Individuals With Bipolar Disorder and Their Relationship With the Criminal Justice System: A Critical Review

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Objective: Bipolar disorder is a severe and prevalent psychiatric disease. Poor outcomes include a high frequency of criminal acts, imprisonments, and repeat offenses. This critical review of the international literature examined several aspects of the complex relationship between individuals with bipolar disorder and the criminal justice system: risk factors for criminal acts, features of bipolar patients' incarceration, and their postrelease trajectories.

Methods: Publications were obtained from the PubMed and Google Scholar electronic databases by using the following MeSH headings: prison, forensic psychiatry, criminal law, crime, and bipolar disorder.

Results: Among patients with bipolar disorder, the frequency of violent criminal acts is higher than in the general population (odds ratio [OR]=2.8, 95% confidence interval

Bipolar disorder is a severe psychiatric disease characterized by recurrent alternating episodes of mania or hypomania and depression separated by euthymic periods that are variably affected by residual symptoms and dysfunction (1). Bipolar disorder is a complex disease with heterogeneous clinical presentations. The lifetime prevalence of bipolar disorder is approximately 1% for the bipolar disorder I subtype and may reach 6.5% when all bipolar disorder spectrum subtypes are considered. Thus bipolar disorder is a major public health problem (2,3) and has been recognized as the seventh most common cause of disability-adjusted life years by the World Health Organization (4). Patients with bipolar disorder are similar to other patients with mental disorders in that they are more likely to be victims of violence than to be perpetrators (5). Among patients with bipolar disorder, criminal acts, imprisonments, and repeat offenses are considered to be poor outcomes (6-8).

Transgressions and criminal acts are typically associated with the manic phases of bipolar disorder (9), which are marked by irritability, exalted mood, and increased energy (10). These phases are often associated with megalomaniac ideas and feelings of omnipotence that could lead to public order offenses or confrontations with the police (11). For example, in a study of 66 imprisoned patients with bipolar disorder, Quanbeck and colleagues (12) showed that approximately 75% had [CI]=1.8-4.3). The frequency is higher among patients with bipolar disorder and a comorbid substance use disorder than among those without either disorder (OR=10.1, CI=5.3-19.2). As a result, the prevalence of bipolar disorder among prisoners is high (2%-7%). In prison, patients' bipolar disorder symptoms can complicate their relationship with prison administrators, leading to an increased risk of multiple incarcerations. Moreover, the risk of suicide increases for these prisoners.

Conclusions: Criminal acts are common among patients with bipolar disorder and are often associated with problems such as addiction. Thus it is important to improve the diagnosis and treatment of inmates with bipolar disorder.

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manic symptoms at the time of the offense. Manic symptoms of bipolar disorder may also present a risk of judicial complication because patients' behavioral and sexual disinhibition may lead to hypersexuality, excessive familiarity, or exhibitionism (13). Criminal acts may also occur during the depressive phases of bipolar disorder. The most serious offenses are associated with altruistic homicide (14), in which a patient (typically with a severe depressive disorder with psychotic symptoms) kills a family member to save him or her from a tragic fate (for example, disaster or apocalypse).

This critical review of the international literature examined the complex relationship between patients with bipolar disorder and the justice system.

METHODS

To identify studies for review, a search was conducted in two electronic databases (PubMed and Google Scholar) for articles published through February 2014. The literature search was performed by using the following MeSH headings: prison, forensic psychiatry, criminal law, crime, and bipolar disorder. The article titles and abstracts of studies identified by the searches were screened. Exclusion criteria were as follows: written in a language other than English or French, presented only an opinion or hypothesis without empirical investigation, or studied populations with disorders other than bipolar disorder.

RESULTS

The literature search identified 517 articles, of which 67 fulltext articles were assessed for eligibility. Thirty-five articles were included in the qualitative review. The results are summarized below in two parts: an inventory of the available literature on the complex and multifactorial associations between bipolar disorder and criminal acts and the current status of incarcerated patients with bipolar disorder.

Bipolar Disorder and Criminal Acts: A Complex Relationship

Epidemiological observations. Numerous epidemiological studies have evaluated the frequency of criminal acts among patients with bipolar disorder (15). However, several methodological issues, including inclusion biases (heterogeneous populations) and evaluation biases (variable diagnostic assessments), make it difficult to draw clear conclusions.

