



ASSOCIATION OF SEVERITY OF ALCOHOL DEPENDENCE & OCCURRENCE OF DEPRESSION : A CROSS SECTIONAL STUDY

Psychiatry

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ABSTRACT

Substance use & abuse is most common mental health issue in our country. Alcohol is one of the most commonly abused. Individual with alcohol use disorder almost always have psychiatric comorbidity. Depression is one such comorbidity. Individual with history of alcohol use can have depression on long term or due to depression individual can get addicted to alcohol. Assessing and identifying the risk of depression & treating plays a crucial role in the de-addiction treatment for alcohol use disorder. One hundred patient were included in the study who scored ≥ 8 on Alcohol Use Disorder Identification Test. Substantial to severe dependence on alcohol was seen in 81.5% individuals. Major depressive disorder was diagnosed in 62% of individuals. A significant association was noticed between severity of alcohol dependence & comorbid Depression.

KEYWORDS

Alcohol dependence, Comorbidity, Depression

INTRODUCTION

Alcohol is one of the common substance abused. Many researches has been done to reflect the association of alcohol abuse & other psychiatric morbidity like depression, anxiety, psychotic disorders [1]. About 3.5% of the global death and disability is due to alcohol abuse [2]. Depression is common among individuals with alcohol dependence [3]. One of the previous study performed a meta-analysis on adults with alcohol dependence, where it reflected positive association of depression with alcohol dependence [3].

Alcohol dependence 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). Data from the National Comorbidity Survey estimated the lifetime prevalence of major depression to be nearly one-quarter (24.3%) among alcohol-dependent individual [4].

Due to its high susceptibility toward dependence, continuous intake leads to the accumulation of alcohol in the body, causing physical and mental health consequences, such as depression, & other psychiatric illness [5]. However, the association of heavy alcohol consumption and depression has been widely studied both in community and clinical samples, there has been no particular focus on the degree of dependence on alcohol and comorbid depression. This study reflect the severity of alcohol dependence & comorbid Depression.

AIM AND OBJECTIVE

AIM

To identify the association between the severity of alcohol dependence & comorbid depression.

MATERIAL & METHODS

Study Subjects

About 180 patients aged between 20 – 70 years were interviewed from August 2016 to March 2017 with the history of alcohol use. Initial screening has been done with the Alcohol Use Disorder Identification Test (AUDIT). While assessing the association between degree of alcohol dependence & Comorbid depression only those who reported alcohol consumption during the last one month, scored ≥ 8 on AUDIT and gave written consent for the study included in the analyses leading to a total of 100 eligible subjects

Inclusion criteria

1. AUDIT score of ≥ 8
2. Intact Cognitive function

Exclusion criteria

1. Multiple substance abuse
2. Major Pre-existing systemic disease except Hypertension & Diabetes

Methods

Assessment of dependence done by Alcohol Dependence Scale (ADS) & to assess the depression Hamilton Depression Rating Scale-17 (HAM-D) were used.

Research Tools

Alcohol Use Disorder Identification Test (AUDIT)

AUDIT is a 10-item screening questionnaire developed by W.H.O. is a very reliable and simple screening tool which is sensitive to early detection of risky and high risk (or hazardous and harmful) drinking [6]. It has three questions on alcohol consumption (1 to 3), three questions on drinking behaviour & dependence (4 to 6) and four questions on problems related to drinking (7 to 10). Each question is scored from 0 to 4 with a maximum score of 40. Scoring ≥ 8 considered as 'Hazardous alcohol use. Srinivasan & Mary (2000) have used AUDIT in Indian Context [7]. For this study purpose, cut-offs of ≥ 8 were used to identify males with hazardous alcohol use.

Alcohol Dependence Scale (ADS)

The Alcohol Dependence Scale standardized in Korean by Lee [8]. It consists of 25 self-report questions: 5 questions measuring the aspects of compulsive drinking, 8 questions measuring behavioural control disorders due to drinking, 6 questions measuring physical withdrawal symptoms related to drinking, and 6 questions measuring the perception of withdrawal symptoms related to drinking. Higher scores indicate higher alcohol dependence.

Hamilton Depression Rating Scale – 17 (HAM-D)

HAM-D most widely used depression-rating scale in the world. It was published by Max Hamilton in 1960 [9]. Each of the 17 items HAM-D is concerned with semi-global symptoms. Each item on the questionnaire is scored on a 3 or 5 point scale, depending on the item, and the total score is compared to the corresponding descriptor. The first 17 questions contribute to the total score. Questions 18 to 21 are recorded to give further information about the depression such as diurnal variation & paranoid symptoms, but are not part of the scale.

Statistical analyses

The data was analysed using a computerized Statistical Software programme (SPSS version 16.0 for windows). Descriptive statistics was used to describe the socio demographic variables. Pearson's correlation was used for assessing the correlation between the variables.

