

Suicidal Behavior in Alcohol Dependence Syndrome

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Abstract

Background: This study was designed to find the prevalence of suicidal behavior in patients with alcohol dependence syndrome (ADS) and to assess the risk factors for the same. **Subjects and Methods:** All the patients with ADS who presented during the study period were screened. ADS were diagnosed as per ICD-10 criteria. All the patients underwent detailed clinical and neuropsychiatric evaluation. MINI Scale (Mini International Neuropsychiatry Interview) was used to assess suicidality and BPRS (Brief Psychiatric Rating Scale) was used to assess psychiatric comorbidities. **Results:** Of the 100 patients with ADS identified during the study period, 14 (14%) had past history of attempted suicide. **Conclusion:** Patients with psychiatric comorbidity were more likely to have a history of past suicide attempt. The patients with psychiatric comorbidity also had higher current suicidality scores. All patients with alcoholism must be evaluated for comorbid psychiatric problems and suicide risk.

Keywords: Alcohol dependence syndrome, Psychiatric comorbidity, Suicidality.

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Introduction

Alcohol abuse and alcohol dependence are major health problems. Individuals with alcohol abuse are not dependent on alcohol; but have repeated legal, interpersonal, social, or occupational impairments related to alcohol consumption. Alcohol dependence syndrome is characterized by tolerance (a need for markedly increased amounts of alcohol to achieve desired effect and/or markedly diminished effect with the continued use of the same amount of alcohol), and a withdrawal syndrome when alcohol is discontinued or intake is decreased.^[1] Alcohol abuse and dependence are commonly called alcoholism. Suicidal behaviour is common in patients with ADS. This association between alcohol use disorders and suicidality is important both from a research and a therapeutic point of view. Professionals working with such patients face unique and challenging dilemmas about how to provide the best treatment to address both conditions. This study was done to identify prevalence of attempted suicide among a group of male alcoholics admitted to a tertiary care centre. The study examines the relationship between presence of mental health morbidity and suicidality with other variables.^[2]

Subjects and Methods

All patients who received a diagnosis of alcohol dependence syndrome as per ICD-10 criteria were identified during the study period. Those who gave informed consent were included in the study. Patients with acute alcohol intoxication and those with alcohol withdrawal symptoms were excluded. We then performed a descriptive cross-sectional type of study. All patients were under the management of a consultant psychiatrist. Face-to-face interviews were conducted. Socio-demographic details were recorded. Family history of ADS, or psychiatric disorders, or suicide was recorded. Presence of any suicide attempt was recorded. Detailed history and mental state examination was done for all patients. A self-made questionnaire was used which contained questions on socio-demographic details, personal and clinical information, past and family history, and habits of the patients. Lifetime prevalence measures were taken for psychiatric problems. BPRS (Brief Psychiatric Rating Scale) was administered to all patients to quantify symptoms. Suicidality was assessed using MINI Scale Version 6.0.0 score (Mini International Neuropsychiatry Interview). No invasive procedures were performed. Treatment was offered for all unmet mental health needs identified in the subjects during study. There was no formal funding for the study. We summarized the demographic data as mean and median. We compared

ADS patients with comorbid psychiatric disorders with those who did not have comorbid psychiatric disorders. We also compared ADS patients with low suicidality with those who had high suicidality. Student's t test was used for parametric variables, and Fisher's exact t test used for non-parametric variables. Odds ratio was then calculated for the non-parametric variables which showed statistical significance between the 2 groups. Spearman's correlation coefficient was used to assess the correlation between the MINI scores and BPRS scores. A p value of <0.05 was considered significant. All the analyses were done with SPSS Statistics version 17 (Chicago, Illinois).

Results

We recruited 100 consecutive patients with ADS for the study. The results were as given below:

Overall Patient characteristics:

- Age:** The age range of the patients was from 23 to 65 years, with a mean age of 41.53 and median age of 41 years [Figure 1].
- Sex:** All the patients were males
- Economic status:** The majority of patients, 53 (53%), were from BPL (Below Poverty Line) families.
- Educational status:** Six (6%) were illiterate. Sixteen (16%) had studied up to 4th standard or less. Forty-five (45%) had educational status between that of 5th to 9th standard. Thirty-one (31%) had passed 10th standard. Only 2 (2%) had higher education. The mean number of years of education was 7.12.
- Occupational Status:** Two (2%) patients were unemployed. Fifty-two (52%) performed unskilled jobs. Thirty-eight (38%) had skilled jobs. Eight (8%) were businessmen. None of the patients had professional jobs.
- Number of months Alcohol dependent:** The mean number of months during which the patients were alcohol dependent was 55.35 (4.6125 years). It ranged from 1 to 20 years.
- Family history of ADS:** A high proportion, 73 (73%), had family history of ADS
- Family history of Psychiatric illness:** Twenty-four (24%) patients had family history of psychiatric illness
- Family history of Suicide:** Eleven (11%) patients had family history of suicide
- Past history of suicide attempt:** Fourteen (14%) patients had past history of attempted suicide
- Medical comorbidities:** Thirty-five (35%) patients had medical comorbidities. Out of which 16(45.7%) had diabetes mellitus; 7(20%) had systemic hypertension; 6 (17.1%) had alcoholic liver disease; and 1 patient (2.9%) each had acid-peptic disease, chronic kidney disease, tuberculosis, liver abscess, and pancreatitis.

