each follow-up interval. For this analysis, we specifically examined the use of conventional antipsychotics (e.g., phenothiazines and haloperidol), atypical antipsychotics (olanzapine, risperidone, quetiapine, and clozapine), and both established and putative mood stabilizers (lithium, valproate, carbamazepine, and new antiepileptic drugs, e.g., topiramate). From these records, we calculated the percentage of follow-up that each patient was prescribed a given type and class of medication. In addition to medication information, the number of mental health contacts during the follow-up interval was obtained. No data were available pertaining to the ethnicity of each patient's prescribing physician.

Additionally, based on these treatment data, treatment compliance was assessed, using definitions from our previous work,[30] as (1) full compliance, in which pharmacologic treatment was taken more than 75% as prescribed; (2) total noncompliance, in which pharmacologic treatment was taken less than 25% of the time as prescribed; and (3) partial noncompliance, in which pharmacologic treatment was taken between these 2 extremes. This rating was obtained by reviewing week-by-week medication use with each patient and with family members and clinicians when indicated (i.e., if a patient's reliability was suspect). From this week-by-week review, the percentage of follow-up in which patients exhibited each category of compliance was determined for each prescribed psychotropic medication. We have established good reliability for this rating ($\kappa > 0.99$). An overall measure of compliance was also calculated by summing the percentage of follow-up with full compliance for each medication class, weighted by the number of weeks on treatment with that medication. At each follow-up visit, patients also provided a subjective rating of how helpful they felt their medication treatment was using a 5-point Likert scale (from 1 = very helpful to 5 = made condition worse).

Statistical Analysis

The primary outcome measures, compared between African American and white patients, were (1) the percentage of follow-up (weeks) in which an antipsychotic medication was prescribed and (2) the percentage of follow-up (weeks) in which an antipsychotic medication was prescribed in the absence of psychotic symptoms (i.e., with SAPS global hallucination and delusion scores < 2). Additional comparisons were made between groups in the percentage of time on treatment with, and mean doses of, conventional and atypical antipsychotic medications specifically to extend the examination of these

Table 2. Medication Prescription and Compliance for 58 Patients With Bipolar Disorder Followed Prospectively for up to 2 Years After Hospitalization for a First Manic Episode, According to Ethnicity[a]

Characteristic	White (N = 34)	African American (N = 24)	All Patients (N = 58)
Treatment with any AP, % of follow-up[b]	34 (40)	70 (44)	49 (45)
Treatment with conventional AP, % of follow-up	3 (11)	18 (36)	9 (25)
Received conventional AP at any time, N (%)[c]	5 (15)	9 (38)	14 (24)
Daily dose of conventional AP, mg/d[d]	7.7 (3.8)	7.9 (7.0)	7.8 (5.9)
Treatment with atypical AP, % of follow-up[e]	31 (39)	56 (47)	41 (44)
Received atypical AP at any time, N (%)	19 (56)	17 (71)	36 (62)
Daily risperidone dose, mg/d	3.4 (2.1)	4.0 (2.1)	3.7 (2.1)
Daily olanzapine dose, mg/d	8.4 (4.6)	12.5 (5.9)	10.6 (5.6)
Treatment with AP in absence of psychosis, % of follow-up[f]	25 (33)	35 (39)	29 (36)
Treatment with AP during remission, % of follow-up	20 (32)	24 (32)	22 (32)
Treatment with MS, % of follow-up	75 (35)	68 (50)	71 (42)
Received MS at any time, N (%)	32 (94)	19 (79)	51 (88)
Daily lithium dose, mg/d	1031 (436)	751 (283)	944 (408)
Daily divalproex dose, mg/d	1252 (553)	1264 (342)	1258 (464)
Treatment with AP in absence of MS, % of follow-up	8 (24)	11 (29)	9 (26)
In full compliance, % of follow-up			
Conventional antipsychotic[g]	59 (45)	45 (36)	50 (39)
Atypical antipsychotic	74 (34)	58 (40)	66 (37)
Mood stabilizer	78 (33)	59 (38)	71 (36)
All medications (weighted average)[h]	72 (34)	56 (40)	65 (38)

