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A CROSSSECTIONAL STUDY OF SEXUAL DYSFUNCTION IN ALCOHOLIC MALES

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ABSTRACT

Background: chronic alcoholism is known to induce sexual dysfunction but most studies lack in determining the type of sexual dysfunction and its clinical correlation.

Objective: We attempted to assess the sexual dysfunction on chronic alcoholic males and the typology, clinical correlates and demographic profile.

Materials and methods: 99 patients between age 18to 45 are taken for this cross-sectional study. Study group of alcohol dependents diagnosed by ICD10 and confirmed by MINI. Participants in both the groups were assessed on Arizona Sexual experience scale (ASEX), Hamilton Depression Rating Scale (HDRS) and State-Trait Anxiety Inventory (STAI). To confirm that the alcohol dependent patients are not in withdrawal state, the alcohol dependent group are also assessed with Severity of Alcohol Dependence Questionnaire (SADQ) for severity of AD and revised clinical institute withdrawal assessment for alcohol scale (CIWA-Ar).

Results: Study shows 56.66% of patients with alcohol dependents having sexual dysfunction with highest dysfunction in arousal (56.66%) and least in ability to reach orgasm(13.33%)and having dysfunction in desire is 48.66% while of satisfaction with orgasm and of erection is 33.33% and 31.66% respectively. Longer duration of alcohol consumption and dependence, high levels of intake and severe dependence appeared to be the most significant predictors of developing sexual dysfunction.

Conclusion: SD is highly prevalent in patients with alcohol dependence and all domains of sexual functioning are affected. Further longitudinal studies should be done to confirm the findings.

KEY WORDS : Alcohol dependence - men - sexual dysfunction

Alcoholism is the major health problem around the world[1]. India ranks 2nd among the world in alcohol consumption. Around 33% of Indian population consumes alcohol[2,3].According to WHO GLOBAL STATUS report on alcohol and health 2014, above 15 years of population,32% men and 11% women consumes alcohol.[4]Chronic alcoholism affects every organ of the body, directly or indirectly. Chronic alcoholic abuse has hazardous affect on male sexual response. Research shows that greater quantity, frequency and duration of alcohol dependence is associated with sexual dysfunction.[5] Prevalence of sexual dysfunction on long term alcoholics range from 8% to 58%[6]. Lemere and Smith reported that 8% of 17,000 patients treated for alcoholism had impotence[7]. A review by Grover et al shows the sexual dysfunction in all the domains of sexual functioning with prevalence range from 40 to 95.2%.Commonest being erectile dysfunction (ED) followed bypremature ejaculation (PME), retarded ejaculationand decreased sexual desire among men[8].Some studies denies any link between sexual dysfunction and alcohol[9].A metaanalysis of population based cross sectional studies yielded a protective association on alcohol consumption and erectile dysfunction[10].Some research reports that 3quarter per day is associated with sexual dysfunction with improvement in sexual functioning after treatment of alcoholism[11]. Alcohol consumption has been associated with hypogonadism, testicular atrophy as well as leydig cell toxicity and failure, thus alcoholics are likely to have a higher prevalence and risk of developing sexual dysfunction than non- alcoholics[12]. Studies conducted throughout the world shows inconsistent results. The aim of this study was to determine the prevalence of sexual dysfunction in alcoholic males .We specifically focused which areas of sexual functioning has been impaired by alcoholism.

MATERIALS AND METHODS:

This study was done between July 2016 to June 2017 in the tertiary care centre in north India. The study protocol was approved by the institutional ethical committee, and the written informed consent has been taken from the patient. This was a crossectional study, as the patients were only one time in the study. Study sample consists of two groups of men-those with AD(Alcohol Dependence) as per ICD10 criteria [AD group n=60] and healthy controls i.e. those not dependent on any substance except nicotine.[control n=39].

INSTRUMENTS:

MINI[13]was used to confirm the diagnosis of AD and to rule out psychiatric comorbidities and other substance abuse. Revised clinical institute withdrawal assessment for alcohol scale (CIWA-Ar)[14] was used to quantify theseverity of the alcohol withdrawal syndrome, to ensure that no participant was in active alcohol withdrawal state. ASEX [Arizona Sexual Experience Scale][15] is a five-item self-report inventory using a six-point Likert scale method.It measures the quality of functioning by five questions each representing one domain.[Drive ,arousal, penile erection, ability to reach orgasm and satisfaction for orgasm].ASEX is interpreted by total score /Or score on individual items(lower score indicates better sexual functioning). A total score >19 on ASEX or a score >5 on any one item or a score >4 on any three items is associated with clinical sexual dysfunction. Reliability coefficients for internal consistency and test-retest forms are excellent. The sensitivity of ASEX was found to be 80.8 per cent and specificity as 88.1 percent.[16]In the present study we have used the hindi translated version of ASEX. Hamilton Depression Rating Scale (HDRS)[17] is a clinician-rated scale, with 17-item,rating is done from 0 to 4 or 0 to 2, according to intensity and frequency of symptomsin the past one week. This was used to evaluate any subsyndromal depressive symptoms. State-Trait Anxiety Inventory (STAI) [18]provides reliable, relatively brief, self-report measure of state (A-state) and trait (A-trait) anxiety.Both

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consist of 20 statements,how people feel at a particular moment. The internal consistency and reliability of the STAI A-trait and A-state scales are high. The test-retestreliability of STAI A-trait scale suggests that it is stable over time, whereas scores on the STAI A-state scale increase as function of stress and decrease in response to relaxation training. A hindi translated version was used. Severity of AD Questionnaire (SADQ)[19] consistsof 20 questions to measure the severity of AD. In SADQ there are 5 subscales each subscale has 4 items: physicalwithdrawal, affective withdrawal, withdrawal reliefdrinking, alcohol consumption and rapidity of reinstatement. The maximum score is 60 and scores greater than 30 correlates with the clinician's rating of severe AD. The test-retest reliability is 0.85 and content, criterion and constructs validity are well established.