- Use of drugs other than alcohol:** Except for 1(1%) patient who had cannabis use, none of the other patients reported the use of any other drug.
- Suicidality:** The MINI score which was used to assess current suicidality ranged from 5 to 20. The mean score was 7.55 (SD 2.41, 95% CI 7.07 to 8.03). Eighty-four (84%) had low MINI scores, 15(15%) had moderate scores, and only 1(1%) had high score.
- BPRS score:** The BPRS scores ranged from 19 to 64. The mean score was 25.96 (SD 6.56, 95% CI 24.64 to 27.24).
- Psychiatric comorbidity:** Fourteen (14%) patients had psychiatric comorbidity (Figure 2). Out of which 4 (28.6%) had the ICD-10 diagnosis of induced psychotic disorder; 3(21.4%) had severe depression; 2(14.3%) had severe depression with psychosis; and 1 patient (7.1%) each had paranoid schizophrenia, recurrent depressive disorder, induced mood disorder, delusional disorder, and BPAD.

Analysis of Factors Associated with Suicidality:

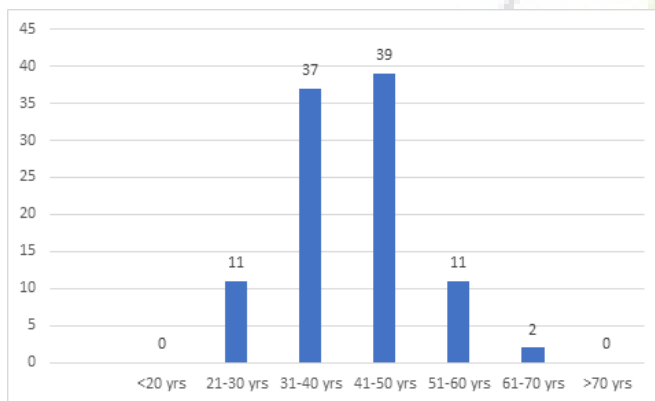
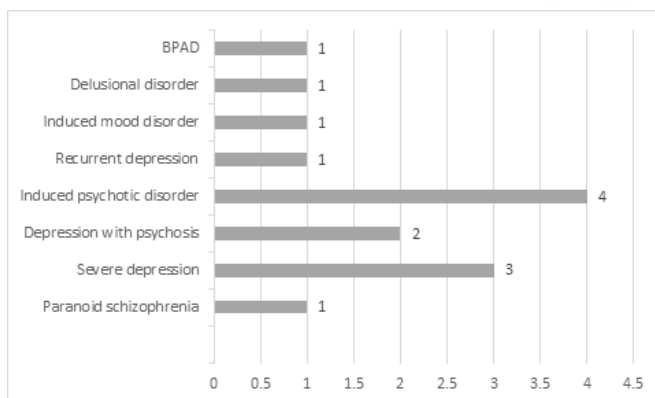
Patients with psychiatric illness had significantly higher MINI suicidality scores compared to others [Table 1]. Mean MINI score was 10.79 (SD 3.93) in the 'Psychiatrically ill' group compared to 7.02 (SD 1.55) in the group without psychiatric illness (p <0.0001, Student's t test). Spearman's correlation analysis comparing the MINI and BPRS scores showed a direct correlation. The correlation coefficient was 0.31. Patients with moderate and high MINI suicidality scores were then grouped together as 'High suicidality group' and compared with patients with low MINI score who constituted the 'Low suicidality group'. Those with high suicidality had significantly higher BPRS scores (p 0.00068). The mean BPRS score was 24.99 (SD 4.86) in those with low suicidality, compared to 30.94 (SD 11.02) in those with high suicidality [Table 2]. Fisher's exact t test comparing non-parametric variables between the groups with and without psychiatric comorbidity showed statistically significant difference only for 'Past suicide attempt' which was higher in the 'Psychiatrically ill' group compared to others (p 0.0005). Odds ratio was 11.2857 (95% CI 3.0698 to 41.4907). There was no statistically significant difference between the 2 groups in Age, Number of years of education, or Number of months ADS. The group with higher suicidality also had significantly higher 'Family history of suicide' (p 0.0144) and highly significant incidence of 'Past suicide attempt' (p 0.0001). Odds ratios were 5.9091 (95% CI 1.5407 to 22.6637) and 359.6667 (95% CI 34.7324 to 3724.4772) respectively. They also had a higher incidence of 'Family history of mental disease'. But this did not achieve statistical significance (p 0.0641). Other factors like BPL status, Employment status, Family history of ADS, and Comorbid medical illness did not differ significantly between the 2 groups.