[a]Values shown as mean (SD) unless otherwise noted. Abbreviations: AP = antipsychotic, MS = mood stabilizer.
[b]Significant difference between groups: F = 7.9, df = 1,52; p < .007.
[c]Significant difference between groups: $\chi^2 = 4.0$, df = 1, p < .05.
[d]Dose given in haloperidol equivalents.
[e]Significant difference between groups: F = 4.7, df = 1,52; p < .04.
[f]Nonsignificant difference between groups: F = 3.8, df = 1,52; p < .06.
[g]Nonsignificant difference with compliance on treatment with mood stabilizer: t = 1.9, df = 63, p = .06.
[h]Significant difference between groups: F = 6.8, df = 1,54; p = .01.

primary measures. Secondary outcome measures compared between the 2 groups included (1) percentage of follow-up on treatment with, and doses of, mood stabilizers; (2) percentage of follow-up on treatment with an antipsychotic medication in the absence of mood stabilizers; (3) percentage of follow-up on treatment with an antipsychotic during symptomatic remission; and (4) percentage of follow-up with full compliance with medication regimens. Other analyses were performed to extend these comparisons as indicated. Differences in the outcome measures were examined using analysis of covariance models in which covariates were identified from clinical and demographic variables (Table 1) that differed between the 2 groups by a liberal p < .2 or that were significantly correlated with the dependent variable.

RESULTS

The patient groups were demographically similar in age, age at onset of bipolar disorder, education, and employment status, but the African American group had a nonsignificantly greater percentage of women ($\chi^2 = 2.5$, df = 1, p = .1) that met the p < .2 criterion to be included as a covariate. The 2 groups were also similar on duration of index episode, index symptom rating scores, rates of mixed states, lifetime rates of alcohol and drug use disorders, number of mental health contacts each month, and reported similar subjective experiences on the helpfulness of their medication treatment (Table 1). However, the African American patients exhibited significantly more weeks in follow-up in the study (t = 2.4, df = 56, p = .02), significantly less percentage of time in remission (t = 2.2, df = 56, p = .04), and a nonsignificantly greater percentage of time with psychosis during follow-up (t = 1.8, df = 56, p < .08). These variables were therefore included as covariates in analyses as well.

As hypothesized, African American patients received antipsychotic medication for a significantly greater percentage of follow-up than did white patients, after controlling for the potential confounds identified previously (F = 7.9, df = 1,52; p < .007; Table 2). African American patients were significantly more likely to receive a conventional antipsychotic medication during follow-up ($\chi^2 = 4.0$, df =l , p < .05). The 2 groups did not differ significantly on antipsychotic dose, nor did they differ on percentage of weeks on treatment with an antipsychotic during periods of symptomatic remission.

The most commonly prescribed conventional antipsychotic was haloperidol, prescribed to 13 patients. One patient received fluphenazine initially, prior to switching to haloperidol. Three patients were prescribed perphenazine, although 2 of those were also switched to haloperidol. The most commonly prescribed atypical antipsychotics were risperidone (N = 21) and olanzapine (N = 25), which did not differ by ethnicity. Three white patients were given quetiapine (mean ± SD daily dose = 260 ± 198 mg). No patients received clozapine. Several of these patients switched among the various atypical antipsychotic medications during follow-up.

Nearly 90% of patients were prescribed a mood stabilizer, which they received for approximately two thirds of the follow-up period (Table 2); percentage of follow-up on mood-stabilizer treatment did not significantly differ by ethnicity. Forty-three patients were prescribed divalproex and 17 were given lithium; these rates did not differ by ethnicity. Three white patients received carbamazepine and 2 white patients received topiramate. Several subjects received more than 1 mood stabilizer, at times concurrently. There was no difference between groups in the

percentage of follow-up on treatment with an antipsychotic while concurrently not on treatment with a mood stabilizer (Table 2).