Nevertheless, a study by Fazel and colleagues (16) is remarkable for its rigorous methodology. Their study highlighted many useful elements that provide insight into the relationship between bipolar disorder and criminal acts. Using data from Swedish national registers, they identified 3,743 patients with bipolar disorder and compared them with 37,429 other individuals from the general population and 4,059 unaffected full-sibling control participants in regard to the incidence of violent crime (defined as any homicide, assault, qualified theft, arson, sexual assault, or threat). A longitudinal follow-up study was conducted between 1973 and 2004. The authors noted that 8.8% of the patients with bipolar disorder committed a violent crime after diagnosis, compared with only 3.1% of unaffected full-sibling control participants (odds ratio [OR]=4.7, 95% confidence interval [CI]=3.3-6.7) (17). Thus it appears that the incidence of violent crime is much higher among patients with bipolar disorder than in the general population, even when numerous sociodemographic factors are considered (for example, household income, marital status, and migrant status). Other studies have reported similar results (6,8).

Surprisingly, Fazel and colleagues (16) found no significant differences in the incidence of violent crime between patients in the manic phase and patients in the depressive phase or between those with psychotic symptoms and those without such symptoms. No "at risk" clinical subgroup of patients with bipolar symptoms was identified. However, recent findings suggest that patients with bipolar disorder display higher rates of anger and aggressive behaviors, especially during acute and psychotic episodes (18). Furthermore, many studies have proposed clinical risk profiles for criminal acts among patients with bipolar disorder: those with comorbid substance use disorders or other mental disorders or those with early onset of the disease (19–22). *Comorbid substance use disorders.* The study by Fazel and colleagues (16) indicated that the risk of criminal acts among patients with bipolar disorder was associated with the presence of substance abuse. Compared with individuals without bipolar disorder, those with bipolar disorder had a significantly higher risk of committing a crime (OR=2.8, CI=1.8–4.3); the risk was even higher for those with bipolar disorder who had a comorbid substance use disorder (OR=10.1, CI= 5.3–19.2). This finding has been confirmed in several studies (23–25).

Thus patients with bipolar disorder should be thoroughly screened for addictive disorders to identify their risk of committing criminal acts (16). Screening is important because of the high prevalence of comorbid addictive disorders among patients with bipolar disorder. Indeed, 25%-60% of these patients have been found to meet criteria for at least one substance use disorder (including alcohol) (25). Comorbid addictive disorders are so common that some authors consider alcohol consumption a symptom of bipolar disorder (26-28). Therefore, it is difficult to study bipolar disorder without also considering addiction. Furthermore, the prognosis is poor for patients with bipolar disorder who have a comorbid substance use disorder; these patients have an increased risk of suicide, are less adherent to treatment, and are hospitalized more frequently than patients with bipolar disorder who do not have a comorbid substance use disorder (25).

Relationship with personality and personality disorders. The association between bipolar disorder and criminal acts is not limited to periods of acute symptoms or to the presence of comorbid addictive disorders. The presence of a personality disorder may also have an effect on criminal behavior. Indeed, several studies have shown that among patients with bipolar disorder, personality disorders, especially antisocial personality disorder, are associated with an increased risk of violence and antisocial personality disorder are associated with increased impulsivity, which could lead to an increased risk of committing criminal acts (30).

Incarcerated Patients With Bipolar Disorder

The association between bipolar disorder and criminal acts can lead to patients' incarceration. Most patients with psychiatric disorders in prison are incarcerated for nonviolent crimes, such as burglary, fraud, and drug offenses (31). However, few studies have examined prisoners with bipolar disorder.

The prison environment and bipolar disorder symptoms. In the United States, jails are detention centers in which prisoners are detained before trial or remand centers that house prisoners serving sentences shorter than one year, and state prisons are establishments for sentenced prisoners. (Here the term "prison" refers to jails and prisons, in accordance with the international literature [32]; we distinguish between them only when pertinent.) The prevalence of bipolar disorder among prisoners is high. Various studies have cited prevalence rates between 2% and 7% (33,34), which is significantly higher than in the general population (35). Overrepresentation of bipolar disorder among inmates has been observed in many countries (36–38).

