

ORIGINAL RESEARCH

The prevalence of delirium in patients with alcohol related disorders

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ABSTRACT

Delirium tremens or alcohol withdrawal delirium is a severe complication of alcohol dependence and it occurs in approximately 5–20% of patients who go through alcohol withdrawal. There are many dilemmas and controversies with respect to its occurrence, aetiology, pathogenesis, evaluation and management of alcohol delirium tremens (DT). Consecutively referred patients with alcohol related problems to the Department of Psychiatry, who fulfilled the inclusion criteria were included in the study. A total of 150 cases were assessed and 142 cases were included for the final analysis. All the patients were assessed on the day of referral or admission and appropriate scales were used to collect the data. A total of 31 patients (21.8%) had developed Delirium tremens (DT) out of 142 patients which were hospitalized for alcohol dependence syndrome over a period of 1.5 years. Alcohol Withdrawal Seizures were seen in 18 cases (12.7%), all of which were of generalized tonic clonic seizures (GTCS) in semiology and occurred within the first 72 hours of the last drink of alcohol. There was a high prevalence of co- occurrence of withdrawal seizures with DT in 11 (7.7%) patients.

Keywords: Delirium, Alcohol related disorders, Withdrawal seizures

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INTRODUCTION

Alcohol use is associated with progressively increased consumption leading to alcohol related disorders resulting in multiple physical, psychological and social problems. Alcohol dependence is one of the many manifestations and is still elusive in terms of its causation as why only few people get dependent and develop complications like delirium tremens and seizures. Research in the field of alcoholism has given answers to some of the questions regarding the vulnerability of certain people to develop alcohol dependence and its complications, but a more needs to be understood. Although only mild withdrawal symptoms like insomnia and tremors develop in some patients, a substantial portion of them have experienced severe manifestations including seizures or delirium tremens (DT).¹

Delirium tremens or alcohol withdrawal delirium is a severe complication of alcohol dependence and it occurs in approximately 5–20% of patients who go through alcohol withdrawal¹. There are many dilemmas and controversies with respect to its occurrence, aetiology, pathogenesis, evaluation and management of alcohol delirium tremens (DT). Delirium tremens is a short lived, but occasionally life

threatening, toxic confusional state with accompanying somatic disturbances. It is usually a consequence of absolute or relative withdrawal of alcohol in severely dependent users with a long history of use. Onset may also be preceded by withdrawal convulsions and prodromal symptoms typically include insomnia, tremulousness and fear^{2,3}. DT is associated with a high morbidity and mortality.⁴

METHODOLOGY**SOURCE OF DATA**

142 out of 150 patients with alcohol related problems were recruited as per ICD-10, those who had attended or referred to the department of psychiatry.

TYPE OF STUDY

A prospective cross sectional study design.

SAMPLING PROCEDURE

Consecutive sampling was done to select the study subjects. All patients who attended or referred to the department of psychiatry with alcohol related disorders as per ICD-10 were included in the study.

INCLUSION CRITERIA

Adult patients more than 18yrs of age who had attended or referred to the Department of Psychiatry for alcohol related problems as per ICD-10.

EXCLUSION CRITERIA

- Clinical evidence of other significant primary psychiatric illness other than alcohol related disorders were excluded. These include dementia due to any cause, schizophrenia, bipolar affective disorders and major depressive disorders.
- Other substance use disorders like benzodiazepine dependence syndrome, opioid dependence syndrome and cannabis dependence syndrome, except for nicotine dependence syndrome Delirium primarily due to other causes

like neuro-

infections, head injury (head injury resulting in intracranial bleed or significant oedema), hepatic encephalopathy, metabolic causes like hyponatremia, hypoglycemia and systemic causes like septicemia.

METHODS OF COLLECTION OF DATA

Consecutively referred patients with alcohol related problems to the Department of Psychiatry, who fulfilled the inclusion criteria were included in the study. A total of 150 cases were assessed and 142 cases were included for the final analysis. All the patients were assessed on the day of referral or admission and appropriate scales were used to collect the data.

RESULTS

Table 1: Prevalence of Delirium Tremens (DT) and withdrawal seizures in patients with Alcohol Dependence Syndrome

Variable	N (%)
Delirium Tremens	31 (21.8%)
Delirium Tremens with seizures	11 (7.7%)
Withdrawal seizures	18 (12.7%)

Table 2: Clinical Profile of patients with Delirium Tremens (DT) on Delirium Rating Scale (DRS R98)

