

A Study to Assess the Prevalence and Clinical Profile of Psychosis in Chronic Alcoholism among Alcohol-Dependence Patients

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Abstract

Introduction: Alcohol use disorders (AUDs) are having special relevance to psychiatry. Alcohol is a potent drug which causes both acute and chronic changes in almost all neurochemical systems and with the result of heavy drinking can produce serious psychological symptoms which are temporary including anxiety, depression and psychosis. Our study has been framed to explore the clinical profile associated with alcoholism and to find out the association between the severity of alcohol dependence and psychiatric co morbidity among alcohol dependence patients.

Methodology: The study was conducted at Government Medical College, Ariyalur, a tertiary care center for a period of 6 months. This study got approval from institutional ethical committee. Consecutive patients above 18 years of age and consuming alcohol for more than 2 consecutive years, attending de-addiction clinic were evaluated. AUDIT- Alcohol Use Disorder Identification Test, SADQ- Severity of Alcohol Dependence Questionnaire, PSLES- Presumptive Stressful Life events Scale. All 66 patients were assessed similarly and statistical analysis of the data was made.

Results: In our study shows that total number of people who got psychosis is 8. The people who got other psychiatric co-morbidity are 15. Out of which 8 (12.1%) were suffering from psychosis, 7 of them (10.6%) have Adjustment disorder with attempted suicide, 5 of them (7.6 %) are suffering from major depressive illness, and 3 of them (4.5%) are reported as Anxiety disorder cases. In our study severity of alcohol dependence increase the risk and prevalence of psychosis. But there is no statistically significance between stressfull life events experienced and types of psychiatric comorbidity.

Conclusion: Based on the findings in our study, it is understood that Alcohol Dependence patients have a variable clinical presentation and high risk of co morbid Psychiatric illness. Early recognition and treatment of Alcohol Dependence and co morbid Psychiatric illness may lead to a better outcome.

Keywords: Alcohol, Psychosis, Dependence.

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Introduction

Alcohol use disorders (AUDs) are having special relevance to psychiatry. Alcohol is a potent drug which causes both acute and chronic changes in almost all neurochemical systems and with the result of heavy drinking can produce serious psychological symptoms which are temporary including anxiety, depression and psychosis. Besides its desired properties, alcohol also has many negative effects and its consumption has been claimed to be causing total global disease burden, which account for 5.1% [1]. Disease burden caused by alcohol including morbidity and mortality is approximately similar to other substances of abuse than all illicit drugs combined [2].

According to World Health Organization - 2014, consumption of alcohol is one of the important factor causing impairment in health of working age population and has been associated with 5.9% of all deaths, which is greater than people dies from AIDS or violence [3]. In this article, the term alcoholism is used as an overall term to refer "Alcohol dependence syndrome and Alcohol use disorder" which are the diagnoses used in ICD-10 and DSM-5, respectively. Medical, social and psychological factors are included in the diagnostic criteria of alcohol dependence and alcohol use disorder.

Our study has been framed to explore the clinical profile associated with alcoholism and to find out the association between the severity of alcohol dependence and psychiatric co morbidity among alcohol dependence patients. This study is designed to find out the prevalence of psychosis and other psychiatric co morbidities seen with these patients. In addition, this study also aims to evaluate the severity of dependence and stress experienced by these patients and its relation to severity of alcohol dependence.

Materials and Method

The study was conducted at Government Medical College, Ariyalur, a tertiary care centre for a period of 6 months. This study got approval from institutional ethical committee. Consecutive patients above 18 years of age and consuming alcohol for more than 2 consecutive years, attending de-addiction clinic were evaluated. Persons who are all meet the inclusion criteria for Alcohol dependence syndrome based on ICD- 10 were independently assessed by senior consultants and Alcohol dependence syndrome diagnosis was confirmed and these patients were recruited in this study. Patients with concurrent presence of other substance dependence other than nicotine, medical illness requiring intensive medical or surgical management and who are already on treatment for primary psychiatric disorders were excluded. Patients/Care givers were explained in detail about this study and from them informed consent was obtained. Semi structured proforma is used to collect data regarding socio-demographic profile, like age ,marital status, occupation, religion and locality , educational status and clinical variables regarding their alcoholic behaviour, age of onset of drinking, amount of alcohol consumed, frequency of drinking etc., Modified Kuppasamy's Socio economic scale was administered. The subjects were administered MINI International Neuropsychiatric interview. Following scales are administered in those patients- AUDIT- Alcohol Use Disorder Identification Test, SADQ- Severity of Alcohol Dependence Questionnaire, PSLES- Presumptive Stressful Life events Scale. All 66 patients were assessed similarly and statistical analysis of the data was made.