Table 1: Analysis of parametric variables associated with psychiatric comorbidity

	ADS with Psychiatric illness	ADS without Psychiatric illness	P value
	Mean (SD)	Mean (SD)	
MINI score	10.79 (3.93)	7.02 (1.55)	<0.0001
BPRS score	35.5 (12)	24.38 (3.25)	<0.0001
Age (in years)	40.6 (10.59)	41.7 (8.58)	0.6638
Education (no. of years)	6.4 (4.01)	7.2 (2.99)	0.3771
No. of months ADS	52.29 (35.33)	55.85 (43.35)	0.7711

Table 2: Analysis of parametric variables associated with suicidality

	Low suicidality	High suicidality	P value
	Mean (SD)	Mean (SD)	
Age (in years)	42 (8.11)	38.93 (11.94)	0.2019
Education (no. of years)	7.3 (2.85)	6 (2.85)	0.1202
No. of months ADS	55.82 (43.71)	52.87 (34.02)	0.7993
BPRS	24.99 (4.86)	30.94 (11.02)	0.00068

**Figure 1: Age distribution of the patients in the study****Figure 2: Incidence of Psychiatric comorbidities for the patients in the study**

Discussion

Our study shows a significant association between psychiatric comorbidity and suicidality in patients with ADS. The psychiatrically ill group had statistically significant higher MINI suicidality scores as well as higher incidence of past suicidal attempts. Reciprocally, ADS patients with high suicidality had higher BPRS scores. The results also show that suicidal behaviour is common in individuals with alcoholism and that suicidal behaviour is especially frequent in patients with comorbid alcoholism and psychiatric disorders. Family history of suicide and Past suicide attempt can serve as red flags to identify those at a high risk for suicidal behaviour. Western studies have shown that comorbid substance abuse in ADS patients, especially cocaine abuse, has a significant association with suicidality. However this was not seen in this study as only 1 patient reported comorbid substance abuse. Our results are consistent with the hypothesis that it might not be substance disorders themselves, but rather comorbid lifetime mental disorders that predict suicide attempts. Comorbidity of alcohol dependence with mood, anxiety, and personality disorders can be attributed to factors shared among these other disorders.^[3] Potential study limitations are noted. Since this study was conducted in a tertiary care hospital, the results cannot be blindly extrapolated to the general population. Comorbidity is believed to be a major determinant of help-seeking.^[4] So the incidence of psychiatric comorbidity in ADS in a community based study is likely to be lower. Also, similar to all epidemiologic studies, lifetime comorbidity associations may be subject to recall bias. Tendency of patients and families to keep problems hidden could lead to underestimation of results. Ideally, to assess the relationship between alcohol

dependence and psychiatric problems, one needs to study a large population cohort followed from early teens into adulthood.

In an inpatient set up where individuals are detoxified for their alcohol dependence, it is important to assess if they have any other psychiatric co morbidity as it will help in the long term management and abstinence of the individual. Patients who have suicidal ideations should be assessed and suicide risk assessment must be evaluated. They should be given pharmacological intervention in case of severe depression and psychotic symptoms. ADS patients who have psychiatric co morbidity are less likely to disclose their symptoms. Hence it is important to assess them on a regular basis with standardized scales and repeated mental state examinations. Medical conditions should always be ruled out. Comorbid medical conditions may be missed out as patients are less likely to complain about their symptoms and the focus may be to get the individual abstinent. As there is a strong genetic link in the development of alcohol dependence, children of alcohol dependent individuals, especially of the adolescent age group, should be counselled and made aware of their genetic vulnerability and also the consequences of becoming dependent on alcohol. Spouses should be actively involved in the care of the patient. They should be given support and advice on how to detect relapse situations and act accordingly. Spouses and children of alcohol dependent individuals should be given family and marital counselling if required. We conclude that about 14% of ADS patients have psychiatric comorbidities. Patients with psychiatric comorbidity tend to have higher suicidality. A past history of attempted suicide in a patient with should alert us for the presence of psychiatric comorbidity. All patients with alcoholism must be evaluated for suicide risk and comorbid psychiatric problems and they should receive appropriate treatment for the same.

Conclusion

We conclude that about 14% of ADS patients have psychiatric comorbidities. Patients with psychiatric comorbidity tend to have higher suicidality. A past history of attempted suicide in a patient with should alert us for the presence of psychiatric comorbidity. All patients with alcoholism must be evaluated for suicide risk and comorbid psychiatric problems and they should receive appropriate treatment for the same

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