

Rates of conversion from substance-induced psychotic disorder to bipolar or schizophrenia spectrum disorder in a community-based teaching hospital

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BACKGROUND

According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) diagnostic criteria, a substance/medication-induced psychotic disorder is defined as the presence of delusions or hallucinations, with symptoms developing during or soon after substance intoxication or withdrawal, or after exposure to a medication capable of producing such symptoms. The overall prevalence of substance-induced psychotic disorder is unknown, but between 7% and 25% of individuals presenting with a first episode of psychosis are reported to have substance/medication-induced psychosis.^{1,2}

Current practice lacks a standardized guideline on the duration of treatment after a substance/medication-induced psychotic disorder. In many cases, patients are treated for the acute presentation, but not provided any follow-up. This study aims to evaluate the time and rates of conversion from a first-time substance-induced psychotic disorder to a bipolar or schizophrenia spectrum disorder to identify if these patients are at a higher risk of developing a mental health disorder later in life, as well as areas of improvement in the continued follow-up of these patients.

OBJECTIVE

- Primary endpoint: Evaluation of the time to conversion from a first-time diagnosis of substance-induced psychotic disorder to a bipolar or schizophrenia spectrum disorder diagnosis
- Secondary endpoints: Analysis of the relationship between converted diagnoses with age, gender, family history of mental illness, and individual substances involved

METHODS

- Location: Monmouth Medical Center, a 500-bed hospital with 44 dedicated adult inpatient psychiatric beds in Long Branch, NJ
- Retrospective analysis of patients admitted to the psychiatric inpatient units between January 1, 2012 through December 31, 2013
- Patients were identified using ICD-9 and ICD-10 codes
- Follow-up until diagnosis of bipolar disorder, schizophrenia spectrum disorder, death, or January 1, 2019, whichever comes first

Inclusion Criteria:

- ✓ First-time diagnosis of substance-induced psychotic disorder

Exclusion Criteria:

- ✓ Previous diagnosis of bipolar or schizophrenia spectrum disorder
- ✓ History of traumatic brain injury (TBI)
- ✓ A diagnosed neurological or neurodevelopmental disorder