Statistical Design

Statistical design was formulated using the data collected as above, for each of the scales and socio-demographic variables. Statistical

analysis was done using SPSS version 22.0. In comparison of the data for categorical variables chi-square and for numerical variables student t test were used. For multiple comparisons of more than two numerical variables ANOVA was used. Correlation among variables was studied using Pearson's correlation coefficient.

Results

In our study among 66 patients eligible for study one third (33%) of the sample population belong to the age group between 31 to 50 years, 17 patients were above 50 years. Further, 74.2 % were married and the remaining 25.8 per cent were unmarried. Majority (57.6%) belong to the Upper- lower socioeconomic group.

Fifty per cent of the sample population were doing skilled work, 68.2 per cent of study population were from urban locality.

In our study, that majority of the AUD patients (89.4%) scored severe in AUDIT, only seven persons (10.6%) scored moderate in AUDIT.

With regard to SADQ, it is observed that 38 persons (57.6%) are in moderate dependence level, whereas 28 persons (42.4%) are in severe dependence level.

In our study that nearly 2/3rd of the patients (65.2%) are not having psychiatric comorbidity, whereas the remaining 1/3rd (34.8%) of them are having psychiatric comorbidity.

Table 1: Types of psychiatric comorbidities

S. No.	Type	Cases (N = 66)	Percentage
1	Major depression	5	7.6
2	Anxiety disorders	3	4.5
3	Psychosis	8	12.1
4	Adjustment disorder	7	10.6
5	Absent	43	65.2

It is observed from our study, that 23 persons have psychiatric co morbidity. Out of which 8 (12.1%) were suffering from psychosis, 7 of them (10.6%) have Adjustment disorder with attempted suicide, 5 of them (7.6 %) are suffering from major depressive illness, and 3 of them (4.5%) are reported as Anxiety disorder cases.

Table 2: Stress level among aud patients.

S. No.	Stressful Life Events	Cases (N = 66) N	Percentage
1	No of Events		
	0-2	13	19.7
	3- Above	53	80.3
2	Stress Score		
	Less than 40	7	10.6
	41-200	30	45.5
	More than 200	29	43.9

It is observed that majority of Alcohol use disorder patients (80.3%) have more than 3 stressful life events, whereas nearly one fifth of them (19.7%) have below 2 stressful life events for past one year. With regard to stressful life event score, it is observed that

43.9 percent of Alcohol use disorder patients have severe stressful life events score, whereas 45.5 percent of them have moderate stressful life events score, and only 10.6 percent of them have less or no stressful life events score.

Impact Of Sociodemographic Variable

In our study shows that total number of people who got psychosis is 8. The people who got other psychiatric co-morbidity are 15. Among the persons who had Psychosis, 4 persons (50%) of them belong to age group of below 30 years and remaining 4 persons (50%) belong to age group 31-50 years. Among the persons who got psychosis, 3 of them were single, 5 of them were married and 3 of them have completed their primary education and 4 of them completed their high school. In relation to occupation 5 of them were doing semiskilled work and 2 of them were doing skilled work and 1 of them was doing unskilled work. Regarding the locality 5 of them belong to urban population, 3 of them belong to rural areas.

Also in our study 22 persons belong to low quartile, 28 persons belong to moderate quartile and 16 persons belong to high quartile in AUDIT score. According to age 11 persons (50%) belong to low quartile group, 13 persons (46.4%) belong to moderate quartile group and 9 persons (56.3%) belong to high quartile group. Regarding marital status, 21 persons (75%) who come under moderate quartile were married.

With regard to age, 10 persons (55.6%) who scored moderate level were less than 30 years and 23 persons (47.9%) scored severe level were belonged to age group of 31 to 50 years of age. Regarding marital status 17 persons (94.4%) who were married had scored moderate in SADQ and 32 persons (66.7%) had scored severe in SADQ. Regarding educational status 13 persons (72.2%) who completed high school were scored moderate in SADQ and 24 persons (50%) had scored severe in SADQ. Regarding locality status 11 persons (61.1%) had moderate SADQ score and 34 persons (70.8%) had severe SADQ score were belong to urban locality. Regarding occupational status 13 persons (72.2%) had moderate SADQ score and 20

persons (41.7%) had severe SADQ score were doing skilled work. The severity of alcohol dependence do not significantly differ with regard to socio demographic variables.

