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STRESSFUL LIFE EVENTS IN OLDER BIPOLAR PATIENTS

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Abstract

Objective—Theories about the impact of stressful life events (SLE) in bipolar disorder have focused on their role early in the disease. Few studies have examined SLE in older bipolar patients. We wanted to assess the impact of SLE in late life bipolar disorder

Methods—We evaluated negative SLE experienced by older bipolar subjects compared with younger bipolar subjects and older controls for number, type, and their association with phase of illness, age of onset, and previous episodes.

Results—Both younger and older bipolar subjects have more SLE than similarly aged controls. There was no significant difference in the number of stressors that younger and older bipolar subjects experienced, based on mood state, previous episodes, or age-of-onset. Both older and younger depressed bipolar subjects reported more SLE in the previous 12 months compared with those in a manic state.

Conclusions—Negative SLE are much more prevalent in bipolar patients compared with age-matched controls, and continue to be frequent in later life.

Keywords

Bipolar; Elderly; Stress; Age of Onset

INTRODUCTION

Although biological factors play a powerful role in bipolar disorder, clinicians since Kraepelin (1927) have noted that stress may play a precipitating role in manic-depression. The full impact of stressful life events (SLE) on the course of bipolar disorder is poorly understood (Ramana and Bebbington, 1995). In patients with bipolar disorder, SLE have been found to be associated with the initiation of manic episodes (more than depressive episodes) (Ambelas, 1987), earlier episodes (rather than later episodes) (McPherson et al., 1993; Johnson et al., 2000), and an early-onset of illness (Ambelas, 1987; Johnson et al., 2000). Based on these findings, it has been hypothesized that SLE have a role in early bipolar disorder, but their impact diminishes over the course of the illness (Post, 1992). Countering this are findings in unipolar depression that supports the importance of SLE in early depressive episodes, but also their continuing importance in recurrence and late onset of illness (especially in new and recurrent episodes in geriatric patients) (Hays et al., 2001). Differences in the observations about SLE in these two mood disorders may be due in part to the age of samples studied in the literature. While there is a robust literature about SLE in late life depression, almost all the studies of SLE in bipolar disorder have focused on young

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and middle-aged bipolar subjects and there is very little information on the impact of SLE in late-life bipolar disorder.

This study evaluated the presence of SLE in late life bipolar disorder compared with younger patients and an older comparison group. We hypothesized that SLE would be more common in 1) late life bipolar subjects compared with a similar aged non-psychiatrically ill control group, 2) younger bipolar subjects compared with older, and 3) older subjects with an early-onset rather than a late-onset illness. We also wanted to assess what SLE older bipolar patients experienced, and compare them by age and phase of disease.

METHODS

Design and Sample

We conducted a cross-sectional survey of SLE in subjects with bipolar disorder at various ages and stages of illness. Participants included inpatients recruited from the psychiatric units at Duke University Medical Center (DUMC) and John Umstead Hospital (JUH), as well as outpatients with bipolar disorder. The study was approved by the Institutional Review Boards at DUMC and the research committee of JUH. There were no conflict of interests identified by the authors. All subjects met DSM-IV diagnostic criteria for Bipolar Disorder, Type I as defined by the Structured Clinical Interview for DSM Disorders (SCID). Patients were excluded if they had evidence of dementia (Mini-Mental Status Examination [MMSE] score ≤23), other primary psychiatric diagnosis, a mood disorder due to neurological or medical illnesses, or a recent history of substance abuse. A non-psychiatrically ill comparison group was recruited by advertisement.

Subjects were divided into two groups: an older group (≥50 years of age) and a younger group (18–49). A further analysis evaluated the effect of age-of-onset within the “older” bipolar group. Early-onset was defined as onset of either mania or depression before the age of 42. This cut-off point was based on our findings published previously that suggested a natural demarcation in the mid-40s for age of onset (see Cassidy and Carroll, 2001).

Measures

All subjects were administered the Duke Social Support Index (DDSI) (George et al., 1989), which includes a 20-item checklist of major life events occurring within the past year. Events include serious illness, changes in family role, residence, employment or financial circumstances for the subject or a member of his or her household. Each event that occurred is assessed by the subject as “negative”, “neutral/mixed”, or “positive”; and a valence rating of “important/unimportant” is assigned by the subject. The stressful life events score is summed from all events rated by the subject as both “negative” and “important”.

Statistical Analysis

Initial evaluations were performed assessing stressful life events between a) younger and older subjects with bipolar disorder, b) older subjects with bipolar disorder and older controls, and c) younger subjects with bipolar disorder and younger controls. The stressful life events score was dichotomized at their median values. Bivariate associations between each of the groups in a, b, and c and categorical variables were examined using chi-square tests; while those with continuous variables were examined using non-parametric Wilcoxen test. Logistic regression was executed for each of the above groups of subjects to examine the relationship between the group and stressful life events after controlling for demographic variables. Finally, older patient’s responses to the life events scale were compared based on their illness age of onset.

