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A Cross Sectional Study of Correlation between Stressful Life Events and Alcohol Relapse

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Abstract: ***Background:*** *Alcohol dependence syndrome is a chronic condition. Patients with Alcohol dependence syndrome are commonly have relapse before attaining complete abstinence. Many factors are interplaying in alcohol relapse.*
Aim*: To find out the relationship of Stressful life events, social support between relapsed and abstinent Alcohol dependent patients.*
Materials and Methods*: Study populations who satisfied ICD-10 Criteria for alcohol dependence syndrome were selected from de-addiction clinic in Department of Psychiatry, Chengalpattu Medical College. 60 patients who relapsed after one month period of abstinent were selected for case study. Sixty patients who satisfied the same diagnostic criteria and abstinent for more than six were included in control group. Both groups were assessed using AUDIT questionnaire, Presumptive stressful life event scale and Social support questionnaire.*
Results*: There is no statistically significant difference between the two groups regarding age and their educational status. Alcohol dependent syndrome with relapse patients score higher than the abstinent patients in the mean stress score.*
Conclusion*: Relapse patients perceive more stressors which might have a causal relationship to relapse. Relapse patients have low social support when compared to the controls.*
Key words*: Alcohol dependence, Stress life events, alcohol relapse.*

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I. Introduction

Alcoholism is one of the major public health problem globally. Alcohol beverages are consumed by 2million peoples worldwide [(1)]. In India 62.5 million people uses alcohol, 10.6 million people are (17.4%) being dependant users [(2)] and 20-30% of hospital admissions are due to alcohol-related problems. [(3)]. Relapse in alcohol dependence is a rule. About 70-90% of patients suffering from alcohol dependence syndrome relapse within 3 months [(4)].Various factors including psychological, social and biological factors predict the relapse. Alcohol problems vary depending upon the numerous cultural and social backgrounds [(5)]. Armor et al., (1978) states that a relapsed patient is a person who was diagnosed as a alcohol dependence syndrome according to the ICD 10 and stopped using alcohol at least for a month but subsequently started using alcohol[(6)].

Peoples believe that one way of coping stress is by consuming alcohol. Drinking in short term causes relaxation and positive feelings. But chronic heavy drinking usually leads to medical and psychological complications and poses the risk for substance dependence. When the stressful events occur the body responds to the stress quickly, shifting the normal metabolic mechanisms into high gear. For this the body has a complex system – the hypothalamic-pituitary-adrenal axis (HPA). This system targets the specific body parts and make them to prepare either for fight or free from it (fight or flight response)[(7,8)]. Heredity, personality and lifestyle can also modify an individual's way of handling stress. People who are optimistic use problem solving and coping strategies and they are resilient to stress and its disorders like alcohol use problems[(9,10)]. Cortisol hormone also interacts with reward circuit. It may contribute to alcohol's reinforcing effects and motivating the drinker to consume higher levels of alcohol [(11)]. Cortisol also has a role in cognition, including learning and memory. In particular, it has been found to promote habit-based learning, which fosters the development of habitual drinking and increases the risk of relapse [(12)]. Cortisol also has been linked to the development of psychiatric disorders (such as depression) and metabolic disorders. If stressors are not managed by adequate stress management approaches, the patient started consuming alcohol to get away from stress. This response classically leads to craving for indulgence and frequently develops into cravings and urges.

Aims and Objective

- To identify the predictors of relapse in alcohol dependence syndrome
- To find out the relationship of Stressful life events, social support between relapsed and abstinent subjects

II. Materials & Methods

Ethical approval was obtained from Institutional Ethical committee of the research panel of Chengalpattu medical college, Chengalpattu, Tamilnadu, India. This study was conducted at the De-addiction clinic in Department of psychiatry, Chengalpattu medical college. All the samples are undergoing de-addiction treatment as outpatient or inpatient. Consecutive patients satisfying the ICD-10 criteria for alcohol dependence were selected for this study. Patients were screened with AUDIT questionnaire and then patients were diagnosed using ICD 10 clinical descriptive criteria for alcohol dependence and in the age group of 20-60 years. Patients who relapsed after a period of one month period of abstinence were included for the study group after getting informed consent. Those exhibiting evidence of other axis 1 disorder, other substance abuse except nicotine and co-morbid medical and neurological conditions were excluded from the study. Patients who were diagnosed by consultant psychiatrist as a case of Alcohol dependence syndrome in the age group of 20-60 years and abstinent for six month included for the control group after getting informed consent. Those exhibiting evidence of other axis 1 disorder, other substance abuse except nicotine and co-morbid medical and neurological conditions were excluded from the control group. Informed consent was obtained from all the patients. Of the 100, 23 patients expressed unwillingness to participate, 7 had medical complications and 10 had psychotic features and hence they were excluded from the study. Finally a sample of 60 patients constituted the study group. The control group consisted of 60 patients. Control group was individually matched with the study group on variables such as age, sex and marital status. The control group was the patients diagnosed as alcohol dependence and coming for regular follow up at the de-addiction clinic. They were under standard treatment and were maintaining abstinence.

