Medical and Psychiatric History: Predictors of Bipolar Disorder Risk in Patients Treated for Unipolar Depression

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ABSTRACT

Objective
This study evaluated patient and family health history data for patients with depression and assessed risk for bipolar disorder (BPD).

Method
Psychiatrists from community and private practice clinic settings randomly selected patients with unipolar depression who had one or more prior antidepressant (AD) medication failures. Patient history and AD use were obtained via record abstraction. A patient survey collected demographics, self-reported "conditions you have been diagnosed with" and "conditions a blood relative (parent, brother, sister, child) may have been diagnosed with", as well as history of suicide thoughts and attempts. BPD risk was obtained via Mood Disorder Questionnaire (MDQ).

Results
Data were collected for 602 patients. Predictors of MDQ+ BPD risk were identified with logistic regression controlling for patient age and gender. For patient reports about their own health problems, this analysis yielded: anxiety/bad nerves (OR=2.7, p<.001), asthma (OR=1.9, p<.009), eating disorder (OR=2.8, p<.001) and obsessive-compulsive disorder (OR=2.3, p< .009). For patients reporting about blood relatives, this analysis yielded: arthritis (OR=2.3, p<.001), bipolar disorder (OR=2.0, p<.003), cholesterol problems (OR=1.8, p<.007) and high blood pressure (OR=2.2, p<.001). Suicide thoughts (OR=2.1, p<.003) and suicide attempts (OR=1.9, p<.005) were also associated with MDQ+ BPD risk.

Conclusions
Medical and psychiatric co-morbidities may have treatment implications in depressed patients' refractory to standard antidepressant treatments by predicting the likelihood of bipolar disorder.

INTRODUCTION

It is commonly known that bipolar disorder co-occurs with other psychiatric and general medical illnesses. The most common psychiatric comorbidities for bipolar disorder are comorbid substance use disorders and anxiety disorders, although other psychiatric and general medical conditions (such as eating disorders, ADHD, and personality disorders) were also reported to co-occur with bipolar disorder.[1]

A recent review of literature[2] revealed a number of general medical disorders that co-occur with bipolar disorder at a rate higher than could be explained by chance including asthma, migraine, multiple sclerosis, Cushing's syndrome, Velocardiofacial syndrome, vascular mania, or vascular bipolar disorder, and head trauma, as well as general medical conditions likely linked to the pharmacologic treatment of bipolar disorder, such as obesity, diabetes mellitus, and hypothyroidism.[2]

Patients with bipolar disorder are generally reported to have higher rates of suicide compared to the general population and other psychiatric populations. In the National Comorbidity Study, 68% of respondents with lifetime bipolar I disorder reported having had suicidal thoughts at some point in their life, and 48% of respondents reported making a suicide attempt. Comorbidities further complicate the course of bipolar disorder, increasing the rate of suicide.[3]

There is consensus that comorbid conditions obscure the diagnosis of bipolar disorder and complicate treatment.[4] This study concentrates on the predictive value of co-occurring conditions by attempting to identify those co-occurring psychiatric and general medical conditions that may act as potential predictors of bipolar disorder risk among patients currently in treatment for unipolar depression.

METHODS

Selection of Subjects

- Psychiatrists from private practice and clinic settings (N=63) were asked to identify their next 10 patients with major depression who had experienced one or more prior medication failure (defined as a change in their depression medication or regimen).
- Patient eligibility criteria:
  - Aged 18+, currently in treatment for major depression
  - Not diagnosed with BPD, OCD, schizophrenia or schizoaffective disorder
  - They had received treatment for major depression for at least three months and had one or more medication changes during their current episode or
  - If treated less than three months, they had changed medications at least three times.

Instruments

- **Patient survey:** Demographic and family history form; the Center for Epidemiologic Studies Depression Scale (CES-D); a health care resource use form; the Mood Disorder Questionnaire (MDQ); a co-morbid health problems form; and legal problems were assessed with the legal status section of the Addiction Severity Index (ASI)
- **A medical records abstraction form:** Patient and family health history; lifetime history of major depression; current episode of major depression; prescription drug treatment history; number of prior antidepressant medication failures; health care resource use; and outcomes of treatment

Analysis

- Logistic regression (controlling for age and gender) was used to identify health conditions present in the patient or in immediate blood relatives that optimized the detection of MDQ+ status. Pearson Chi-Square analysis was used to assess the relationship between suicide ideation and attempts in MDQ+ versus MDQ- patients.