Psychiatric Comorbidities And Its Relation

Our study also shows that 8 persons (100%) who had psychosis scored high in AUDIT score when compared with other types of psychiatric comorbidity. It shows that there is statistically significant relationship between high AUDIT score and prevalence of psychosis suggesting that severe dependence has high risk of developing psychosis.

Also our study shows that 7 persons (87.5%) who had psychosis and 9 persons (60%) with other comorbid illness were found to have above 2 stressful life event and 6 persons (75%) who had psychosis and 7 persons (46.70%) with other comorbid illness were found to have severe stressful life event score. But there is no statistically significance between stressful life events experienced and types of psychiatric comorbidity.

Among our study participants there is statistically significant relationship between frequencies of heavy drinking in the past 3 months with prevalence of types of psychiatric co morbidity suggesting that severe dependence has high risk of developing psychiatric comorbidity. There is no statistically significant relationship between family history of psychiatric illness/alcohol dependence with prevalence of psychiatric comorbidity.

Severity Vs Type Of Psychiatric Comorbidity

When we did the comparison of Alcohol use disorder identification test (AUDIT) scores, among the three groups of patients with psychosis, with other psychiatric co morbidity, with no psychiatric co morbidity AUD patients. On studying the differences in

the scores of AUDIT with types of co morbidity, using one way ANOVA, it is found that audit score is significantly high in patients with psychosis suggesting that severity of alcohol dependence increase the risk and prevalence of psychosis.

Comparison of Severity of Alcohol Dependence Questionnaire (SADQ) scores, among the three groups of patients with psychosis, with other psychiatric co morbidity, with no psychiatric co morbidity in AUD patients. On studying the differences in the scores of SADQ with types of co morbidity, using one way ANOVA, it is found that audit score is significantly high in patients with psychosis suggesting that severity of alcohol dependence increase the risk and prevalence of psychosis. Above results show that AUDIT and SADQ score has significant and positive correlation with stressful life event scoring, stressful life events experienced and amount of alcohol consumed.

Discussion

Alcohol use in excess amount has been recognized as a major contributor to the universal burden of disease. Alcohol use causes 5.9% of all deaths globally. In addition, it is responsible for 5.1% of the disability-adjusted life years[4].

This study is done to assess the prevalence of psychosis and other types of Psychiatric comorbidities in patients with Alcohol Use disorder. In our study 66 Alcohol Use Disorder patients were selected according to the inclusion and exclusion criteria. Alcohol Use disorder severity was assessed in them using AUDIT and SADQ scale. The stressful life events experienced by the patients was also assessed.

In our study, nearly one third of them (33%) belonged to the age group of 31 to 50 years. Further, 74.2 per cent were married and the remaining 25.8 per cent were unmarried.

Majority (57.6%) belong to the Upper- lower socioeconomic group. Fifty per cent of the sample population were doing skilled work, nearly half of the patient (53.1%) had completed high school and 68.2 per cent of them were from urban locality.

Our study findings are supported by study done by Pramod Kumar Reddy *et al*⁵ and Anil kumar *et al*[6], since in our study we have taken only male alcohol dependence patient, could not analyse the sex difference among Alcohol Use Disorder patients as shown in study done by Anil kumar *et al* [6]. In fact, in India earlier reviews and research on substance use disorders 64 and co morbidity [7,8] have included less than half of the published Indian research articles with dual disorders.

Study done by Akkilagunta Sujiv *et al* [9], revealed that 39.8% of current alcohol users and 10.9% among them diagnosed AUD using AUDIT(score ≥ 8). Four current alcohol users are to be screened to identify one AUD patient.

In our study we have found that the severity of alcohol dependence do not differ with regard to sociodemographic variables like age, marital status, occupation, locality, religion and educational and socioeconomic status. This is not supported by study done by Pramod Kumar Reddy *et al* [5], where they found that the alcohol dependence syndrome was more common in low socioeconomic class and people with education up to high school level [5].