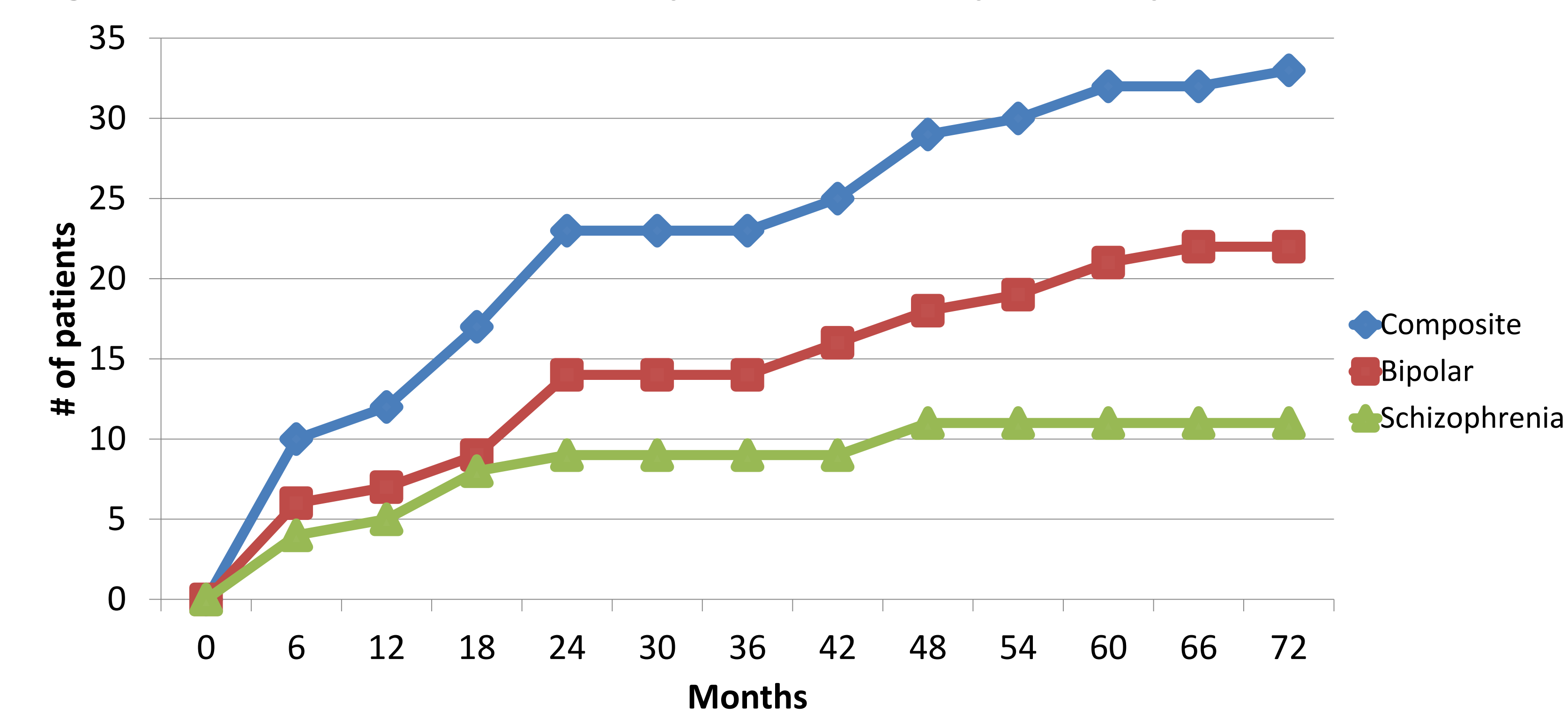
Table 1. Baseline Demographics

	Total Population (112), n (%)	Conversion Population (33), n (%)	P-value
Female	24	10	0.3803
Male	88	23	0.7612
Age, median	47±4.44	47±8.18	
Family History			
Bipolar Disorder	6 (5.4)	3 (9.1)	0.4371
Schizophrenia Spectrum Disorder	8 (7.1)	2 (6.1)	1
Substance Abuse	30 (26.8)	9 (27.3)	1
Other	13 (11.6)	5 (15.2)	0.7676
None	65 (58.0)	19 (57.6)	1
Substance Use			
Alcohol	93 (83.0)	23 (69.7)	0.6495
Opioid	17 (15.2)	6 (18.2)	0.791
Cannabis	34 (30.4)	16 (48.5)	0.2561
Sedative, Hypnotic	9 (8.0)	6 (18.2)	0.2019
Cocaine	11 (9.8)	4 (12.1)	0.7505
Other Stimulant	6 (5.4)	0 (0)	0.3401
Hallucinogen	3 (2.7)	1 (3.0)	1
Inhalant	0 (0)	0 (0)	1
Other	6 (5.4)	2 (6.1)	1

Nominal data was evaluated using Fisher Exact test with a 2 x 2 contingency table and a P value showing statistical significance at ≤ 0.05 .

A Kaplan Meier analysis was performed to obtain time-to-event data with an alpha of 0.05 and an effect size of 0.1 [Figure 2].