RESULTS

Patient Demographics	N	%
Total	602	100%
Gender		
Females	462	76.74
Age (Mean = 47.9, Median = 48.0)		
18-24	22	3.67
25-44	212	35.33
45-64	316	52.67
65+	50	8.33
Ethnic Background		
African American	51	8.5
Caucasian	512	86.39
Other	31	5.1
Of Spanish or Hispanic Heritage	20	3.40
Income		
<$20,000	254	43.2
$20,000 to $39,999	130	22.11
$40,000 to $59,999	104	17.69
$60,000 to $79,999	46	7.82
$80,000 to $99,999	16	2.72
$100,000 to $119,999	11	1.87
$120,000+	27	4.59
MD Practice Characteristics		
Private Practice	409	68.01
Community Mental Health Clinic	116	19.19
Hospital	51	8.55
Research Center	22	3.58
Other	4	0.69

Medical and Psychiatric Conditions Found Predictive of MDQ Positive Status Via Logistic Regression*

	Odds Ratio	95% Confidence Interval	Wald	P Value
Predictors for SELF				
Asthma	1.93	1.18-3.16	6.75	0.009
Anxiety Disorder	2.65	1.50-4.68	11.20	0.001
Obsessive-Compulsive Disorder	2.26	1.22-4.17	6.77	0.000
Major Depression	1.81	1.03-3.17	4.31	0.04
Eating Disorder	2.83	1.51-5.30	10.46	0.001
Predictors for BLOOD RELATIVES				
Acid Reflux/GERD	1.60	1.03-2.47	4.46	0.04
Arthritis	2.31	1.50-3.56	14.46	0.000
Bipolar/Manic Depression	1.99	1.27-3.12	8.97	0.003
Cholesterol Problems	1.78	1.17-2.71	7.36	0.007
Heart Disease/Congestive Heart Failure	1.55	1.01-2.37	3.98	0.05
High Blood Pressure	2.15	1.36-3.42	10.58	0.001
Obsessive-Compulsive Disorder	1.95	1.07-3.56	4.74	0.03
Seizure Disorder	2.23	1.07-4.65	4.61	0.03
Stroke	1.72	1.09-2.72	5.37	0.02
Suicide Reports by Patient/MD				
Patient Reported Thoughts of Committing Suicide	2.08	1.28-3.37	8.76	0.003
Patient Reported Suicide Attempts	1.89	1.21-2.96	7.77	0.005
Psychiatrist Reported Suicide Attempt During Current Episode of Depression	2.62	1.07-6.43	4.43	0.04

*Logistic regression analyses were conducted controlling for patient age and gender. Odds Ratios and confidence intervals are provided for significant variables only.

Percent Patient and MD Reported Thoughts of Committing Suicide or Suicide Attempts by MDQ Status

	MDQ-	MDQ+	Chi-Square	P value
Patient-reported				
Have you ever thought about killing yourself?	62.5	79.5	11.65	0.001
Have you ever tried to kill yourself?	22.1	35.7	9.14	0.003
Psychiatrist-reported				
Did the patient *ever* try to commit suicide?	22.1	32.7	5.57	0.02
Did the patient try to commit suicide during his/her *current* episode of major depression?	3.2	7.5	4.16	0.04

DISCUSSION

- In addition to anxiety and depression, we found that asthma, eating disorder and obsessive-compulsive disorder were significantly associated with screening positive for bipolar disorder in these patients with depression.
- Interestingly, epilepsy/seizure disorders were not predictive of bipolar disorder risk.
- In addition, migraine, chronic pain, allergies, diabetes, emphysema/COPD, hyperactivity/ADD and thyroid disease were not significantly associated with bipolar disorder risk.
- We also found that the following conditions among family members were predictive of BPD risk: acid reflux/GERD, arthritis, bipolar disorder, cholesterol problems, heart disease/congestive heart failure, high blood pressure, obsessive compulsive disorder, seizure disorder, and stroke.
- Interestingly, family history of depression was not predictive of BPD risk.
- Also of interest in this analysis, alcohol/drug use problems were not associated with bipolar disorder risk for self or family members, possibly because the question asked about "diagnosed" conditions and many individuals with this problem have not been formally diagnosed.
- Suicide thoughts and suicide attempts were more common in patients who screened positive for bipolar risk (MDQ+) versus those who screened negative (MDQ-).

CONCLUSION

- Medical and psychiatric co-morbidities may have treatment implications in patients with depression that is refractory to standard antidepressant treatments by predicting the likelihood of bipolar disorder.
- Prior studies report the co-occurrence of BPD with epilepsy and migraine, however the current data suggest that these conditions do not necessarily predict BPD risk.
- Special attention should be given to patients with a history of suicidal ideation and attempts. Suicidality is associated with BPD risk in this patient population.

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