The Relationship Between Bipolar Disorder and Multiple Sclerosis

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KEY FINDINGS

- Twenty percent of patients with MS screened positive for or carried a prior diagnosis of Bipolar Disorder.
- Bipolar Disorder and Family History of Bipolar Disorder were independently associated with poor physical and mental quality of life.

BACKGROUND

- Emotional disturbances are common in MS and consist of mood and affective instability.

- Psychiatric management is a major factor in morbidity & MS treatment compliance.[1]

- The prevalence of Bipolar Spectrum Disorders (BD) ranges from 3 to 6.5% in the community.[2]

AIMS

- To evaluate the prevalence of BD in an outpatient population of adults with MS.

- To examine the demographic and MS clinical features associated with BD.

- To study the impact of BD on MS quality of life.

METHODS

- 133 patients with clinically definite MS were recruited at a single ambulatory MS center.

- Demographic and clinical data were obtained from medical record review.

- BD was classified via a positive score on the self-recorded Mood Disorder Questionnaire (MDQ) or previous psychiatric evaluation.

- MS symptom severity was assessed via the MS quality of life (MSQOL)-54 instrument

- We classified QOL scores of <50 as poor QOL

RESULTS

Figure 1. Prevalence of BD by Screening Method

Positive Mood Disorder Questionnaire N = 14

N = 6

Prior Diagnosis of Bipolar Disorder N = 8
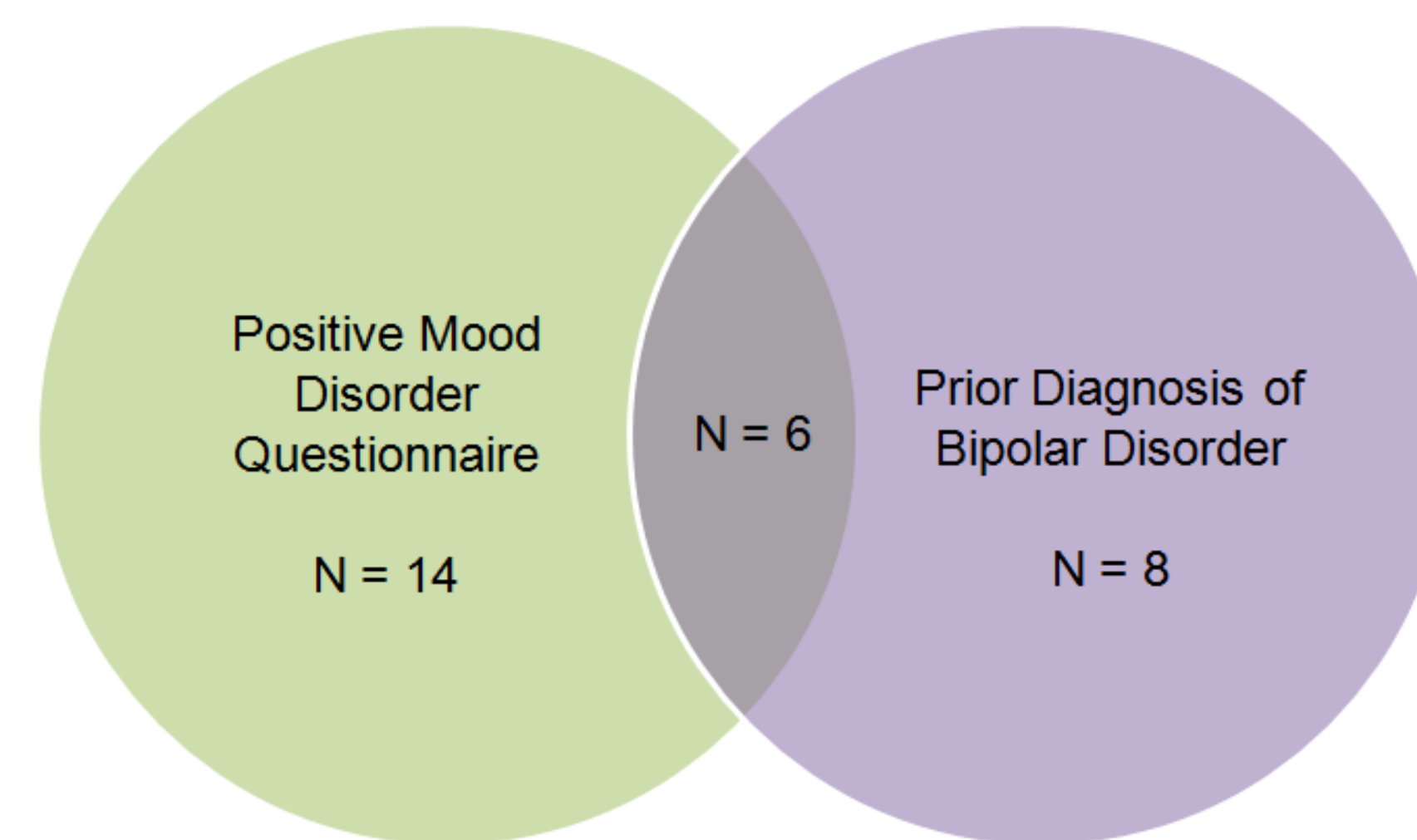
- 133 patients: mean age 48, 72% women, and 85% with relapsing remitting subtype (RRMS).

