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# Patients With Alcohol Use Disorder Co-Occurring With Depression and Anxiety Symptoms: Diagnostic and Treatment Initiation Recommendations

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About a third of the US population has alcohol use disorder (AUD) at some point in their lifetime, which is higher than the prevalence of drug use disorder and tobacco use disorder combined.<sup>1</sup> AUD often occurs with depression and anxiety disorders. The co-occurrence of these disorders negatively impacts psychiatric symptoms, worsens physical functioning, and increases health care utilization, which therefore increases cost.<sup>2-4</sup> Despite treatment availability, dual diagnosis patients often do not receive appropriate intervention.<sup>5</sup>

The decision of whether to initiate treatment for depression or alcohol use first in this population is debated among clinicians.<sup>6</sup> Therefore, the aims of this article are to provide clinicians with guidance that can help with diagnostic clarification of the 2 major types of presentations (alcohol-induced and independent disorders) and provide recommendations about the management of these patients in outpatient settings.

## THE RELATIONSHIP BETWEEN ALCOHOL AND DEPRESSION OR ANXIETY SYMPTOMS

There is a strong bidirectional relationship between AUD and depression or anxiety symptoms. Untreated depression or anxiety may lead to “self-medication” with alcohol to relieve symptoms.<sup>7</sup> Khantzian<sup>8</sup> stated that drinking can be an attractive if temporary solution for individuals who want to relieve feelings derived from loneliness or emptiness. Individuals without baseline depression can also be at risk for the development of depression or anxiety if they have chronic exposure to alcohol. This could occur indirectly through the disruptive effect of alcohol on social relationships or directly through alcohol’s effect on the brain. Studies conducted in rats show that chronic alcohol exposure causes a reduction in cortical norepinephrine and hippocampal brain-derived neurotrophic factor, which are associated with depressive

characteristics.<sup>9,10</sup> A person’s genetics could also play a role in increasing vulnerability to both disorders.<sup>11</sup> For example, individuals with alcohol sensitivity that is regulated by a specific genotype combination were at increased risk for AUDs as well as depressive and anxiety disorders in a Japanese population.<sup>12</sup>

## ASSESSMENT AND DIAGNOSIS

The first, and perhaps the most important, step in determining the treatment focus for patients with dual disorders is to record an accurate and thorough patient history. Clinicians should start by first identifying and diagnosing the AUD and then investigating the relationship between AUD and the affective symptoms. This strategy facilitates determination of an independent versus alcohol-induced disorder. The clinical interview can start with investigating the onset of regular alcohol intake in relation to depressive symptoms. The clinician can then ask about the longest period of abstinence in order to determine the course of symptoms after abstinence achieved.<sup>11</sup> An independent disorder is more likely if the onset of depression/anxiety was prior to heavy use of alcohol and/or if symptoms continued after at least a month of complete abstinence.<sup>13</sup> A positive family history for mood disorders is also suggestive of an independent disorder.<sup>11</sup> Another useful indicator is when the severity of depressive symptoms occurs “in excess” of the usually associated effect of the consumed amount or duration of alcohol use.<sup>11,14</sup>

Some patients, such as older adults, might present with alcohol adverse events such as falls or medication interactions due to age-related physiological changes that increase the sensitivity of the body to alcohol. At the same time, they may not meet the *DSM* criteria due to other age-related factors such as cognitive impairment that might affect reporting symptoms accurately, lack of awareness or denial of alcohol as a problem, and fewer work/family obligations than the general population.<sup>15</sup> Therefore, it is important to differentiate these individuals using more flexible terms such as “at-risk drinker” that can be used to reflect the connection of alcohol with the psychiatry symptoms.<sup>15</sup>

It is not unusual for patients presenting for treatment to be intoxicated or in withdrawal from alcohol during the initial assessment. Recent heavy consumption of alcohol can lead to mental states resembling depression such as poor focus, and acute withdrawal that leads to autonomic hyperactivity can

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resemble symptoms of anxiety.<sup>11,13</sup> Therefore, it is important not to make a diagnosis of an independent depression or anxiety disorder in the first few weeks after achieving abstinence based only on current mental status.<sup>11,16</sup>

Even after clinically diagnosing alcohol-induced depression or anxiety symptoms, it is essential to continuously evaluate these symptoms. In a longitudinal study of patients presenting for alcohol treatment, 26.4% of those diagnosed with alcohol-induced depression were re-diagnosed with independent depression during a year of follow-up.<sup>17</sup> Previous history of independent depression disorder not related to the current episode and comorbid anxiety disorders increase the odds that alcohol-induced depression will be reclassified as independent depression after follow-up.<sup>17,18</sup>

