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Original article

Screening for bipolar disorder among outpatients with substance use disorders

A. Nallet [a], B. Weber [a], S. Favre [a], M. Gex-Fabry [c], R. Voide [a], F. Ferrero [c], D. Zullino [b], Y. Khazaal [b], J.M. Aubry [a,*]

[a] Geneva University Hospital, Department of Mental Health and Psychiatry, Service of General Psychiatry, Bipolar Program, 6–8, rue du 31-Décembre, 1207 Geneva, Switzerland
[b] Geneva University Hospital, Department of Mental Health and Psychiatry, Service of Addictology, 2, rue Verte, 1205 Geneva, Switzerland
[c] Geneva University Hospital, Department of Mental Health and Psychiatry, Service of General Psychiatry, 2, chemin du Petit-Bel-Air, 1225 Chêne-Bourg, Switzerland

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ABSTRACT

Background: Comorbidity of bipolar disorder and alcohol or substance abuse/dependence is frequent and has marked negative consequences on the course of the illness and treatment compliance. The objective of this study was to compare the validity of two short instruments aimed at screening bipolar disorders among patients treated for substance use disorders.
Methods: The Mood Disorder Questionnaire (MDQ) and the Hypomania Checklist-32 (HCL-32) were tested with reference to the mood section of the Structured Clinical Interview for DSM-IV axis I disorders (SCID) in 152 patients, recruited in two outpatient clinics providing specialized treatment for alcohol and opiate dependence.
Results: According to the SCID, 33 patients (21.7%) had a diagnosis within the bipolar spectrum (two bipolar I, 21 bipolar II and 10 bipolar not otherwise specified). The HCL-32 was more sensitive (90.9% vs. 66.7%) and the MDQ more specific (38.7% vs. 77.3%) for the whole sample. The MDQ displayed higher sensitivity and specificity in patients treated for alcohol than for opiate dependence, whereas the HCL-32 was highly sensitive but poorly specific in both samples. Both instruments had a positive predictive value under 50%.
Conclusions: Caution is needed when using the MDQ and HCL-32 in patients treated for substance use disorders.

1. Introduction

Among patients of a comprehensive addiction treatment service, considerable overlap of psychiatric symptoms has been reported [7], with more substance use disorders (SUD) associated with more psychiatric symptoms (multi-morbidity). There is also a significant association between most SUD and mood and anxiety disorders [20].

However, few studies have determined the prevalence of bipolar disorder (BD) in substance use patients [1]. For example, a lifetime history of mania was reported in 6.5% of alcoholic men and 10.6% of alcoholic women [33]. In a retrospective chart review [1] evaluating 295 patients admitted to an inpatient substance abuse program for men, 85 were diagnosed as bipolar at intake. About half of them had not been previously diagnosed with BD. Among these patients, alcohol was the most common SUD (62%), followed by cocaine (38%), opioid (26%), poly substance (12%) and sedative-hypnotic (2%) dependence.

Studies of bipolar samples confirm that substance abuse is common, even from the first episode [4,61], with various rates of alcohol or substance abuse or dependence reported [34]. More than half of bipolar subjects in the Epidemiologic Catchment Area Survey had a SUD [45], most frequently alcohol and cannabis, followed by cocaine and opioids [8]. Rates of comorbid lifetime alcohol abuse up to 69% and of drug abuse up to 60% have been reported, with rates of substance abuse higher in men than women and lower in older age cohorts [6]. Compared to women in community samples, bipolar women had 4-fold higher rates of alcohol use disorders and 7-fold higher rates of other SUD [24]. In bipolar patients, Griffin et al. [21] reported that only few patients limited their intake to a single substance and confirmed alcohol to be the most common substance, followed by cocaine and marijuana.

According to Goldberg [17], explanations for such high BD and SUD comorbidity are complex, probably embracing numerous factors, and cannot be reduced to the simple "self-medication" hypothesis. The relationship between substance abuse and BDs has

* Corresponding author. Tel.: +41 22 305 45 38; fax: +41 22 305 45 99.
E-mail address: jean-michel.aubry@hcuge.ch (J.M. Aubry).

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been repeatedly addressed but remains only partly understood [9,48,50,51,54]. Some evidence suggests that substance use follows onset of BD [35]. Patients with primary BD and those with BD secondary to substance abuse present a significantly different picture in terms of demographics, clinical course and family history [12]. Reasons for use, but also pattern of use, seem to be idiosyncratic to the individual and evolve through personal experience [23].

Patients with a dual diagnosis of BD and substance dependence experience lower quality of life compared to patients having either diagnosis or healthy controls [46]. Comorbid SUD worsens bipolar patients social functioning to the level reported in schizophrenia [31]. Moreover, treatment for substance abuse has been reported as less effective in the presence of psychiatric illness [40] and effective mood stabilization leads to decreased active substance abuse [62].

Current or past substance abuse in bipolar patients has been associated with poorer recovery/remission rates, more frequent and prolonged affective episodes, increased risk of psychiatric hospitalization, decreased compliance or response to treatment, and higher suicidal ideation or number of suicidal behaviors [8,10,11,28,30,49,52,60]. In spite of elevated risk of suicidal behaviors, BP patients with SUD might not receive more intensive treatment [44]. Thus, not only do patients with comorbid BD and SUD need to be better identified, but specific treatments must also be developed [15,19,56].