Results

Overall 180 individual data was collected only one hundred study sample was consider for the study who qualified the study requirement. All the subject in our study were male. Most of the patients were aged 40s or older (n=74; 74%) and were high school graduates (n=56; 56%). In case of marital status, most individuals were married (n=72; 72%). Forty-two individuals were Hindus. Regarding hospitalization

experience, 28% were hospitalized more than twice and only 12 % had delirium which lasted less than 4 days. In terms of current diseases majority had hypertension (32%), followed by diabetes (29%). About 13% had both hypertension & diabetes. Details in table 1

Table 1. Socio demographic data

Parameters	n (%)
Age	
• 21 – 40 years	26 (26 %)
• 41 – 60 years	35 (35 %)
• ≥ 61 years	39 (39 %)
Religion	
• Hindu	42 (42 %)
• Muslim	28 (28 %)
• Christian	18 (18 %)
• Others	12 (12 %)
Marital status	
• Married	72 (72 %)
• Unmarried	22 (22 %)
• Widower	06 (6 %)
Pre-existing systemic illness	
• Hypertension	32 (32 %)
• Diabetic mellitus	29 (29 %)
• Both	13 (13 %)
• None	26 (26 %)
Delirium	
• Present	12 (12 %)
• Absent	88 (88 %)
Hospitalization	
• Present	28 (28 %)
• Absent	72 (72 %)

In this study majority of the individual had substantial risk of alcohol dependence (n=32,32 %) followed by low level (n=27,27 %) , severe level (n = 22,22 %) & intermediates level of alcohol dependence (n = 19,19 %) respectively.

In case of severe level of alcohol dependence about 90.9% individuals had depression followed by substantial risk of dependence (75%), intermediate level (47.3%) & low level of alcohol dependence (33.3%).Detail in Table 2

Table 2 Degree of Dependence vs Severity of Depression

Degree of alcohol dependence	No. of individual	Degree of Depression	n (%)	n =Depression present , (%)
Low level	27	No Depression	18 (66.7%)	9 (33.3%)
		Mild Depression	05 (18%)	
		Moderate Depression	04 (14.8%)	
		Severe depression	-	
		Very severe depression	-	
Intermediate level	19	No Depression	10 (52.6%)	9 (47.3%)
		Mild Depression	02 (10.5%)	
		Moderate Depression	05 (26.3%)	
		Severe depression	02 (10.5%)	
		Very severe depression	-	
Substantial level	32	No Depression	08 (25%)	24 (75%)
		Mild Depression	06 (18.7%)	
		Moderate Depression	07 (21.8%)	
		Severe depression	06 (18.7%)	
		Very severe depression	05 (15.6%)	
Severe level	22	No Depression	02 (9.1%)	20 (90.9%)
		Mild Depression	01 (4.5%)	
		Moderate Depression	05 (22.7%)	
		Severe depression	11 (50.0%)	
		Very severe depression	03 (13.6%)	

Table.3 Statistical analysis

Degree of alcohol dependence	Depression present	No depression	significance
Low level 27	9 (33.3%)	18 (66.7%)	P < 0.001

Intermediate level 19	9 (47.3%)	10 (52.6%)	
Substantial level 32	24 (75%)	8 (25 %)	
Severe level 22	20 (90.9%)	2 (9.1%)	

The correlation between the degree of alcohol dependence and comorbid depression is statistically significant (*P* value 0.001) which correlates with the previous study where there was association between depression and the level of alcohol dependence intake (*P* value 0.002) [10]

The difference in the prevalence of depressive symptoms was similar between different alcohol dependence groups for men. The difference was statistically significant; substantial level & severe level of alcohol dependence showed more depressive symptoms compared with the other groups.

Out of all respondents 34% reported a substantial level of alcohol dependence. Substantial & severe level of alcohol dependence reported more depressive symptoms 75 % & 90.9 % than others. Majority of the alcohol dependence individual had pre-existing illness (74%). This also points at the risk of acquiring hypertension & diabetes on long term use with alcohol. Delirium was seen in only 12 % individual with alcohol dependence.

Discussion

Alcohol use almost always associated with multiple systemic & mental health issues. Many studies are carried out around the world to elicit the association of alcohol use & depression [11,12]. Depression and alcoholism are associated with considerable morbidity, disability, and mortality, and co-occur more commonly than expected by chance [13,14]. A depressed individual can become alcohol dependent [15] or prolong alcohol use can leads to depression [16]

Many researches has been proved the more the alcohol use more susceptible for depression [17]. Present study aims at occurrence of depression depending upon the degree of alcohol dependence. It includes the individuals who are at hazardous level of alcohol use. In this study about 32 % had at substantial level of dependence & 22% had severe level of dependence. Among low & intermediate level of alcohol dependence only 33.3% & 47.3% showed signs of depression. High prevalence of depression seen in substantial & severe level of alcohol dependence 75% & 90 .9% respectively. Similar higher prevalence rates (63.8%) of major depression among the alcohol-dependent persons showed in previous studies [10]. High prevalence rate (74%) of hypertension & diabetes is seen in this study which correlates with previous other studies [18]. This study highlights the importance of screening for depression in alcohol-dependent individual and continuous monitoring for it during treatment of alcohol dependence . This is because untreated persistent depression may reduce the resolve to refrain from alcohol, or alternatively depression may lead to self-medication with alcohol [15,19]

Limitation

This study highlights the presence of depression in alcohol dependent individual does not necessitate if depression is independent to substance use or it is substance induced depression. This study does not include the treatment of such individual and necessary follow up of such cases.

CONCLUSION

Alcohol dependence, withdrawal & its treatment plays major role in our society. The comorbid psychiatry disorder in alcohol use patient plays significant challenge during abstinence phase. Identifying such disorder & treating in early phase plays pivotal role in prolong abstinence.

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