An overview of Co morbidity of Alcoholism and Psychiatric Disorders by Ismene L. Petrakis *et al* [10] showed that large proportion of population who are seeking treatment with alcohol use disorders present with psychiatric co morbidities, more commonly mood disorders(27.9%), psychotic spectrum disorders, anxiety spectrum disorders (36.9%). In our study we have found that patients present with

psychosis (12.1%) more commonly than depressive disorder (7.6%). This finding is not supported by study done by Ismene L. Petrakis *et al* [10].

In our study two third of the AUD patients (65.2%) are not having psychiatric co morbidity, whereas the remaining one-third (34.8%) were having psychiatric co morbidity. Out of 66 persons, 23 persons have psychiatric comorbidity. Out of which 8 (12.1%) were had psychosis, 7 of them (10.6%) have Adjustment disorder, 5 of them (7.6 %) are suffering from major depressive illness, and 3 of them (4.5%) are reported as Anxiety disorder cases. Our study findings not supported by study done by Kumar *et al* [11] found that around 65% of patients had co morbid illness out of which 50% of patients presented with mood disorder, and 45.8% had an anxiety disorder and also 25% patients had a psychotic disorder.

Several studies done in the community estimated the prevalence of Alcohol dependence between 7.1% and 14.2% using AUDIT questionnaire [12-14]. Studies reported the proportion with alcohol dependence among the current alcohol users between 28.1 per cent and 42.2 per cent. In India, few hospital- based studies have been conducted to assess the prevalence of alcohol dependence among male in-patients which ranged between 14.6 percent and 30.5 per cent [15].

In our study the 3 groups of patients that with psychosis, with other psychiatric co morbidity, without any psychiatric co morbidity do not differ with regard to sociodemographic variables like age, marital status, occupation, locality, religion and educational status. None of the study have typed the comorbidity as we have done in our study.

Anil Kumar *et al* [6] study also showed that depression and anxiety disorders were the more common co morbidity among both

males and females AUDs, but more females suffer with co morbidity than male. In our study showed that 2 persons (40%) below 30 years and other 2 persons (40%) of 51 years and above had depression and 1 person (20%) who belong to 21 to 50 years had depression. Regarding marital status 3 persons (60%) were married, 2 persons (40%) were single. Regarding education, 3 persons (60%) have completed primary school ,each one (20%) completed high school and graduate. Regarding locality 3 persons (60%) were from urban ,2 persons (40%) were from rural. But we did not compare between male and female alcohol dependence patients as mentioned in above study [6].

Persons who experiencing stress were 5.9 times more likely to indulge in harmful use of drinking against those who were not stressed, and those were at the risk for developing depression had a 4.1 times higher prevalence of harmful alcohol use. This study confirmed statistically significant high prevalence rates (63.8%) of major depression among the alcohol-dependent persons.

In our study, the majority of Alcohol use disorder patients (80.3%) have more than 3 stressful life events, whereas nearly one fifth of them (19.7%) have below 2 stressful life events. Any how our study findings are not comparable with this study because of the sample population in my study that we have enrolled all patient who have been reported to tertiary care center for their treatment. So both the samples were not comparable.

In our study, with regard to stressful life event score, it is observed that 43.9 percent of Alcohol use disorder patients have severe stressful life events score, whereas 45.5 percent of them have moderate stressful life events score, and only 10.6 percent of them have less or no stressful life events score.

In our study 8 persons (100%) who had psychosis, three persons (100%) with

Anxiety disorder, and 5 persons (100%) who had depression were having severe alcohol dependence. But the severity of alcohol dependence (AUDIT & SADQ score) do not differ with regard to sociodemographic variables like age, marital status, occupation, locality, religion and educational status.

In our study, 7 persons (87.5%) who had psychosis and 9 persons (60%) with other comorbid illness were found to have above 2 stressful life event and 6 persons (75%) who had psychosis and 7 persons (46.70%) with other comorbid illness were found to have severe stressful life event score. Nonetheless there is statistically no significant relationship between experienced stress and their socio-economic status, but it is clearly stating that severity of alcohol dependence has significant and positive correlation with amount of alcohol consumption and stressful life events. Hence, our study also emphasize the need for screening at the primary health care level which can help in identifying the risk group and thus help in reducing the morbidity and mortality due to alcohol use in the population [9].

Conclusion

Based on the findings in our study, it is understood that Alcohol Dependence patients have a variable clinical presentation and high risk of co-morbid Psychiatric illness. Early recognition and treatment of Alcohol Dependence and co-morbid Psychiatric illness may lead to a better outcome.

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