In the case of co-occuring affective and substance misuse symptoms, both patients and clinicians may find themselves inclined to overcompensate for the historical underdiagnosis of BD, even in the absence of formal DSM-IV criteria for a lifetime manic or hypomanic episode [18]. In accordance with the study of Stewart and El-Mallakh [47], suggesting that only a minority of adults with SUD identified in the community as having BD really met full DSM-IV criteria for bipolar type I or II disorders (43%), Goldberg et al. [18] found that only one third of patients with active SUD suspected as bipolar really met DSM-IV criteria for this illness. Most often, they were presumed to suffer from this condition solely on the basis of the presence of mood instability. In patients with mood instability and cocaine use, Goldberg et al. [18] recommend to first pursue aggressive treatment for active cocaine use and ascertain the formal presence of manic or hypomanic symptoms during abstinence. They also report the risk for clinicians to pay less attention to the rigorous treatment of active SUD as a prerequisite for the accurate diagnosis and treatment of bipolar illness.

In recent years, several screening instruments to improve diagnosis of bipolar spectrum disorders have been developed. Their strengths and limitations have been reported [2]. The Mood Disorder Questionnaire (MDQ) [25] and the Hypomania Checklist-32 (HCL-32) [3] have received particular interest and are available in several languages [3,32,53,55]. Most studies provided evidence that both tools have sufficient sensitivity and specificity to detect BD in clinical samples with mood disorders. Some discussions are still going on about which algorithm and best cut-off score to use when screening for BD and more specifically BD type II [13,27,59]. The HCL-32 was precisely developed with the goal of increasing sensitivity for bipolar II disorder, based on the assumption that the content of the MDQ items restricted its power to detect bipolar II or other subsyndromal bipolar conditions. A recent study suggested that for distinguishing between BD type II and unipolar disorder, a cut-off of 13 was optimal for the HCL-32 [63]. Regarding the MDQ, our research team [16,59] found evidence that the sensitivity for bipolar II was lower when compared to bipolar I disorder and tested a new screening algorithm.

To date, only few studies have reported data on both the HCL-32 and the MDQ in the same sample [5,42,55]. Whereas Vieta et al. [55] confirmed a significantly higher sensitivity of the HCL-32 for BD in general, Carta et al. [5] concluded that the higher sensitivity was specifically due to bipolar II disorder. Both instruments were considered by Meyer et al. [42] as fairly comparable in detecting bipolar I disorder (sensitivity of 87% for the HCL-32 versus 84% for the MDQ) but slightly different for bipolar II (sensitivity of 90% versus of 83%). The MDQ yielded higher specificity for BDs.

The major objective of the present study was to determine the power of detection of the MDQ and HCL-32, two internationally widely used screening tools for BD, in a sample of outpatients recruited in two addiction treatment facilities, respectively for alcohol or opiate. A second objective was to compare sensitivity and specificity of both instruments in these two subsamples.

2. Methods

2.1. Study Sample

The study was conducted in a community mental health outpatient clinic (Department of Mental Health and Psychiatry), part of the Geneva University Hospitals. Patients with SUD were recruited among those newly referred to treatment or already in contact with specialized facilities for alcohol and opiate treatment. Exclusion criteria were: age under 18 years; previous treatment in a specialized unit for mood disorders; insufficient mastery of French, patient unable to give informed consent. The study protocol had been accepted by the Ethics Committee of the Psychiatry Department and written informed consent was obtained from each participant before inclusion.

2.2. Instruments and procedure

The Structured Clinical Interview for DSM-IV axis I disorders (SCID) is a semi-structured interview aimed at making major axis I diagnoses. Because of its widespread international acceptance, it was considered as the reference diagnostic instrument in the present study.

The MDQ is a 15-item, single page, paper and pencil self-report that screens for lifetime bipolar spectrum disorders [25]. It includes 13 yes/no hypomanic items derived from DSM-IV criteria and clinical experience. Two additional questions ask whether several symptoms have been experienced during the same period of time and whether they caused psychosocial problems (no, minor, moderate or serious problem). With the standard algorithm, positive screening requires a minimum of seven affirmative items, with several symptoms co-occurring and causing at least moderate psychosocial impairment. The alternative Geneva algorithm, first introduced in our validation study of the French version of the MDQ [59], extends positive screening if symptoms cause at least a minor instead of a moderate problem.

The HCL-32 is a self-rated questionnaire available in different countries and languages [3]. Its primary goal was to identify hypomanic symptoms in patients with major depressive disorder, in order to help clinicians diagnose BD II. The HCL-32 comprises a checklist of 32 hypomanic symptoms that require yes/no answers with reference to any period patients were in a "high" state. A total score is obtained by adding positive answers. Patients with a total score greater or equal to 14 are identified as potentially bipolar [3]. Eight other sections evaluate the severity and impact of symptoms on different aspects of patient's life. The French version used here has not yet been validated.

The Addiction Severity Index (ASI) is a multidimensional semi-structured clinical interview designed to detect and measure the severity of problems in seven areas commonly affected by alcohol and drug dependence: medical, employment/support, alcohol and