



Depression among alcohol dependent patients: a cross-sectional study

Abstract

Background: Substance use disorder and alcohol dependence in particular, is a major mental health problem. Many persons with alcohol dependence also suffer from a comorbid psychiatric illness, particularly depression. Depressive disorders when undiagnosed or untreated can contribute to the severity of dependence and also increase the risk of suicide. **Aims and objectives:** (1) To identify the prevalence of depression among alcohol dependent patients. (2) To describe the association between comorbid depression and the severity of alcohol dependence. **Methodology:** All consenting patients in the age group of 18-60 years who attended the de-addiction clinic were included in the study. Socio-demographic data and clinical history of those who met the inclusion criteria were recorded. Diagnosis was made using MINI-PLUS according to the ICD-10 diagnostic criteria. Severity of alcohol dependence was rated using Severity of Alcohol Dependence Questionnaire (SADQ) and depression with Hamilton Depression Rating Scale (HAM-D). **Results:** Seventy men participated in the study. Major depressive disorder was diagnosed in 22 (31.4%) of the subjects. Severity of alcohol dependence was assessed to be moderate in 70% of individuals. A significant association was noticed for the severity of alcoholism and severity of depression. **Conclusion:** Alcohol dependent individuals show a high rate of comorbid depression. The severity of alcoholism and severity of depression are statistically related.

Keywords: Substance-Related Disorders. Comorbidity. Prevalence.

**Christy Abraham¹,
Anithakumari Ayirolimeethal²,
Biju George³**

¹MD, Department of Psychiatry, Govt. Medical College, Kozhikode, and currently working at PHC, Malayalapurza, Pathanamthitta, Kerala, India, ²MD, Department of Psychiatry, Govt. Medical College, Kozhikode, Kerala, India, ³MD, Department of Community Medicine, Govt. Medical College, Kozhikode, Kerala, India

Correspondence: Dr. Anithakumari Ayirolimeethal, Associate Professor, Department of Psychiatry, Govt. Medical College, Kozhikode-673008, Kerala, India. akumeethal@rediffmail.com

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Introduction

Alcohol use disorder is one of the most prevalent psychiatric disorder. A significant number of alcohol use disorder patients also suffer from other psychiatric disorders including mood disorders, anxiety disorders, personality disorders, and schizophrenia.[1-4] Of these, depressive disorders were found to be the most prevalent axis I disorder.[5] People, when in distress tend to self-medicate using alcohol or other psychoactive substances. Alcohol itself can cause temporary mood swings. In a previous study, 25% of major depressives were found to be having an alcohol use disorder.[6] Though studies reported high rates of depression among alcoholics and alcoholism among patients with major depression, the cause effect relationship between alcoholism and depression remains controversial.[2,3]

Patients with substance use disorder were reported to have a high prevalence of depression.[3,7-9] de Graaf *et al.*[3] observed 14.9% of mood disorders among patients with substance use disorder and Deykin *et al.*[9] reported 20% of the substance use disorder subjects as having alcoholism and depression. The presence of a psychiatric comorbidity in alcoholics can badly influence the treatment outcome and these patients are more likely to be re-hospitalised.[10] It can increase the treatment cost and also lead to loss of productivity. When 110 subjects with the substance use disorder were

followed up for one year, 88% of them had depressive symptoms for at least one week and 57% of them were diagnosed as having a major depressive disorder.[11] Depressive symptoms or disorder often persists or appear after the acute phase management. A high rate of major depressive disorders was observed even among abstinent alcoholics when they were followed up for one year.[12] Many a time, alcoholic patients relapse and a few may commit suicide. Most often the comorbid depression goes undetected or unmanaged. The prognosis or the outcome can be improved if the comorbid psychiatric disorders are addressed. This study aims to have a look into the extent of the comorbid depression to throw some light into the problems that can be considered while addressing alcohol dependent patients.

Aims and objectives

To identify the prevalence of depression among alcohol dependent patients.

To describe the association between comorbid depression and the severity of alcohol dependence.

Methodology

The study was conducted during March to August 2014. Newly registered consecutive patients in the age group of

18-60 years, who attended the de-addiction clinic at a tertiary care centre (Government Medical College, Kozhikode, Kerala, India) were the study subjects. Patients with epilepsy, other substance use except nicotine, Mini Mental Status Examination (MMSE)[13] score less than 25, and those with severe medical problems that interfere with assessment were excluded. Only those individuals with last use of alcohol at least two weeks prior to the study were included. The study was approved by the institutional ethics committee for research.

After obtaining the informed written consent, socio-demographic profile and clinical data were recorded using a proforma. Diagnosis of alcohol dependence and depression were made using MINI-PLUS according to ICD-10 diagnostic criteria.[14] The severity of alcohol dependence was assessed using Severity of Alcohol Dependence Questionnaire (SADQ)[15] and the depression was rated using Hamilton Depression Rating Scale for Depression (HAM-D).[16] MMSE questionnaire was used to find out cognitive impairment. Statistical analysis was done using SPSS version 18 (SPSS Inc, Chicago, USA). Categorical variables were presented as frequency and percentages, and compared between the groups by chi-square test. A 'p' value of 0.05 or less was considered as statistically significant.

