

*The information in this column is not intended as a definitive treatment strategy but as a suggested approach for clinicians treating patients with similar histories. Individual cases may vary and should be evaluated carefully before treatment is provided. The patient described in this column is a composite with characteristics of several real patients.*

### The treatment of bipolar patients with elevated impulsivity and suicide risk

A 22-year-old man with bipolar II disorder was referred for follow-up at the mood disorders clinic of a tertiary care centre. He was first seen by a psychiatrist at age 20 when he had a 6-week episode of decreased need for sleep; increased energy; difficulty concentrating; and impulsive spending, including purchasing a new house. This episode resolved without treatment. A year later, at age 21, he experienced depressive symptoms, including low mood, decreased appetite, weight loss, low energy and insomnia. He began to have increasing suicidal thoughts and developed an elaborate suicide plan. He purchased a plane ticket to his hometown, where he planned to jump from a high-rise hotel. Prior to leaving for his flight, he called a friend and disclosed his plan. His friend called an ambulance and he was brought to the hospital. This is when he received the diagnosis of bipolar II disorder and was started on quetiapine XR for the depressive episode.

Upon the patient's referral to our mood disorders clinic 1 year later, we confirmed the diagnosis of bipolar II disorder. At this time, he was euthymic and denied suicidal ideation. During our assessment he reported a longstanding history of impulsive behaviour, including spur-of-the-moment spending, physical altercations and sexual encounters. His level of impulsivity on the Barratt Impulsiveness Scale (BIS-11) was 91, which is an elevated level compared with healthy men, who score an average of 62.8.<sup>1</sup> As the patient was no longer interested in taking quetiapine XR owing to side effects, he was started on lithium. He was compliant with treatment and remained euthymic for 2 months, but was lost to follow-up after a trip abroad.

Our patient's case highlights the potential high lethality of suicidal ideation and planning in individuals with bipolar II disorder and elevated impulsivity. Several studies have reported that patients with bipolar disorder score higher on impulsivity measures than healthy controls.<sup>2,3</sup> Furthermore, impulsivity may be associated with suicide attempts in these patients. Three studies have reported a significant association between BIS-11 scores and suicide attempts in patients with bipolar disorder,<sup>3-5</sup> whereas 1 study has reported a trend toward significance<sup>6</sup> and 3 others have found no association.<sup>7-9</sup> Unfortunately, most studies examining impulsivity in patients with bipolar disorder do not distinguish between bipolar I and bipolar II disorder, but the prevalence of suicide attempts is comparable in both subtypes.<sup>10</sup>

Lithium may be the preferred maintenance pharmacotherapy in patients at high suicide risk, although close clinical follow-up is required given its narrow therapeutic window and potential lethality in overdose. Lithium maintenance treatment has been shown to reduce the frequency of affective episodes in both patients with bipolar I and bipolar II disorder, but may have superior benefits in those with bipolar II disorder.<sup>11</sup> Meta-analyses have found that patients with mood disorders treated with lithium have a 4- to 5-fold decrease in the rate of suicide completion than patients on comparison treatments (placebo, anticonvulsants, antidepressants).<sup>12,13</sup> Large population-based studies have shown lower rates of suicide attempts in patients treated with lithium than those treated with anticonvulsants.<sup>14,15</sup> Lithium's antisuicidal properties may be at least partially attributed to its effects on impulsivity.<sup>16</sup> Rodent models have shown that lithium, but not anti-

convulsants, reduces impulsivity on behavioural tasks.<sup>17,18</sup> Lithium has also been shown to reduce impulsivity in randomized double-blind trials involving patients with bipolar disorder and pathological gambling<sup>19</sup> and in patients with attention-deficit/hyperactivity disorder.<sup>20</sup>

It is less clear whether other treatments for bipolar disorder have any effect on impulsivity and suicide. Valproate has been used successfully to treat impulsive aggression in patients with disruptive behaviour disorders<sup>21</sup> and cluster B personality disorders.<sup>22</sup> However, a meta-analysis by the US Food and Drug Administration found that the use of anticonvulsants is associated with higher rates of suicidal behaviour in both psychiatric and non-psychiatric patients.<sup>23</sup> Antidepressant use may also be problematic, as exposure to selective serotonin reuptake inhibitors may increase suicide risk in patients with bipolar disorder.<sup>24</sup>

In conclusion, elevated impulsivity may increase the risk of suicidality in patients with bipolar disorder. Although there are limited data on the treatment of highly impulsive patients, there is evidence that lithium may reduce both impulsivity and suicidality in patients with bipolar disorder. Clinicians treating patients with bipolar disorder should be vigilant during assessment and follow-up for elevated impulsivity as part of a thorough suicide risk assessment and should consider lithium maintenance as a potential strategy.

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