N=31	Scoring of the DRS R98 Scale			
	0	1	2	3
DRS Score on Day 1 of admission				
Sleep -Wake Cycle	0	1 (3.2%)	8 (25.8%)	24 (77.4%)
Perceptual Disturbances	0	2 (6.4%)	17 (54.8%)	14 (45.1%)
Delusions	0	3 (9.6%)	16 (51.6%)	14 (45.1%)
Lability of Affect	0	4 (12.9%)	20 (64.5%)	9 (29.0%)
Language	0	0	24 (77.%)	9 (29.0%)
Thought Process	0	1 (3.2%)	18 (58.0%)	14 (45.0%)
Motor Agitation	0	1 (3.2%)	8 (25.8%)	24 (77.4%)
Motor Retardation	0	14 (45.1%)	18 (58.0%)	1 (3.2%)
Orientation	0	0	0	31 (100.0%)
Attention	0	0	20 (64.5%)	13 (41.9%)
Short-Term Memory	0	0	14 (45.1%)	19 (61.2%)
Long-Term Memory	3 (9.6%)	15 (48.3%)	13 (41.9%)	2 (6.4%)
Visuospatial Ability	0	2 (6.4%)	23 (74.1%)	8 (25.8%)
Temporal onset of symptoms	0	0	5 (16.1%)	28 (90.3%)
Fluctuation of symptoms	0	4 (12.9%)	29 (93.5%)	0
Physical Disorder	29 (93.5%)	2 (6.4%)	0	0

A total of 31 patients (21.8%) had developed Delirium tremens (DT) out of 142 patients which were hospitalized for alcohol dependence syndrome over a period of years. Alcohol Withdrawal Seizures were seen in 18 cases (12.7%), all of which were of generalized tonic clonic seizures (GTCS) in semiology and occurred within the first 72 hours of the last drink of alcohol. There was a high prevalence of co- occurrence of withdrawal seizures with DT in 11 (7.7%) patients.

All the 31 cases had predominantly autonomic hyperactivity with tachycardia which was comparable with that of other non DT cases. On DRS R-98 scale, majority of the cases had higher scores (>70% cases)

on impairment in attention, orientation, psychomotor agitation, sleep wake cycle impairment and temporal onset of symptoms to relative decrease or cessation of alcohol use. Around half of these cases had perceptual impairments in the form of hallucinations, disturbed thought process and short term memory impairment. The above clinical profile of DT is indicative of hyperactive form of delirium. Most cases of DT resolved by four days of admission and detoxification. Three cases had protracted as delirium over 1 month duration.

DISCUSSION

In our study a total of 31 patients (21.8%) had developed DT out of 142 patients who were referred for alcohol dependence syndrome in psychiatric department over a period of 1.5 years.

The study sample represented the population with severe alcohol dependence as indicated by the higher consumption of alcohol of about 102 grams of alcohol per day over a period of more than 10 years. These findings indicate that every fifth patient with severe alcohol dependence syndrome developed withdrawal symptoms in the form of DT or withdrawal seizures. The worldwide prevalence of withdrawal seizures ranges between 0.6% and 15%. Prevalence of alcohol withdrawal seizures was about 15% in an Indian study.^{5,6}

The mean age distribution of the sample was comparable with earlier studies and most patients came from lower socio economic status. Most of the patients used to consume toddy and Indian made Foreign Liquor (IMFL; whisky in this group), most of them had co-morbid tobacco dependence syndrome. There was high family history of alcohol use in both the first degree and second degree relatives. Most patients had the onset of withdrawal symptoms within 24 hours of discontinuation of alcohol use. Most patients were rated as moderate to severe on SADQ-C rating scale which is again an indicator of sample with severe alcohol dependence syndrome. The above sample findings are similar to the findings in the earlier studies which were hospital based sample use.^{7,8}

There is a significant variation in occurrence of DT between studies ranging from 1% to 33% of the individuals who undergo treatment for alcohol withdrawal.

In another study 33% of the cases diagnosed as having alcohol dependence developed DT, which was much higher than that found in the earlier study. This variation in occurrence of DT in the previous studies may be due to the varying study methodology, sampling methods and the methods of assessments.

Our study findings show higher prevalence rates when compared to the earlier studies which are in the range of 5-10% of cases with alcohol dependence syndrome. The possible causes may be due to the methodological issues like a prospective study with consecutive sampling and the study population was hospital based which is an indication of the severe form of alcohol dependence syndrome. There was higher co-morbid hepatic impairment in the ultra-sonographic evaluation showing features of hepatitis in the cases with DT, which may be a cause for the higher prevalence of DT in our study sample, as reported by earlier studies.⁹

In our study alcohol withdrawal seizures was seen in 18 cases (12.7%), all of which were of generalized tonic clonic seizures (GTCS) in semiology and occurred within the first 72 hours of the last drink of alcohol. There was a high prevalence of co-

occurrence of withdrawal seizures cases in 11 (7.7%) cases with that of DT. There was high co-occurrence of DT with withdrawal seizure, which was one of the significant predictors of DT. This finding is similar to that of earlier studies.¹⁰

In another study conducted in rural areas of AP and Telengana, to assess the problem drinking in rural women found that dependence was seen in 4.1% and problem drinking in 1%. Physical complications possibly due to alcohol were seen in 4.1% and psychiatric co-morbidity in 1%. Pregnancy drinking was recorded in 4.4%. Only 0.2% came for follow-up.^{4,8}

CONCLUSION

The prevalence of DT in cases with alcohol dependence syndrome was 22% in the patients admitted in a general hospital setup for alcohol de-addiction. It was associated with frequent occurrence of withdrawal seizures and was seen in patients with higher score on CIWA-Ar rating scale.

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