RESULTS

Sample

One hundred forty-six subjects with bipolar disorder and 101 control subjects were interviewed for this study. Table 1 outlines the demographics of the four subject groups. Not unexpectedly, the older bipolar group had a significantly later onset of illness compared with the younger group.

Effect of SLE Based on Age

On average, older bipolar subjects experienced 1.64 negative life events in the year prior to this study; the non-psychiatrically ill older comparison group experienced 0.70 (see Table 2). Younger bipolar subjects experienced a mean of 1.94 negative life events in the previous 12 months, compared with 0.67 experienced by younger controls. Using logistic regression analysis controlling for gender, marital status, race, education, and recent hospitalization, bipolar subjects had significantly higher numbers of SLE, both among the older groups [OR=4.91; 95%CI(2.05, 11.79)] as well as the younger groups [OR=4.72; 95%CI(1.87, 11.88)].

When the older and younger bipolar groups were compared, we found that age was not associated with a difference in SLEs. Both older and younger bipolar groups experienced similar numbers of negative life events in the year prior to the study (1.94 ± 1.63 vs 1.64 ± 1.92). However, the types of stressful life events did vary between the two. As expected, younger bipolar subjects were more likely to be recently married (p=0.0496), begin a new job (p=0.0006), and relocate (p=0.0018). Unexpectedly, younger bipolar subjects were also more likely to experience the loss of a child (p=0.0408).

Effect of SLE in Affective Episodes

Bipolar Depression—Thirty-two of the younger bipolar subjects and thirteen of the older bipolar subjects were in an acute depressive episode at the time of evaluation. No significant difference in the number of SLE during the previous 12 months was found between these younger and older bipolar subjects (Table 1). Depressed younger bipolar subjects compared with depressed older bipolar subjects were more likely to have started a new job (p=0.0085), have had improved finances (p=0.0276), or moved to a new location (p=0.0085).

Bipolar Mania—Fifty-two of the younger subjects and twelve of the older bipolar subjects were in an acute manic or hypomanic episode at the time of evaluation. There were no significant difference in the number of SLE during the previous 12 month period experienced between the younger and older bipolar manic groups (Table 1). The only SLE more prevalent in one group compared with the other was an increased likelihood of a recent divorce in younger manic subjects (p=0.0302).

Effect of SLE Based on Age of Onset and Number of Previous Episodes

Of the 58 bipolar subjects over age 50 that were interviewed for the study, 20 subjects (17 early-onset and 3 late-onset) had experienced a depressive episode and 11 subjects (9 early-onset and 2 late-onset) had experienced a manic episode in the previous year. However, no significant differences were found in the number of negative life events the two groups experienced. Of the 11 older bipolar subjects who were manic at time of evaluation, 8 had less than 3 previous episodes and 3 had more than 3 previous episodes. There were no significant differences in the number of stressors prior to the manic episode.

DISCUSSION

Only one of our hypotheses was supported: both younger and older bipolar subjects experience more SLE than similarly aged controls, a finding consistent with studies in multi-aged groups (Bebbington et al., 1993, Kennedy et al.1983). We did not find a difference between younger and older bipolar subjects in the number of SLE experienced, though the type of stressors did vary with age. This was true whether the groups were depressed, manic, or emotionally stable. Interestingly, we did find that both older and younger subjects who were depressed experienced more SLE compared with those who were manic. This suggests that mania may be influenced more by SLE than depression (see Ambelas 1987), or that depression is more likely to produce SLE than mania. From our data, the impact SLE may have in late life bipolar disorder appears to be similar to that seen in younger adults. Only one other study, Hays et al (1998), has reported on the presence of SLE in a small sample of older adults. They also found that SLE were still significant in elderly bipolar patients .

Although research in older adults is limited, there is a robust literature on the impact of SLE in the earlier versus later course of the disease suggesting that SLE have a decreasing impact through the course of the disorder. Two cross-sectional studies (Ambelas, 1987; Ambelas, 1979) found that individuals in their first admission for mania had more SLE in the prior month compared with those admitted for recurrence. Other studies (McPherson et al., 1993; Okuma and Shimoyama, 1972; Glassner et al., 1979) have also suggested that SLE are more likely to trigger affective episodes earlier in the disease course compared with later, or that early adversity may result in a greater effect of stress on bipolar recurrence and earlier onset of bipolar disorder (Dienes et al., 2006).

These findings have been cited to support the “kindling-sensitization” theory of bipolar disorder (Post, 1992), which proposes that initial episodes require a “trigger” to initiate the disease, but repeated episodes are less dependent on a “triggering” SLE. However, not all researchers agree. Hammen & Gitlin (1997) found that SLE remains significant in precipitating episodes of bipolar illness, especially for those with many prior episodes. Hlastala et al (2000) reviewed the data and suggested that the kindling hypothesis was inadequate to explain all the effects of SLE. They postulated that age, independent of previous episodes, was associated with the level of stress experienced prior to onset of illness. Other researchers have proposed that a better integration of genetic and psychosocial variables (early childhood adversity, cognitive processing of stress, schedule-disrupting stressors) needs to be considered to better understand the interaction of SLE and bipolar disorder (Johnson, 2005).