Moreover, symptoms of bipolar disorder can complicate patients' relationship with the prison administration. During manic episodes, a patient's elevated mood may lead to conflicts (insults or fights) with prison guards. Behavioral disinhibition may also lead to overfamiliar or exhibitionist behaviors that often result in sanctions (disciplinary penalties or additional prison sentences). Because impulsive personality traits are widely associated with bipolar disorder (39), it is not uncommon for patients with relatively short sentences to have their prison term extended because of repeated acts of violence or aggression. Moreover, when these behaviors are sexual, they may lead to conflict with other inmates, and the patients may become victims of violent attacks (40).

The prison administration may view patients' behaviors as acts of defiance against prison authorities. Patients may not always be reported to the psychiatric team, which delays their access to care. Access to care can be exacerbated by other factors (such as lack of medical staff and organizational issues). Patients may be detained many times before they receive a diagnosis. In a longitudinal study of 79,211 U.S. prisoners conducted over six years, inmates with psychiatric disorders showed an increased risk of multiple incarcerations (41). Patients with bipolar disorder were 3.3 times more likely than inmates with no psychiatric disorder to experience multiple incarcerations (at least four imprisonments).

Suicide. Research has shown that bipolar disorder is associated with increased mortality from suicide. A recent metaanalysis indicated that suicide mortality among patients with bipolar disorder is 20 to 30 times higher than in the general population (42). Moreover, the prison environment has an impact on suicide mortality, and suicide is the leading cause of death in prison (43). A longitudinal study conducted between 2003 and 2007 in 12 Western countries recorded a rate of approximately 50 to 150 suicides per 100,000 inmates per year (44). Differences were noted between countries. For example, lower rates were noted in Canada, New Zealand, and Australia. The risk of suicide in prison increases for patients with bipolar disorder. Fazel and colleagues (45) showed that the risk of suicide among prisoners was higher among those with bipolar disorder than among those with no psychiatric disorder (OR=2.4, CI=1.6-3.7). This increased risk of suicide highlights the need to detect and manage patients' symptoms.

Early-onset bipolar disorder. Early-onset bipolar disorder is characterized by onset before age 21 (1). Half of patients with bipolar disorder manifest symptoms at this early age. Compared with patients who experienced a later onset of bipolar disorder, they experience more episodes of acute violence and more legal complications and have more psychotic symptoms, mixed episodes, anxiety disorders, comorbid substance use disorders, recurrences of mood episodes, and suicide attempts and suicides, as well as shorter euthymic periods (1). This subtype of bipolar disorder encompasses many risk factors for criminal acts, incarceration, and a generally poor prognosis. To avoid these complications, early-onset bipolar disorder must be detected and treated, in particular among young inmates. It is likely that the prevalence of early-onset bipolar disorder is significantly underestimated in prison. For example, the prevalence of bipolar disorder among youths committed to Texas juvenile correctional facilities was estimated to be 19.4% (46).

DISCUSSION

We propose two main areas in which the management of patients with bipolar disorder in prison can be improved.

Screening Patients With Bipolar Disorder

Diagnosing bipolar disorder can be complex (47). In practice, delays in diagnosis are common (ten years on average) (48). In prison, diagnostic difficulties are increased, and delays in treatment may have serious consequences, in particular with respect to suicide risk (49). Diagnostic difficulties have several causes. First, the symptoms of bipolar disorder are diverse, and several types of bipolar disorder have been described. Some types may be more difficult to diagnose, especially the bipolar disorder II subtype or the rapid-cycle subtype. In addition, as noted above, patients typically have one or more comorbid disorders. Addictions or personality disorders (including borderline and antisocial personality) may be more apparent, masking the mood disorder. The prison environment is rife with stressful events, which may provide greater visibility to these "noisy" aspects of the disorder. Therefore, psychiatrists should carefully examine patients for subtle clinical signs of bipolar disorder (early depression, family history, comorbid substance use disorders, and antidepressant treatment responses).

The systematic use of scales has diagnostic utility in clinical practice and can improve the initial management and monitoring of patients (50). Screening scales are helpful in diagnosing bipolar disorder and may be particularly important in the prison context. Practitioners should be aware of and trained in screening methods for bipolar disorder and validated scales that are easily used in practice. The Mood Disorder Questionnaire (51), the Young Mania Rating Scale (52), the Hypomania Checklist–32 (53), and the Montgomery-Åsberg Depression Rating Scale (54) may be extremely useful, particularly in prisons, where resources and means are often limited.