African American patients exhibited significantly worse medication compliance overall compared with white patients, adjusting for a prior history of alcohol or drug use disorder ($F = 6.8$, $df = 1,54$; $p < .01$; Table 2). Alcohol and drug use were covaried in this analysis because our previous work (in a different sample) suggested that these variables are significantly associated with compliance,[21] and in this current sample, patients with a prior history of an alcohol use disorder had a significantly lower percentage of follow-up with full compliance than patients without this history (54% vs. 75%; $t = 2.2$, $df = 56$, $p < .03$), as did patients with a prior history of a drug use disorder (50% vs. 81%; $t = 3.5$, $df = 56$, $p < .001$). However, there was no significant difference in compliance between ethnic groups for any specific medication class (Table 2). In the sample as a whole, compliance with conventional antipsychotics was worse than with mood stabilizers ($t = 1.9$, $df = 63$, $p = .06$). In addition, in the group as a whole, the percentage of follow-up with full medication compliance was significantly associated with the subjective rating of how helpful the treatment was ($r = 0.45$, $p = .0004$) and the number of non–medication-related mental health contacts ($r = 0.39$, $p = .0025$).

These findings suggested that compliance might be a mediating variable between ethnicity and antipsychotic use, i.e., that lower compliance in African Americans leads to poorer course (less symptomatic remission, more psychosis) that causes clinicians to prescribe antipsychotic medication more frequently. To test this post hoc hypothesis, we used multivariate regression in which percentage of follow-up on treatment with an antipsychotic medication was modeled as a function of ethnicity, compliance, and percentage of follow-up with psychosis and in symptomatic remission. In this model, only ethnicity (adjusted $r = 0.37$, $p = .006$) and percentage of follow-up with psychosis (adjusted $r = 0.32$, $p < .02$) both significantly, and independently, contributed to percentage of follow-up on treatment with an antipsychotic. Compliance (adjusted $r = 0.08$, $p > .5$) and percentage of follow-up in remission (adjusted $r = 0.11$, $p > .4$) did not.

DISCUSSION

To our knowledge, this is the first study to prospectively and longitudinally examine ethnic influences on antipsychotic prescribing in a well-defined sample of patients with bipolar disorder. We also believe that this is the first study to examine these effects in new-onset patients for whom the effects of illness chronicity and long-term medication prescribing will not influence the results. Therefore, differences in antipsychotic use cannot be simply ascribed to continuation of treatment prior to this first psychiatric hospitalization. Our results suggest that African American patients spend relatively more time during follow-up on treatment with antipsychotic medication, are more likely to be prescribed conventional antipsychotic medication, and are more likely to receive antipsychotic medication during times when they are not psychotic. Since the groups were demographically well matched, these differences do not appear to be secondary to demographic factors (e.g., socioeconomic status).

The specific reasons that African American patients received more antipsychotic medication are not clear. Although the African American patients experienced less time in symptomatic remission, and correspondingly more time with psychotic symptoms, these variables did not account entirely for the disparity in antipsychotic use observed, since we controlled for these longitudinal measures statistically. Our post hoc hypothesis that antipsychotic medication might be prescribed more often by clinicians as a response to ongoing symptoms that results from poorer treatment compliance in the African American sample was not supported by our data, either. Instead, in our analyses, patient ethnicity and psychotic symptoms both significantly and independently predicted antipsychotic use in these patients, whereas treatment compliance and time in remission did not. In previous studies, we have suggested that African American patients with affective illness are at a higher risk of being misdiagnosed with schizophrenia than demographically similar white patients.[13–17] Therefore, it is possible that these patients were rediagnosed with schizophrenia after hospital discharge, thereby leading to more antipsychotic use. Since we did not obtain community diagnoses on these patients, we cannot directly assess this possibility. However, our observation that mood stabilizer use was similar in the 2 groups suggests that diagnostic reassignment did not occur commonly. These results suggest that additional studies are needed that specifically evaluate the factors clinicians use when deciding to prescribe antipsychotic medication to patients with bipolar disorder. For instance, clinicians may rely more heavily on patient-related factors (e.g., sociodemographics) when prescribing for African Americans and illness-related factors (e.g., symptoms) when prescribing for white individuals.