Clinicians/researchers may benefit from use of assessment guides such as the Psychiatric Research Interview for Substance and Mental Disorders to distinguish independent disorders from substance-induced disorders.<sup>19</sup> The Alcohol Use Disorders Identification Test can be a good tool to measure the change in alcohol misuse severity over time.<sup>20</sup>

## ADDRESSING ALCOHOL USE

In 3 longitudinal studies<sup>21-23</sup> that assessed patients with AUD presenting for inpatient detoxification, clinical depression and anxiety symptoms dropped to a normal range after 2-4 weeks of abstinence. These findings suggest that patients presenting with AUD co-occurring with depressive or anxiety symptoms may respond well to abstinence from alcohol. In a study that differentiated independent from alcohol-induced disorders prior to admission, most of the patients with independent depression were still in the moderate to severe range of depression severity after 4 weeks of abstinence, while most of the patients with alcohol-induced depression were not.<sup>24</sup> Based on these results, experts recommend that patients with severe AUD go through a detoxification program and that clinicians refrain from treating the depression or anxiety as independent disorders until abstinence is achieved and symptoms are reevaluated.<sup>11,14,23,25</sup> Undifferentiated cases, such as patients with an unclear history, could also benefit from achieving abstinence first. By the end of the third or fourth week of abstinence, significant reduction or remission of depressive or anxious symptoms is expected in alcohol-induced disorders.

When inpatient detoxification is not available or patients refuse abstinence and prefer alcohol use reduction, clinicians are encouraged to work with them in order to achieve this modified goal. There is evidence from a longitudinal study that reduction of "hazard drinking" leads to faster improvement of depression and anxiety symptoms.<sup>26</sup>

Alcohol use reduction can be achieved with anticraving medications, behavioral interventions such as motivational interviewing, and/or specific programs (eg, Alcoholics Anonymous) that facilitate behavioral change. Some approved alcohol anticraving medications that are safe

in patients dually diagnosed with depression can reduce alcohol cravings after abstinence (eg, acamprosate), and some can help with alcohol use reduction (eg, naltrexone).<sup>27</sup> However, these medications do not directly treat depressive symptoms.

## ADDRESSING DEPRESSION WITH ALCOHOL USE

Studies that differentiated types of depression found that patients with independent depression were more likely to use alcohol after getting discharged from the hospital and more likely to relapse in their alcohol use after sustained remission ( $\geq 26$  weeks) compared to patients without depression.<sup>28,29</sup> Patients with alcohol-induced depression were also more likely to use alcohol after discharge, which led authors to believe in the importance of adequately addressing depression.<sup>28</sup> Therefore, simultaneous treatment of AUD and depression may be preferable. Treatment with an antidepressant alone does not sufficiently address alcohol use.<sup>30</sup> However, cotreatment with anticraving medication and an antidepressant has effectively treated mood symptoms and alcohol use in randomized controlled trials (RCTs).<sup>31</sup> This is an important finding for patients with independent depression or anxiety disorder. A recent meta-analysis of 10 RCTs in patients with AUD and co-occurring depressive symptoms evaluated the effect of antidepressant use in this population,<sup>32</sup> and although this meta-analysis was underpowered, the effect size of antidepressant treatment use in patients with independent depression was stronger than that of antidepressant use in patients with alcohol-induced depression.<sup>32</sup> Therefore, I recommend (1) confirming diagnosis with a period of abstinence, (2) augmenting treatment of AUD with antidepressants in patients likely to have independent disorders, and (3) focusing on treatment of AUD in patients likely to have alcohol-induced disorders in order to avoid unnecessary adverse effects and costs. Integrating medication with psychotherapy is beneficial; a study that evaluated the effectiveness of an intensive outpatient program with integrated psychotherapy (ie, cognitive behavioral therapy) and pharmacotherapy for this dual diagnosis population had greater treatment retention and long-term outcomes than treatment as usual.<sup>33</sup>

## CONCLUSION

Management of patients presenting with co-occurring AUD and depression or anxiety symptoms can be challenging. It is essential to conduct a comprehensive assessment and attempt to determine if the depression or anxiety disorder is independent of the AUD or induced by the AUD. It is best to reassess the diagnosis after 2-4 weeks of abstinence from alcohol. Depression and anxiety symptoms usually improve after 4 weeks of abstinence in patients with alcohol-induced disorders. Addressing depressive symptoms along with alcohol use in patients likely to have independent disorders will improve treatment outcomes.

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