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ALCOHOL DEPENDENCE SYNDROME

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ABSTRACT
Alcohol dependence syndrome is a psychiatric disorder characterized by loss of control over alcohol consumption, preoccupation with alcohol, withdrawal symptoms upon cessation, and continued use despite negative consequences. Key features include craving, tolerance, and the inability to cut down, which can lead to significant physical, psychological, and social problems. The fear of withdrawal can also perpetuate the cycle of dependence and relapse.[1]

KEYWORDS: Key features include craving, tolerance, and the inability to cut down, which can lead to significant physical, psychological, and social problems.

INTRODUCTION
The Alcohol Dependence Syndrome described by Edwards and Gross (1976) remains a key framework in the World Health Organization's classification of alcoholism. The present research aimed to assess and validate this syndrome among a sample of 225 individuals experiencing alcohol-related difficulties. From this, a concise 29-item Alcohol Dependence Scale (ADS) was developed, demonstrating strong internal consistency reliability ($\alpha = 0.92$). Due to the strong relationship between dependence severity and the negative outcomes of alcohol use, the Alcohol Dependence Scale offers valuable insight for treatment planning. It can be particularly useful in determining whether an individual would benefit more from a goal of complete abstinence or controlled drinking.[2]

CLINICAL CHARACTERISTICS
1. Craving: Strong desire or sense of compulsion to drink alcohol.
2. Loss of Control: Difficulty controlling onset, termination, or level of use
3. Tolerance: Need for markedly increased amounts of alcohol to achieve desired effect.
4. Withdrawal Symptoms: Physical symptoms when alcohol is reduced/ceased.
Tremors, Sweating, Anxiety, Nausea, Vomiting, Delirium, Tremors (Severe Cases), Relief of Symptoms by Drinking alcohol (negative reinforcement).
5. Persistent Use Despite Harm: Continued use despite: Medical problems (e.g., liver disease), Psychological issues (e.g., depression),Social/family consequences, Occupation damage.
6. Salience: Increased priority given to drinking over other activities/hobbies.
7. Narrowing of Repertoire: Reduced variability in drinking behaviour.
8. Compulsive Use: Drinking becomes mandatory to function.
9. Reinstatement After Abstinence: Rapid return to old drinking pattern after a period of abstinence.[3]

CASE PRESENTATION
A male patient of 21 year's old he was apparently normal three days ago when initiated alcohol consumption(toddy) daily per litter with friends as the part of joy this pattern of drinking continued and he used to express anger aggression at the period of time. He exhibited threatening behaviour under effect of alcohol without drink the patient feel discomfort anxious loss of appetite, sleeping disturbances.

- He had past medical history of seizure episodes since 3 years and trauma since 8 months.
- He was alcoholic since 3 years and smoker since 1 year.

INVESTIGATIONS

Parameter	Results	Normal Range	Remark
Eosinophils	17%	(01-06%)	Mildly Elevated
Blood Urea	10	(14-45)	Slightly Decreased
SGOP	67	(up to 67 IU/L)	Mildly Elevated
SGPT	38	(up to 37 IU/L)	Mildly elevated

OTHER INVESTIGATIONS

ECG: Sinus tachycardia, atrial fibrillation.
U/S ABDOMEN: Grade 1 fatty changes.

TREATMENT

TRADE NAME	GENERIC NAME	ROUTE	DOSE	FRQY	THERAPETIC ACTION/USE
T. Tolaz dt	Olanzapine	P/O	5mg	OD	Schizophrenia and bipolar disorder.
T. Divaa	Divalproex sodium	P/O	500mg	OD	Seizures, bipolar disorder and migraine prevention.
C.Flucos	Fluoxetine	P/O	20mg	OD	Reduces alcohol consumption, depressive symptoms.
INJ.Serence	Haloperidol	IM	5mg	SOS	Schizophrenia, Tourette syndrome.
INJ.Lorazepam	Lorazepam	IM	2mg	SOS	Anxiety and seizure.
T.Naltiva	Naltroxone	P/O	50mg	OD	Treat alcohol use disorder.