Figure 1. Rates of Conversion to Bipolar and Schizophrenia Spectrum Disorder

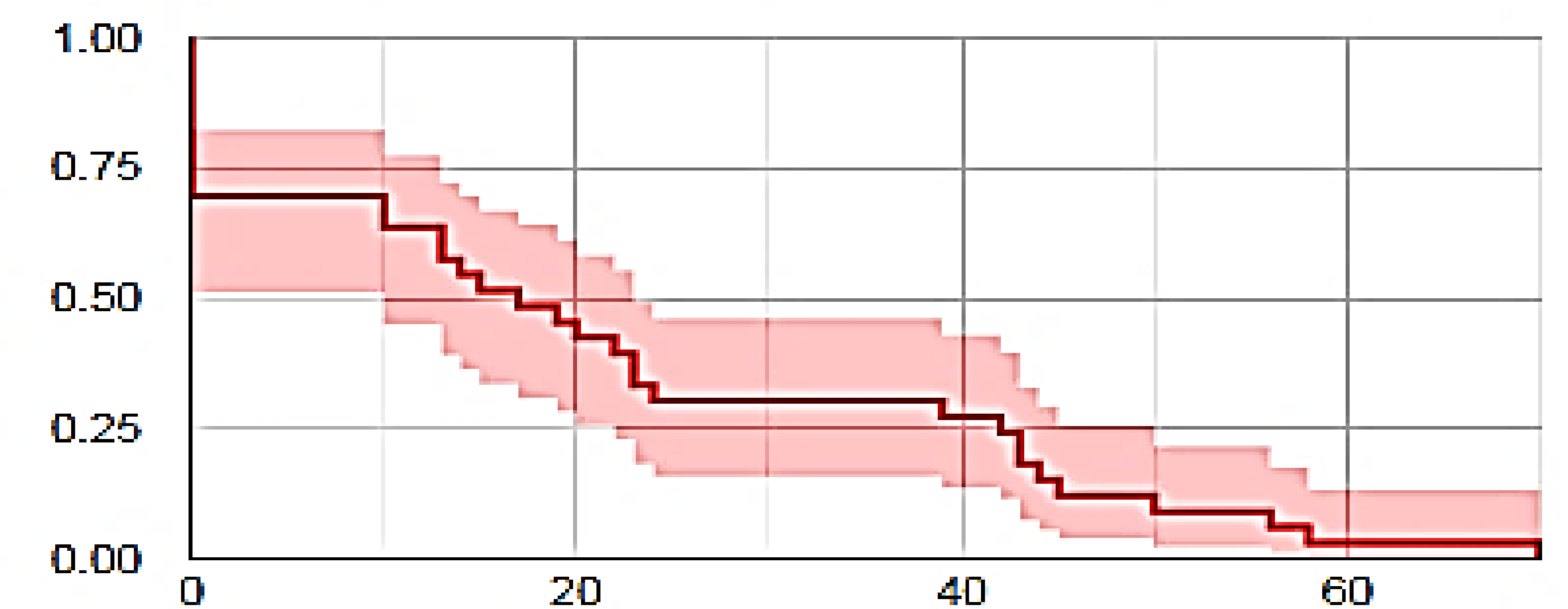


RESULTS

Table 2. Conversions Based on 1-year, 3-year, and 5-year Endpoint

	Bipolar, n (%)	Schizophrenia, n (%)	Bipolar & Schizophrenia Composite, n (%)
Conversions in 1 year	7 (6.3)	5 (4.5)	12 (10.7)
Conversions in 3 years	14 (12.5)	9 (8.0)	23 (20.5)
Conversions in 5 years	21 (18.8)	11 (9.8)	32 (28.6)

Figure 2. Probability of Conversion to Bipolar or Schizophrenia Spectrum Disorder vs Months to Event



CONCLUSION

This study suggests that after initial presentation with a substance-induced psychotic disorder, 30% of patients are at risk for converting to bipolar or a schizophrenia spectrum disorder within 5 years, particularly during the first 24 months. Continued psychiatric follow-up for a period of time after discharge from the hospital may help in increasing the time between a secondary episode of psychosis or the need for hospitalization.^{7,8} If there are reasons to believe the patient should not be initiated on pharmacotherapy at the time of initial presentation, increased screenings and outreach would be an alternative. Therefore, we believe that preemptively screening, following-up with, and/or treating these at-risk patients, could prevent further episodes of psychosis, inpatient hospitalizations, and worsening of function.

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