



A Case Report on Alcohol Dependence Syndrome with Relation to Insomnia

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ABSTRACT

Alcohol dependence is a maladaptive pattern of substance use, leading to clinically significant impairment or distress; chronic alcohol abuse has been known to disrupt the normal sleep cycle and lead to sleep disorders, including sleep terror disorder. A male patient of age 42 years was a known alcoholic for 24 years, and the patient does not have any previous psychiatric history. Then, he stopped drinking for four days and developed insomnia. The patient gave an account of emotional outbreaks from 2 days; vital signs included blood pressure 140\90 mmHg, pulse rate 81 bpm, respiratory rate 20 cpm, and oxygen saturation 97%@RA and the patient's GRBS level was 210 mg\dl, and the patient was immediately given with medication in. Lorazepam 4mg (IV), inj. Optineuron (2 amp in 100 ml NS, BD), inj. Panto 40mg (IV), the same drug, was continued for three days, and there was no complaint of visual hallucinations. The patient felt symptomatically better and was discharged on the 4th day with no fresh complaints. The patient was advised to continue Tab. lorazepam 2mg for three days. The preliminary case investigation evaluated the link between insomnia and alcohol dependence syndrome (ADS).

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INTRODUCTION

Alcohol dependence is a common disorder that causes physical, psychological, and social problems. The pathogenesis of alcohol dependence is multifactorial and includes shared genetic and environmental factors [1]. Various terms, including alcohol abuse and alcohol dependence, have known alco-

holism. Today, it's referred to as ADS [2].

According to Morse and Flavin, the symptoms of alcohol dependency (craving, preoccupation) are chronic, and contemporary therapeutic techniques are founded on the notion that these symptoms can be decreased but not suppressed. Therefore, the stated objective of medical trials was lower-grade craving and abstinence [3]. Nearly a third of alcoholics have potentially serious health issues, while 20 to 21% experience psychotic symptoms. Significant marital, employment, and behavioral problems affect 40 to 56 percent of alcoholics, possibly encouraging continued heavy drinking [4].

Alcoholism can harm the brain in various ways, depending on variables like age, sex, past alcohol consumption, food, and the sensitivity of particular brain regions [2]. According to recent estimates, people with alcoholism have a 7% lifetime risk of suicide, similar to the risk linked with depres-

sion [5]. Compulsive behavior, dyscontrol, salience, obsession, and a physiologic tolerance to alcohol are just a few of the symptoms and indicators they'll display [6].

As a result, alcoholism meets the criteria for a psychiatric illness defined by the Diagnostic and Statistical Manual of Mental Disorders. Consequently, despite issues associated with alcohol use, there is persistent alcohol use in alcohol dependence [6]. They also experience panic disorder, specific phobia, obsessive-compulsive disorder, generalized anxiety disorder (GAD), social anxiety disorder (SAD), post-traumatic stress disorder (PTSD), and panic disorder [7].

There are several other potential possibilities for alcoholism risk factors besides the known ones. Trait anxiety has been linked to adolescent susceptibility to excessive drinking, alcoholics' desire for alcohol, and the ability to predict alcohol dependency over time. In a follow-up study, anxiety disorder was also discovered to be a risk factor for alcohol dependency. Numerous personality traits, including predelinquency, rebelliousness, impulsivity, and thrill-seeking, have been found to predict alcohol consumption [8].

Chronic alcohol usage has been linked to sleep disturbances, especially sleep terror disorder, by disturbing the regular sleep cycle. Chronic alcohol consumption can modify sleep architecture significantly, reducing rapid eye movement (REM) sleep, interfering with sleep-wake processes, and changing sleep patterns [8]. Alcohol and other drugs are linked to insomnia (problems falling or staying asleep). Alcohol consumption decreased the time it took for sleep to start but interrupted the subsequent sleep phase [9]. Alcohol-dependent patients are frequently advised to concentrate on sobriety to improve their sleep. Considering that sleep disruptions might continue even after lengthy abstinence, many people will find this strategy undesirable [10].

Therefore, it is essential to carefully evaluate behavioural and pharmaceutical treatment options while closely monitoring sleep disturbance throughout the early stages of recovery [10]. Alcohol consumption has been associated with at least two desires: to feel better (reward drinking) or not to feel worse (relief drinking). Therefore, it should come as no surprise that alcohol dependency is linked to one or more co-occurring disorders, including personality disorders (39.5%), anxiety disorders (23.5%), and mood disorders (27.6%) [6].

Relapse is one of the main issues of alcoholism. According to estimates, 85% of patients with alcoholism relapse. Stress, alcohol cues, and alcohol

need are the three leading causes of deterioration; therefore, by suppressing craving, relapses should be preventable [6]. Transcranial magnetic stimulation (TMS) is a noninvasive technique that controls brain activity and connectivity. It has been demonstrated that repetitive TMS (rTMS) temporarily reduces alcohol craving [6].