CLINCAL PRESENTATION

Patient generally with strong craving or urge to consume alcohol, inability cutting to limit drinking amount, time, or frequency. Develop when alcohol intake is reduce/stopped: Tremors, anxiety, agitation, nausea, vomiting, and tachycardia.

DIAGNOSTIC EVALUATION

Typical effects of alcohol use that are found on physical examination (polyneuropathy, fetor alcoholics, rhinophyma, spider nevi, altered facial appearance, and many more). The most sensitive laboratory test is the gamma-GT concentration. An elevation of the carbohydrate-deficient transferrin (CDT) concentration is correlated with chronic alcohol use. For clinical use, gamma-GT, MCV, and CDT are the simplest and most reliable tests. The combined measurement of gamma-GT and CDT seems to be the most sensitive and specific test available.

The fact that alcohol has been consumed in the past three to four days can be confirmed by detection of the direct ethanol metabolite ethyl glucuronide (or ethyl-sulfate, ETS).[3,4,5,6]

MANAGEMENT

Nutritional Therapy

To improve the nutritional status of individuals with mild alcoholic hepatitis (AH), it is advised to provide a high-protein, low-fat diet along with adequate supplementation of vitamins B, C, K, and folic acid. These nutritional interventions have shown to enhance patient outcomes in short-term evaluations, such as liver function tests and histological assessments.

ALCOHOL WITHDRAWAL THERAPIES

Specific medications for alcohol withdrawal are clinically used as adjunctive treatments. Disulfiram, an irreversible inhibitor of alcohol dehydrogenase, is one of the commonly prescribed drugs for the management of alcoholism.

Acamprosate, when combined with psychological counselling, has been shown to help prevent relapse in alcohol-dependent individuals, though there is a possibility of liver-related adverse effects.

Baclofen, a GABA-B receptor agonist, has demonstrated effectiveness in maintaining alcohol abstinence, even among patients suffering from liver cirrhosis. Moreover, the opioid receptor antagonist naltrexone canalso aid in reducing relapse, though its overall efficacy remains moderate.

Hormone-Related Therapies

Corticosteroids are commonly administered to enhance the nutritional and clinical condition of patients suffering from alcoholic hepatitis (AH). The anti-thyroid medication propylthiouracil has also been tested for its therapeutic potential in acute AH.

Since alcoholic liver disease (ALD) is often linked to increased oxidative stress, the use of antioxidants such as vitamin E and silymarin has been explored in various

studies. Conversely, another study assessing the combination of N-acetylcysteine and corticosteroids reported better survival rates among AH patients.

In addition, losartan has been investigated for its potential role in preventing hepatic fibrosis. Prednisolone, a corticosteroid, is widely used to reduce inflammation of hepatocytes. Early studies involving oxandrolone suggested beneficial effects.[7,8,9,10,11]

DISCUSSION

This case is about a young adult male diagnosed with Alcohol Dependence Syndrome (ADS).

He showed features like tolerance, withdrawal symptoms, and loss of control, The patient needed more toddy to feel the same effect and developed tremors, restlessness, and irritability when he stopped drinking. He also had sleep problems and seizures, showing the effect of alcohol on the brain. Lab tests revealed increased eosinophils and Grade I fatty liver, indicating early liver damage. These findings suggest a moderate to severe level of dependence. He was treated with Naltrexone 50 mg once daily to reduce cravings and prevent relapse. Supportive care included hydration, nutrition, counselling, and family support. Behavioral therapy helped him understand the risks of alcohol and how to stay sober. Because he is young and motivated, his prognosis is good with continued follow-up. This case shows that early diagnosis, medical treatment, and family involvement are vital for long-term recovery.

CONCLUSION

A male patient of 21 year's old was admitted in the psychiatric ward with the known case of seizures, he had a complaint related to alcohol dependence syndrome and after taking appropriate treatment his condition was improved.

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