Instrument used:

Socio demographic data, AUDIT questionnaire, Presumptive stressful life event scale and Social support questionnaire.

AUDIT (Alcohol Use Disorders Identification Test) was developed by World health organization as a simple tool to identify the early signs of heavy drinking and dependence. It is a 10 item screening questionnaire with 3 questions on the amount and frequency of drinking, 3 questions on alcohol dependence and 4 on the problems caused by the alcohol. It gives rapid assessment and relatively free of gender and cultural bias.

Presumptive stressful life events scale was devised by Gurmeet Singh et al and was based on social readjustment rating scale of Holmes and Rahe[13]. Singh developed the scale appropriate for evaluating stressful life events for Indian patients by using open ended questionnaire. It consists of 51 life events appropriate to Indian situations ranging in severity from death of a partner to going on a pleasure trip/pilgrimage. Scale items are classified into desirable, undesirable or ambiguous; and personal or impersonal. The scale is administered by asking the respondents to go through a list of events during the lifetime and in the past 1 year. A cumulative scale can be obtained by summing up of individual scores weighed depending upon the stress caused to the individual.

Statistical Analysis

SPSS software latest version 20 was used for statistical analysis. Chi-square test to compare proportion between cases and controls. Independent samples T-Test to compare mean values between cases and controls**.**

III. Results & Observations

Table

		Case N=60	**Control** N=60	**P value**
Age		Mean =37.0 S.D =6.43	Mean =34.6 S.D = 6.80	0.046
Education	Profession	1	1	0.992
	Graduate	3	4	
	Intermediate	3	4	
	High school	12	11	
	Middle school	20	21	
	Primary	21	19	
Occupation	Profession	1	2	0.620
	Semi-Profession	2	3	
	Clerical	4	5	
	Skilled	20	27	
	Semi skilled	4	5	
	Unskilled	27	17	
	Unemployed	2	1	
Family type	Joint	9	16	0.116
	Nuclear	51	44	
Mean number of stressful life events	Mean	4.17	3.10	**< 0.001**
	S.D	0.493	0.477	

The Mean age for case group and control group respectively were 37.0 and 34.6. There is no statistically significant difference between the two groups regarding the age (p value 0.046). There is no statistically significant difference between the two groups regarding the educational status (p value 0.992). Most of the cases and controls were found to have lower education (middle school & primary). There is no significant difference between the two groups. Among the relapse patients 45% were involved in unskilled manual work and 33.3% were employed in skilled work. Among the abstinence group 28.3% were involved in unskilled manual work and 45% were employed in skilled work. There is no statistically significant difference between the two groups regarding the occupation (p value 0.620). There is no statistically significant difference between the two groups regarding the family type (p value 0.116). Both relapse group (85%) and the abstinent group (73.3%) were belonging to nuclear family.

Relapse patients had more stressful life events when compared to the controls. Independent samples T-Test was used to compare mean value between cases and controls**.** There is a statistically significant difference between the two groups regarding the number of stressful life events. Relapse patients had more mean stress score when compared to controls. Independent samples T-Test was used to compare mean value between cases and controls**.** There is a statistically significant difference between the two groups regarding the number of stressful life events (p value <0.001). It is found that alcohol relapse patients score higher than the abstinent patients in the mean stress score. There is a statistically significant difference between the two groups. There is a statistically significant difference between the two groups regarding the number of stressful life events.

IV. Discussion

In the present study alcohol relapse patients did not differ significantly from the non relapse patients in the socio demographic profile. Relapsing Patients have slightly higher mean age (37 Vs 34.60) possibly because of the chronic tendency of the group, and the abstainer's dropout from the treatment services after a considerable period of abstinence. In this study, unskilled workers in relapses are 45% and unskilled workers in abstinent are 28.3%. Unskilled workers are more prone for Relapse. But there is no significant difference between the groups. Mandell et al suggested that alcohol patients are over represented in occupation with less

supervision and flexible work schedule [(16)]. Regarding the age, education and income there is no statistical significant difference between the abstinent and relapse patients in this study. In this study relapse patients had more number of stressful life events and higher mean stress score when compared to the controls and there was significant statistical difference between the two groups. Marlatt et al., (1978) suggest that non-relapsers were experienced fewer negative life events and more positive life events, than relapsers.

V. Conclusion

There is no significant relationship between socio-demographic profile of two groups. Relapse patients perceive more stressors which might have a causal relationship to relapse.

VI. Limitations

The study was conducted in a tertiary care hospital. So it was not representative of the total population. In this study only male patients are involved, female patients are not included due to scarcity of the sample. Perceived stress scale is a self reporting scale. As it might change with perception of the stressful life events than by the event by itself. Patients in the control group were assessed by the history elicited from the patient and the close relatives. Increased possibility of single interviewer bias.

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