Results

Seventy patients, all men participated in this study. None of the patients refused consent. The socio-demographic details are shown in Table 1. Five (7.1%) of the patients had a history of delirium during the withdrawal phase. Age at initiation of alcohol use was found to be below 25 years in 52 (74.2%) and age at dependence was below 25 years in 17 (24.3%) of the study population. The severity of alcoholism was assessed as mild in 16 (22.9%), moderate 49 (70%), and severe five (7.1%) of the alcohol dependents. Major depressive disorder was diagnosed in 22 (31.4%) of the subjects. Of these 15 patients had mild depression and seven had moderate on HAM-D. Thirteen (18.6%) of the subjects reported a history of suicide attempt. Age was found to have no association with major depressive disorder ($p=0.412$). Also, the age at initiation and age at dependence of alcoholism were found to have no significant association with major depressive disorder ($p=0.853$, $p=0.693$) (Table 2). A significant relationship was noticed for severity of alcoholism and severity of depression ($p=0.010$) (Table 3).

Discussion

Our study revealed a high rate of depressive disorders among alcoholics. Similar observation was made by many researchers.[1,4,7,8,17] A major depressive disorder was diagnosed in 31.4% of the study population. An Indian study by Khalid *et al.*[7] reported a slightly higher (41.7%) prevalence of depressive symptoms among 36 alcoholics. However a higher prevalence of depressive symptoms (88%) and major depressive disorders (57%) was reported by Nunes *et al.*[11] This could be explained on the basis of differences in the study settings and the diagnostic criteria. In contrast to our observations, a lower prevalence (4.7%) of depressive symptoms was noticed in a previous study by Moggi *et al.*[4]

Table 1: Socio-demographic characteristics

Parameters	n (%)
Age (years)	
≤40	27 (38.6)
41-50	27 (38.6)
51-60	16 (22.8)
Education	
Primary	37 (52.9)
Secondary/Higher secondary	31 (44.3)
Graduate	2 (2.9)
Occupation	
Unskilled	39 (55.7)
Skilled	30 (42.9)
Professional	1 (1.4)
Marital status	
Unmarried	9 (12.9)
Married	61 (87.1)
Religion	
Hindu	56 (80)
Muslim	9 (12.9)
Christian	5 (7.1)

Table 2: Association of MDD with age at initiation and age at dependence

Parameters	MDD n (%)		p value
	Yes	No	
Age at initiation (years)			
<25	12 (32.7)	35 (67.3)	0.853
≥25	5 (27.8)	13 (72.2)	
Age at dependence (years)			
<25	6 (35.3)	11 (64.7)	0.693
≥25	16 (30.2)	37 (69.8)	
Deliberate self-harm			
Yes	10 (76.9)	3 (23.1)	<0.001*
No	12 (21.1)	45 (78.9)	
Family h/o alcoholism			
Yes	15 (25.4)	44 (74.6)	0.014*
No	7 (63.6)	4 (33.4)	
Family h/o psychiatric illness			
Yes	5 (50)	5 (50)	
No	17 (28.3)	43 (71.7)	0.172
H/o delirium			
Yes	2 (40)	3 (60)	0.668
No	20 (30.8)	45 (69.2)	

MDD=Major depressive disorder, *p value significant

This could be due to the differences in the study population where only 15.5% of the subjects were having only alcohol dependence. However, the same study reported a dual diagnosis in more than 40% of the study population. In contrast to a previous Indian study,[7] we found an association

Table 3: Association between severity of alcoholism and severity of depression

Alcohol severity (SADQ)	Depression severity (HAM-D) n (%)			p value
	Moderate	Mild	None	
Mild	0 (0)	1 (6.25)	15 (93.75)	0.010*#
Moderate	5 (10.2)	14 (28.6)	30 (61.2)	
Severe	2 (40)	0 (0)	3 (6)	

SADQ=Severity of Alcohol Dependence Questionnaire, HAM-D=Hamilton Rating Scale for Depression, *p value significant, #p value from chi-square for trend test

between the severity of alcohol dependence and depressive symptoms. Similar to many previous studies,[3,7,8,17,18] this study also showed a male preponderance among substance abusers. More than 75% of our study population were below the age of 50 years and more than half of them had at least a primary level of education. A few other studies also reported a similar pattern of age and educational level.[4,7,19] About a third of (32.7%) of alcohol dependents with major depression had their first drink before 25 years of age, among which 35.3% developed dependence before 25 years of age. However, no statistical significance was observed between age at initiation ($p=0.853$) or age at dependence ($p=0.693$) and major depression among them. A highly significant association between suicide attempt and depressive disorders was observed ($p<0.001$) among the alcoholics. This finding indicates that identifying and treating depression among alcohol dependents can help to prevent suicide to a great extent. Also, a statistically significant relationship was noticed between depressive disorders and family history of alcoholism. However, no statistical association was observed in relation to the family history of psychiatric illness and major depression among alcoholics ($p=0.172$). This may indicate the possibility of an independent factor other than genetics in the causation of depression in alcohol dependent individuals.

Limitations

This study involved a small group of patients who attended the de-addiction unit of a tertiary care centre. No women patients were available for this study. Since this is a cross-sectional study, the average duration, course, and prognosis of depression in alcoholism could not be assessed.

Conclusion

This study has thrown some light into the occurrence of depressive disorders among alcohol dependent patients. A significant relationship exists between comorbid depressive disorders with suicide attempt and also with a family history of alcoholism. Hence, proper diagnosis of depression and timely intervention can reduce the risk of suicide among alcoholics. Individuals with severe alcohol dependence tend to have more severe depression. More explorations are needed to ascertain the cause or effect relationship between alcohol and depression.

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