African American patients exhibited significantly worse medication compliance in this sample, consistent with our observations from a previous, separate sample of patients with first-episode affective psychosis.[21] The lower rate of treatment compliance in African American patients compared with white patients was not related to ethnic differences in the subjective helpfulness of the medication nor in the number of mental health contacts, although both of these factors were strongly associated with treatment compliance in the group as a whole. Additional research is needed to clarify why medication

adherence is worse in African American than white patients.

As with any clinical study, there are limitations that must be considered when interpreting these findings. First, these patients were recruited at a single site, so that these findings may not be generalizable to other regions of the country or other treatment settings. However, the observation that African Americans commonly receive excess antipsychotic medication has been previously reported from a number of different sites.[7–11] Second, we did not systematically obtain medication levels to verify patient reports of treatment compliance. Nonetheless, the approach taken here has been used in previous reports and is reliable.[18–21,29,30] Third, a number of comparisons were made between the patient groups without specifically controlling for type I error. However, only 2 comparisons were of a priori outcome measures, as the remaining analyses were used either to identify potential confounds or to extend the findings in the primary outcome comparisons to better understand associations. Nonetheless, because of the potential type I error risk, comparisons other than the primary outcome measures should be interpreted with caution. Finally, confirmation of these results in a sample of white and African American patients with bipolar disorder who are group matched on outcome measures of psychotic symptoms, remission status, and medication compliance is required before they can be attributed to ethnic differences with confidence. However, this is the first study to examine specifically the associations between antipsychotic prescribing and ethnicity while controlling for these potentially confounding longitudinal measures.

Concerns about excessive antipsychotic prescription in bipolar disorder in general, and for African American patients specifically, are based on the assumption that this practice exposes patients unnecessarily to side effects and ineffective treatments. Although conventional antipsychotic medications have been demonstrated to be effective acute antimanic agents,[3] their use as maintenance therapy is not well established. In contrast, it is well known that extended use of conventional antipsychotic medication leads to a significant risk for developing tardive dyskinesia. Additionally, Ahlfors and colleagues[4] found that flupenthixol decanoate as a monotherapy did not appear to provide effective prophylaxis against depression in bipolar disorder. Therefore, the prescribing physician should conduct a careful risk-benefit analysis of conventional antipsychotic agents as maintenance therapy for bipolar disorder on a case-by-case basis.

Whether these same concerns exist for the newer atypical antipsychotics is yet to be established; however, the side effect profiles for atypical agents appear to be more favorable than those for their conventional counterparts. Preliminary studies with these drugs suggest that they may have thymoleptic properties,[3] and olanzapine has been recently approved by the U.S. Food and Drug Administration for the treatment of bipolar mania. However, controlled, long-term maintenance studies with these agents have not yet been published, so care is indicated when prescribing extended use of these drugs as well. Even if these agents do prove to be effective in the prophylactic treatment of bipolar disorder, they are not without side effect risks, and so the potential for increased reliance on these drugs to treat African American patients warrants additional study. We are hopeful that this report will encourage other investigators to examine the complex interactions among patient ethnicity, clinical course, and medication prescribing.

Drug names: carbamazepine (Tegretol and others), clozapine (Clozaril and others), divalproex sodium (Depakote), fluphenazine (Prolixin, Permitil, and others), haloperidol (Haldol and others), olanzapine (Zyprexa), perphenazine (Trilafon and others), quetiapine (Seroquel), risperidone (Risperdal), topiramate (Topamax).

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