- BD was present in 20% of patients with MS (Fig 1).

- 36% of patients with BD had no previous BD history.

Table 1. Sample Characteristics by Bipolar Disorder

Characteristic	Bipolar Negative N = 111	Bipolar Positive N = 22	P-value
Age, mean years (SD)	49.1 (11.5)	44.4 (12.2)	0.11
Female, %	72.1	72.2	0.99
Caucasian, %	97.3	77.3	**0.003**
Family History of BD, %	18.9	36.4	0.09
RRMS, %	82.9	95.5	0.20
MS disease duration, mean years (SD)	12.8 (8.6)	7.8 (5.1)	**0.001**
MS medication, %	82.0	63.6	0.08
Antidepressant, %	39.6	86.4	**<0.001**
Anxiolytic, %	24.3	50.0	**0.049**
Mood Stabilizer, %	4.5	63.6	**<0.001**
MSQOL Physical Composite Score <50, %	42.3	77.3	**0.004**
MSQOL Mental Composite Score <50, %	22.5	72.7	**<0.001**

Table 2. Predictors of Poor MS QOL

Physical MSQOL Composite Score <50	
Predictor Variables	OR (95% CI)
Progressive MS	3.7 (1.3-10.9)
Bipolar Disorder	4.9 (1.6-14.8)
Family History of BD	4.2 (1.6-11.1)
Mental MSQOL Composite Score <50	
Predictor Variables	OR (95% CI)
MS Disease Duration	1.1 (1.0-1.1)
Bipolar Disorder	7.1 (2.4-21.3)
Family History of BD	4.0 (1.6-10.4)

- Patients with BD had shorter MS disease duration, were more likely to take antidepressants and mood stabilizing medications, and had poorer QOL scores.

- BD significantly increased the odds of low physical and mental health MSQOL scores, respectively.

- Family Hx of BD quadrupled the odds of poor MSQOL.

CONCLUSIONS

- BD was highly prevalent in our MS cohort and was independently associated with poor QOL.

- This knowledge may aid in the design of specific interventions targeting affective disturbances

REFERENCES

1. Marrie RA, et al. "The burden of mental comorbidity in multiple sclerosis: frequent, underdiagnosed, and undertreated." *Mult Scler* 2009; 15:385-92.

2. Hirschfeld RA, et al. "Development and validation of a screening instrument for bipolar spectrum disorder: the Mood Disorder Questionnaire." *Am J Psychiatry* 2000; 157:1873-1875