CASE STUDY

A male patient of age 42 years with a medical history of type 2 diabetes mellitus and hypertension, and the patient stopped medications four months back. The patient does not have any previous psychiatric history. The patient was a known alcoholic for 24 years and had been drinking four quarters daily for the last month. Then he stopped drinking for four days, after which he developed insomnia and could not sleep, so he was admitted to the psychiatry department in our hospital. The patient gives a history of emotional outbreaks from 2 days and visual hallucinations from yesterday. Vital signs included blood pressure 140\90 mmHg, pulse rate 81 bpm, respiratory rate 20 cpm, and oxygen saturation 97%@RA. The patient's GRBS level was 210 mg\dl; other test parameters are shown in Table 1, and the patient was immediately given medication. Lorazepam 4mg (IV), inj. Optineuron (2 amp in 100 ml NS, BD), inj. Panto 40mg (IV), in. meet 4mg (IV) if needed. Haloperidol 5mg (IV) if required, and on the second day, the patient's GRBS level is 200 mg/dl, and the same medications are continued. On 3rd day, the same drugs were continued. There was no complaint of visual hallucinations, and the patient feels symptomatically better; the patient was discharged on the 4th day with no fresh complaints. The patient was advised to continue Tab. lorazepam 2mg for three days.

DISCUSSION

People with anxiety and depression illnesses often have sleep patterns similar to alcoholics. In secondary depressed and non-depressed alcoholics, abstinence causes comparable REM sleep alterations [10]. Insomnia was genetically linked to greater levels of drug use due to moderate genetic associations with smoking features and alcohol dependency [9].

In heavy drinkers, sleep disturbances and complaints may also be caused by sleep-disordered breathing. Snoring and even obstructive sleep apnea (OSA), which causes oxygen desaturation, can develop in typical sleepers even after one drink [10]. Alcohol also affects sleep in various ways. Alcohol may worsen sleep-inducing movement prob-

Table 1: Test parameters

| Test parameter | Result | Reference range |
|------------------|-----------|---|
| Total bilirubin | 1.6mg\dl | 0.2-1.3 mg\dl |
| Direct bilirubin | 0.4 mg\dl | 0-0.3 mg\dl |
| SGOT | 155U\L | Up to 35U\L |
| SGPT | 64u\L | Up to 38-126 U\L |
| PCV | 38.4% | 40-54% |
| MCV | 79.8 fl | 80-100fl |
| HbA1C | 9.5% | American diabetic association recommendations: Diabetic:>=6.5% |

lems, and periodic leg movements that disrupt sleep increased two to threefold in men and women who take two or more drinks daily [10].

Sleep disturbance is increasingly recognized as an essential but understudied mechanism in the complex and multifactorial causation of the symptoms and functional disability associated with psychiatric disorders [11]. Despite ongoing abstinence, objective and subjective sleep problems last for months, and naturalistic treatment outcomes studies suggest that they lead to relapse [12].

Treatment for insomnia during alcohol rehabilitation may enhance sleep quality and reduce the risk of relapse. Alcohol use has been linked to intellectual declines in verbal learning and memory, handling speed, working memory, visuospatial capacity, and linguistic skills [12]. Additionally, alcoholism can account for a significant number of all psychiatric admissions and a considerable portion of the workload at all psychiatric facilities. These cases place a substantial demand on the unit's and the hospital's resources due to the high prevalence of alcohol-related physical, occupational, disciplinary, and social issues [4].

Alcoholic hallucinosis is a rare complication of chronic alcohol abuse characterized by predominantly auditory hallucinations that occur during or after heavy alcohol consumption [11]. High trait anxiety and parental alcohol issues were associated with increased alcohol dependence in men. High facial flushing, high stimulation while drunk, and high social support were all associated with lower incidence [2]. Trait anxiety and autonomic nervous system activity are strongly correlated at rest and during stress [8].

Alcohol has traditionally been used as a sedative. But it's crucial to understand the complexity of the connection between alcohol use and insomnia for several reasons. Alcohol misuse or dependence may be indicated by sleep disruption. Therefore, clinical

awareness of sleeplessness as a sign of alcoholism may help with prompt intervention. Understanding the connection between sleep disturbance and alcohol use disorders may help doctors better support patients in recovery [10].

CONCLUSION

Although it varies, people who drink alcohol frequently are more likely to experience sleeplessness. It can significantly lower quality of life and cause anxiety, depression, and other psychological issues to worsen. Alcohol helps people fall asleep when consumed at low to moderate levels. But even in people who do not fit the diagnostic criteria for alcohol dependency, prolonged alcohol consumption ultimately disturbs sleep-related physiology, according to scholarly consensus.

Conflict of Interest

The authors declare no conflict of Interest.

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