One could assume that if SLE were a major determinant to the onset of the illness regardless of age, then late-onset older bipolar subjects should have more SLE at the time of our study compared with those who had developed it earlier in life. We found no difference between these two groups. It is possible that late-onset bipolar disorder is etiologically different than early-onset bipolar disorder, or that there may be a protective Stressful agent for those who did not develop bipolar disorder until late life which obscures the difference.

Also, if the kindling hypothesis was the primary factor in recurrent episodes, older acutely-ill bipolar subjects with few previous episodes should have more SLE than those with many previous episodes. However, we again found no differences.

This is the first study that addressed SLE in a truly older bipolar cohort, and it provides an assessment of the number and types of SLEs that occur in the daily life of bipolar patients. However, there are several limitations to the data. First, since the study was retrospective, there are inherent difficulties in determining if a SLE was a “cause or consequence” (Johnson et al., 2000) of an affective episode. Secondly, we reviewed SLE for the 12 months

prior, but did not specifically assess for SLE that occurred just before the mood episode that may have been more important to the episode. Thirdly, though we weighted the SLE by subjects' assessment, this may not be a true measurement of the impact a particular SLE had on the subject. The emotional valence about a life event may change over time; therefore in this paper we focused on the occurrence of an event. While it is difficult to truly understand how similar life events may have a different emotional impact on different people, future research should include consideration of the subjective assessment. This may be especially important in mood disorders research where a subject in a mood episode may note a significant life event occurring but not assess enough valence to the event (if in a manic state) or too much valence (if in a depressed state). Future research is also needed to address the impact SLE have on treatment response and quality of life in older bipolar patients, or on interventions may be effective in decreasing SLE.

CONCLUSION

We found that negative SLE are much more frequent in patients with bipolar disorder than controls. This is consistent with much of the literature in multi-aged bipolar subjects. However, contrary to most other studies, we did not find that SLE decreased with age. Stressful life events remained equally as common in older bipolar patients as they are in younger bipolar patients, though the type of stressor may differ. Further, stressful life events did not differ in number between older bipolar subjects who had many previous episodes and those that had only a few episodes, nor did they differ between those with a late-onset versus those with an early-onset of disease. We did find that SLE were more common in depressed patients than manic patients, regardless of age. These findings suggest that SLE remain a significant concern throughout the life span, and may continue to be associated with recurrences into late life.

Key Points

1. Stressful life events are much more frequent in patients with bipolar disorder than controls, regardless of age.
2. Stressful life events are equally as common in older bipolar patients as they are in younger bipolar patients, though the type of stressor may differ.
3. Depressed bipolar patients have more stressful life events than manic patients.
4. There is no difference in number of stressful life events between late- and early-onset bipolar patients.
5. In older adults with bipolar disorder, the number of stressful life events is not affected by the number of previous episodes.

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TABLE 1

Descriptive Statistics for the Bipolar and Control Subjects

	YOUNGER BIPOLAR SUBJECTS	YOUNGER CONTROLS	p-value	OLDER BIPOLAR SUBJECTS	OLDER CONTROLS	p-value
NUMBER	**88**	**58**		**58**	**43**	
AGE *(Range;SD)*	35.6±9.51 (18–49)	31.7±8.20 (20–49)	0.0137	59.3±9.55 (50–89)	58.0±6.70 (50–77)	0.0184
GENDER *n(%)*						
Female	58 (66%)	41 (71%)	0.5452	39 (67%)	30 (70%)	0.7873
Male	30 (34%)	17 (29%)		19 (33%)	13 (30%)	
MARITAL STATUS *n(%)*						
Married	30 (34%)	24 (41%)	0.3721	34 (59%)	18 (44%)	0.0956
Unmarried	58 (66%)	34 (59%)		24 (41%)	25 (56%)	
RACE *n(%)*						
White	70 (80%)	30 (51%)	0.0004	53 (91%)	31 (79%)	0.0767
Non-white	18 (20%)	28 (49%)		5 (9%)	9 (21%)	
EDUCATION *n(%)*						
<HS	23 (26%)	8 (14%)	0.0743	14 (24%)	6 (14%)	0.2041
>HS	65 (74%)	50 (16%)		44 (76%)	37 (86%)	
Age of first mania *n(sd)*	24.8±13.16			38.9±21.3		
Age of first depression *n(sd)*	19.4±9.45			31.1±19.18		
# Negative Stressors in past 12 months	1.94±1.63 (0–7)	0.67±0.89 (0–3)	0.0001	1.64±1.92 (0–8)	0.70±0.99 (0–4)	0.0068
# Negative Stressors in the past 12-months if depressed	1.5±0.64			1.3±0.82		0.7609
# Negative Stressors in the past 12-months if manic	0.8±0.75			0.44±0.73		0.2054

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