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#### **Case Report**

# Alcohol 'Induced' Mania -Insights from Three Cases in a Hospital in India

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#### Abstract

**Background:** Heavy alcohol drinking has been documented to 'induce' mania in a sub-set of persons. Misrecognition of this association is known to negatively impact illness course in these patients. Lack of research in this area has deterred the understanding of the link of alcohol drinking to mania in such cases. Alcohol 'induced' mania remains a vague diagnostic entity with uncertain validity.

Cases: We report three cases of mania occurring subsequent to heavy alcohol drinking. The distinct features of the cases offer the opportunity to delve into the probable role of alcohol in the development of mania in the patients, i.e., if alcohol was the 'inducing' agent, if alcohol was only one among several potential precipitating factors, or if it was a co-occurrence by chance.

**Discussion:** Establishing the relationship of alcohol with mania is known to have immense clinical importance. Furthermore, a potential benefit of research on the association of alcohol drinking and mania would be the better understanding of the biological underpinnings of bipolar disorder.

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#### **INTRODUCTION**

The co-occurrence of bipolar disorder and alcoholism has been well documented [1]. Various hypotheses have been proposed to explain this co-occurrence [2]. One among them is the ability of alcohol to 'cause' bipolar disorder in a sub-set of patients [3]. Recurrent mania has been reported occurring following excessive alcohol drinking [4]. Cases of mania occurring subsequent to heavy alcohol drinking have been variously described by previous authors as alcohol 'induced' mania, 'secondary' mania, mania 'precipitated' by alcohol and so on. Limited research in this area has deterred the understanding of the association of alcohol drinking and mania in such cases. A consequence of this is that alcohol 'induced' mania remains a vague diagnostic entity with uncertain validity.

We report three cases of mania occurring subsequent to heavy alcohol drinking, each having distinct characteristics. Probable nature of association between alcohol use and mania in the cases are discussed. Implications and future avenues of research are discussed.

#### **CASE PRESENTATIONS**

## Case 1

A 55-year old male with insignificant family history presented

with one month's history of irritability, violence, grandiosity, over-activity, over-spending and decreased need for sleep. On further exploration of history, it emerged that the above symptoms were observed two weeks after restarting alcohol intake, following peer-pressure.

The patient had started to consume alcohol at the age of 24 years, progressing to a dependent pattern at the age of 29. From the age of 30 years, he had suffered 6 episodes suggestive of mania prior to the present episode, with three of them accompanied by psychotic symptoms. Strikingly, all the manic episodes occurred few days following significant increase in alcohol consumption. Following abstinence from alcohol and introduction of anti-manic drugs, symptoms would remit fully in a few days. He would stop taking medication on his own soon after, remaining symptom-free and abstinent from alcohol use in-between episodes.

#### Case 2

A 45-year old male with unremarkable family history came with two month's history persistent irritability, increased talkativeness, over-religiosity, inflated self esteem, and decreased need for sleep. Symptoms were observed about 10 days after a social gathering where he had consumed some alcohol but had gone on to drink excessively in the following days.



On detailed history, it emerged that he had started using alcohol at the age of 35 years, gradually progressing to a dependent pattern from the age of 38. There was history suggestive of a manic episode (with similar symptoms to the index episode) without psychotic symptoms at the age of 40 years, following an increase in alcohol use over few days. The episode had necessitated in-patient care. With anti-manic medications and abstinence from alcohol, symptoms had remitted in three weeks. Soon after discharge, he stopped medication, but abstained from alcohol and remained symptom-free for five years.

#### Case 3

A 34-year old man with family history of alcohol dependence in a second degree relative, with no significant past history, presented with history of irritability, physical aggression, increased activity levels, inflated self esteem, social disinhibition, decreased need for sleep and increased libido for the past 2 months. His wife reported that the above symptoms were observed about 1 week following abrupt increase in consumption of alcohol. He had started consuming alcohol at the age of 20 years, growing to a dependence pattern from the age of 29 years.

## Further description of cases

Detailed description of treatment and further course of the cases are outside the scope of this article. Manic symptoms in all 3 patients remitted after 2-3 weeks of presentation. In all the patients, after admission in our hospital, abstinence from alcohol was ensured. Anti-manic medications were used in cases 1 and 2 only. Benzodiazepines (in de-escalating doses) and vitamins were administered to all the patients.

It must be highlighted that in the first two cases, alcohol dependence had been missed in the diagnosis made by previous treating physicians, with no intervention being done to interrupt the use of alcohol. In all the cases, thorough history-taking ruled out evolving depression or mania accompanying increased use of alcohol prior to onset of mania.

# **DISCUSSION**

In the cases depicted, commonalities are – onset of mania shortly after increase in alcohol consumption; quick remission of manic symptoms after stopping alcohol drinking; symptom-free periods during abstinence from alcohol. In addition to these observations, the relatively late age of onset of mania and the absence of family history of mood disorder in all three cases are not typical of the clinical presentation of 'primary' mania. All three cases would fulfill the DSM-V [5] diagnostic criteria for "Alcohol-induced bipolar disorder". However, the differences in the cases provides the opportunity to recognize that the conviction with which alcohol could be termed 'inducing' agent as against a chance association, or only one among many potential precipitating factors would be highest in case 1, followed by cases 2 and 3. Longitudinal follow-up would be essential in cases 2

and 3 to accurately describe the nature of association of alcohol drinking and mania.

In assessing the causal nature of observed associations and validity of psychiatric illnesses, the criteria proposed by Bradford Hill [6] and Robins and Guze [7] have been valuable. Though psychiatric disorders have conventionally struggled to fulfill all these criteria, they could be useful frameworks in guiding future research in this area. Establishing the relationship of alcohol with mania is known to have therapeutic and prognostic importance [1-3]. For instance, identifying this association in a patient with mania would allow the clinician to determine the impetus to be given to interventions towards interruption/reduction of alcohol use as opposed to relying only on mood-stabilizing medication. Misrecognition of the association may adversely impact the patient, as exemplified in the first two of the described cases. Also, a potential benefit of research on the association of alcohol and mania would be the gains in understanding the biological underpinnings of bipolar disorder. Inspiration could be sought from the research into the association between cannabis use and schizophrenia, which has led to commendable insights into the neurobiology of schizophrenia and the development of potential novel treatments [8].

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