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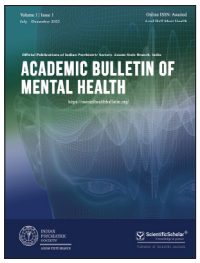

Case Report

Alcohol Withdrawal Presenting with Catatonia Followed by Delirium Tremens: A Clinical Case Report

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ABSTRACT

This case report of a 28-year-old male with 10 years of heavy alcohol use, meeting ICD-11 criteria for Alcohol Dependence, who developed withdrawal symptoms after 72 hours of abstinence, progressing to acute catatonia. He presented with mutism, posturing, waxy flexibility, negativism, mask-like facies, poor intake, and tremors, with a Bush–Francis Catatonia Rating Scale (BFCRS) score of 28/69 and Alcohol Use Disorders Identification Test (AUDIT) score of 32/40. Injection of lorazepam led to rapid and complete resolution of catatonia, followed by the onset of delirium tremens within one hour, which was successfully managed with benzodiazepines, hydration, thiamine, and supportive care. Symptoms fully resolved within 48 hours of admission. This case highlights the importance of recognizing catatonia as a rare presentation of alcohol withdrawal and the effectiveness of prompt benzodiazepine therapy.

Keywords: Alcohol dependence syndrom, Alcohol withdrawal, Catatonia, Delirium tremens, Lorazepam challenge test

INTRODUCTION

The National Drug Use Survey 2019 (NDUS), India's first state-level substance use assessment, surveyed 200,111 households using the WHO ASSIST tool. Alcohol was the most commonly used substance, with 14.6% prevalence; 5.2% showed problematic use, and 2.7% dependence. Use was higher among men, with country liquor and spirits predominating.[1]

Alcohol dependence, commonly referred to as alcoholism, is marked by a strong desire to consume alcohol, loss of control over drinking behavior, possible physical dependence, and the need for increasing amounts of alcohol to achieve the desired effect (American Psychiatric Association, 1994).[2]

Catatonia is a neuropsychiatric syndrome marked by characteristic motor abnormalities associated with disturbances in mood, affect, thought, and cognition. Core features include mutism, stupor, and posturing. Originally described by Kahlbaum in the nineteenth century, its concept has evolved, re-emerged, and is now undergoing a paradigm shift in modern psychiatry.[3] Although catatonia has been experimentally induced in animal models under laboratory conditions, only a limited number of cases in humans have been reported in which catatonia is attributable to alcohol use.[4]

Reported cases in the past

Muralidharan *et al.* (2007) reported what is believed to be one of the first documented human

cases, describing the onset of catatonic features such as mutism and negativism 72 hours after cessation of alcohol intake, with complete remission following lorazepam administration.[5]

Nkemjika *et al*. (2021 reported a rare case of alcohol withdrawal–related catatonia in a patient without prior psychiatric history. Severe withdrawal resolved with benzodiazepines within 72 hours. Catatonia, marked by waxy flexibility and reduced responsiveness, should be recognized as a possible alcohol withdrawal manifestation.[6]

A 28-year-old male with long-standing alcohol and tobacco dependence developed severe alcohol withdrawal after abrupt cessation, progressing to catatonia within 60 hours. He presented with mutism, posturing, and waxy flexibility. Catatonia resolved with lorazepam, followed by transient delirium tremens, with complete recovery after supportive management.[7]

CASE REPORT

A 28-year-old male was brought to the Emergency Department ofChhattisgarh Institute of Medical Science , Bilaspur, by family members with complaints of withdrawn behavior beginning 24 hours prior to admission, associated with reduced speech and delayed responses. He was noted to stare and sit in one place for prolonged periods, with diminished engagement with his surroundings. Over the next few hours, he developed abnormal posturing, maintaining imposed positions for prolonged periods despite attempts at repositioning, along with markedly reduced spontaneous activity. He failed to follow simple commands and appeared stiff. Subsequently, he became completely mute and almost immobile. Oral intake was significantly reduced, following which emergency hospitalization was advised.

On admission, the Bush–Francis Catatonia Rating Scale (BFCRS) [8] score was 28/69. Five minutes after administration of the injection of lorazepam 4 mg, the BFCRS score reduced to 3/69, indicating a positive lorazepam challenge test. After resolution of catatonic symptoms, the patient provided a 10-year history of heavy alcohol consumption, averaging 2–3 quarts of country liquor daily, with a clear pattern of impaired control over use, progressive tolerance, continued consumption despite harm, and withdrawal symptoms over the past 5 years. His last alcohol intake was 3 days prior to admission. He also had tobacco dependence, smoking approximately 18–20 bidis per day, with the last tobacco use occurring 3 days prior to admission. He denied the use of any other substances.

Subsequently, the Alcohol Use Disorders Identification Test [9] was administered, with a score of 32/40, indicating severe alcohol dependence. The Clinical Institute Withdrawal Assessment for Alcohol–Revised[10] scale was applied, yielding a score of 36/67, suggestive of severe alcohol withdrawal. A detailed history and Mental Status Examination were then conducted. A diagnosis of Alcohol Dependence Syndrome, currently in withdrawal with catatonic presentation — consistent with ICD-11 criteria[11] (6C40.2 Alcohol Dependence; 6C41 Alcohol Withdrawal) was made. An investigation ruled out medical conditions, and the NCCT Head was normal as per reports. After two hours, post-resolution, the patient developed acute confusion, fluctuating consciousness, severe agitation, coarse tremors, diaphoresis, tachycardia, visual hallucinations, disorientation, and autonomic instability, consistent with delirium tremens. These symptoms responded well to continued fixed-dose lorazepam-based withdrawal management, hydration, thiamine supplementation, and supportive care, with complete remission within 48 hours of admission.

DISCUSSION

Catatonia is well recognized in mood and psychotic disorders; however, its association with alcohol withdrawal is rare. Possible mechanisms include, altered gamma-aminobutyric acid (GABA)–ergic neurotransmission has been implicated in the pathophysiology of catatonia, alcohol withdrawal, and the mechanism of action of benzodiazepines. Motor symptoms of catatonia are thought to arise from impaired top-down GABA-mediated modulation of the caudate nucleus and other basal ganglia structures due to orbitofrontal cortical dysfunction. Alcohol withdrawal produces a marked imbalance between inhibitory GABA and excitatory glutamatergic systems, resulting from adaptive receptor changes during chronic alcohol use. Abrupt cessation leads to reduced GABA levels, decreased receptor sensitivity, and excessive glutamate activity, causing central nervous system hyperexcitability.[12] Lorazepam shows rapid efficacy due to its GABA-A agonistic action.

This case parallels previous literature reporting catatonia during alcohol withdrawal, leading to complete recovery with lorazepam therapy catatonia. The subsequent onset of delirium tremens after initial improvement emphasizes the importance of continued monitoring even after catatonia resolves.

CONCLUSION

This case underscores that:

1. Catatonia can be a presentation of alcohol withdrawal.
2. Early recognition with BFCRS and prompt lorazepam therapy are highly effective.
3. Patients remain at risk for severe withdrawal complications such as DT even after catatonia resolves.
4. Continuous monitoring of post-response is essential.

This case adds to the limited literature on catatonia associated with alcohol withdrawal and highlights the importance of structured assessment and timely benzodiazepine treatment.

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Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given consent for clinical information to be reported in the journal. The patient understands that the patient's names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.
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