Managing Patients With Bipolar Disorder

Therapeutic adaptations. In prison, pharmacological treatments often require specific adaptations. Some medications target some symptoms better than other medications do. However, guidelines and recommendations must be observed when prescribing psychotropic drugs in prison (55). Because of its efficacy, lithium is preferred in cases of high risk of suicide (56). Monotherapy generally proves insufficient in the treatment of bipolar disorder, requiring combination therapies to be implemented quickly (57). Combination therapies should be selected on the basis of the clinical presentation (57). Antipsychotics should be considered when patients have particular traits of impulsivity or significant emotional dysregulation. For those with comorbid substance use disorders, specialized management by an addiction specialist should be considered, and alternative treatments should be discussed promptly (58). A recent pilot study conducted in Connecticut prisons to assess an algorithm-driven pharmacological management program has shown promising results (59).

Comorbidities. Effective addiction management is essential for the treatment of patients with bipolar disorder (60). The effect of comorbid substance use disorders must be taken into account in the assessment of patients' risk of criminal acts. However, practitioners must be careful not to stigmatize patients who have addictive disorders.

Attention-deficit hyperactivity disorder (ADHD) is also frequently associated with bipolar disorder (61). Adolescents with ADHD, particularly those with comorbid conduct disorders, have been shown to have an increased risk of unipolar depression and bipolar disorder in later life. Adolescents with ADHD had a higher risk of developing bipolar disorder than those without ADHD (hazard ratio=5.24, CI=2.44–11.24) (62). Moreover, among patients with bipolar disorder, comorbid conduct disorder has been found to be associated with higher rates of global aggression, compared with patients who have conduct disorder alone (63).

Comorbid anxiety disorders must not be neglected (64). Panic disorder and obsessive-compulsive disorder are also frequently associated with bipolar disorder. Anxiety symptoms may also be a prodrome or early sign of bipolar disorder among adolescents (65,66).

Adherence and continuity of care. Adherence to treatments appears to decrease the risk of criminal acts among patients with bipolar disorder. Continuity of care between prison psychiatric services and community-based psychiatric services after release from incarceration plays a central role in maintaining treatment adherence (67). Moreover, side effects and poor tolerance of therapy must be monitored because they may cause premature discontinuation of treatment (57).

The literature shows that mortality is high for all prisoners, especially in the period immediately after release from incarceration (68). During the first two weeks after release, the risk of death from all causes was found to be 12.7 times higher among former prisoners than in the general population, even after adjustment for age, sex, and race-ethnicity (69). The risk of suicide is greatly increased during the postincarceration period. A study in Wales and England showed that mortality from suicide in the year after release was eight times higher among former male prisoners than in the general population and 36 times higher among former female prisoners (70). Although there is no specific evidence regarding prisoners with bipolar disorder, this period is likely critical because of their high risk of suicide (42). Therefore, the assessment of suicide risk must be rigorous, and the relationship between psychiatric services in prison and community-based services should be strengthened. Providing support programs during the postincarceration period appears to be an absolute necessity (71).

CONCLUSIONS

Criminal acts are common among patients with bipolar disorder and are often associated with comorbid disorders, including substance use disorders, conduct disorders, ADHD, and personality disorders. As a result, the prevalence of bipolar disorder is high in prison. The welfare of inmates with bipolar disorder is of serious concern because of diagnostic difficulties, patients' suicidal tendencies, and patients' comorbid substance use disorders, among other problems. In addition, recurrence of criminal acts is a concern in regard to these patients. Thus many improvements should be made both within and outside prison with respect to diagnosis and treatment. The relationship between psychiatric care outside prison and psychiatric services within prison is a significant factor in improving care for these patients (72). Such improvements are critical to providing better outcomes for patients with bipolar disorder. As noted, prison constitutes a stressful environment, and the mental and general medical health of patients with psychiatric disorders, particularly those with bipolar disorder, may be seriously affected by multiple incarcerations. Thus, although a clinician's role is to care for individuals and not to prevent criminal acts, clinicians who provide services in prison should communicate with their counterparts outside prison to help ensure a better quality of life for patients with bipolar disorder (73).

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