INCLUSION CRITERIA-

Abstinence from alcohol for at least 1 week which was confirmed from their relatives, men with age group 21-50 years and who were married or having a stable heterosexual partner. The purposive random sampling was used to determine the inclusion in the study, i.e. 50 percent were included by the predetermined randomization table.

The control groups were non-blood related attendents of the patients who were not taking of any psychoactive substance except tobacco which was confirmed by their relatives.

EXCLUSION CRITERIA-

Patients who had acute intoxication or were in an acute withdrawal state, those with a chronic comorbid medical illness which can cause sexual dysfunction [hypertension, diabetes mellitus, thyroid dysfunction, cardiovascular disorders (angina and myocardial infarction), renal dysfunctions and neurological disorders (stroke, spinal cord lesions and peripheral neuropathy).Medical illnesses were ruled out by the history, physical examination and investigations. Those regularly using any medication which could improve/decrease the desire or the level of sexual functioning (e.g., phosphodiesterase inhibitors) were also excluded. Both groups were assessed on MINI, ASEX,HDRS and STAI. AD group was also assessed on SADQ, and CIWA-Ar.

STATISTICAL ANALYSIS:

Data were analyzed using SPSS 17. Frequency and percentages were calculated for the categorical variables and mean and standard deviation (SD) were determined for the continuous variable. Comparisons were done using Chi-squaretest, and t-test.

Results: For the above study 65 patients, who had been diagnosed as alcohol dependent (MINI) were included.One patient refused to participate in the study and 4 patients had been excluded because of comorbid opium abuse. 39 controls without any substance abuse except tobacco have been taken as controls. These 4 patients are excluded because of following reason, being use of any other illicit substance except tobacco, having any other psychiatric disorder like psychosis NOS, generalized anxiety disorder and not having permanent sexual partner.

The sociodemographic profiles of the AD group and healthy control group are shown in Table I.

Clinical profile of alcohol dependent:

The mean age atonset of alcohol use in the study group was 21.8± 2.8years. At the time of assessment, the mean duration of alcohol use was 11.0± 1.5 years. Three patients (5%) were found in a state of delirium tremens and 6.7% had withdrawal seizures. Half of the patients from study group had positive family history. At the time of assessment, the mean duration of abstinence was 9.69 ± 3 days; the CIWA-Ar mean score was 4.37 ± 1.14,with all the cases scoring less than seven and SADQ mean score was 32.8 ± 7.2, and thirty nine patients had an SADQ score of more than 30 indicating severeAD.ASEX score more than 19 in 5 patients (8.33%), more than 4 on 3 domains in15 patients (40.0%), more than 5 on 1 domain in14 patients (23.33%), with specifically dysfunction in desire in 28patients (48.66%), of arousal in 34 patients (56.66%),of erection in 19 patients(31.66%), of ability to reach orgasm in 8 patients (13.33%) and satisfaction with orgasm in 20patients (33.33%). Meanage of study group was 32.87 years and of control group was 32.64(p =0.84).

Table 1: sociodemographic details of both the groups

	Group		chi-value	p-value
	Study group	Control group		
Occupation			0.07(1)	0.80
1. Employed	14	10		
2. Unemployed	46	29		
Socioeconomic status			0.30(2)	0.85
1. Upper middle class	3	3		
2. Lower middle class	5	3		
3. Lower class	52	33		
Religion			0.64(1)	0.44
1. Hindu	54	33		
2. Muslim	6	6		
Family type			0.39(1)	0.53
1. Nuclear	30	22		
2. Joint	30	17		
Locality			0.001(1)	0.97
1. Rural	29	19		
2. Urban	31	20		

Abbreviations-chi:chi square test p value significant<.05

Table 2: scores of HDRS and STAI of Both the Groups

Clinical Parameters	Group mean(SD)		t- value(df)	p-value
	Study group	Control group		
HDRS	4.35(1.47)	4.33(1.54)	.054(97)	0.95
STAI	22.02(1.60)	22.33(2.09)	-.851(97)	0.39

Abbreviations- HDRS:-Hamilton Depression Rating Scale , STAI:-State-Trait Anxiety Inventory d(f):-degree of freedom

Table 3: Clinical Parameters of Both The Groups

Clinical Parameters	frequency(percentage)		**chi-value(df)**	**p-value**
	Study group	Control group		
ASEX	34(56.66%)	0(.000)	30.7(1)	0.001
ASEX-global scores (≥19)	5(8.33%)	0(.000)	3.4(1)	0.06
ASEX score 4 on 3 domains but global score of <19	15(40.0%)	0(.000)	11.5(1)	0.001
ASEX score 5 on 1 domain but global score of <19	14(23.33%)	0(.000)	10.6(1)	0.001
Desire	28(48.66%)	8(20.51%)	6.9(1)	0.008
Arousal	34(56.66%)	5(12.82%)	19.03(1)	0.001
Erection	19(31.66%)	8(20.51%)	1.5(1)	0.22
Ability to reach orgasm	8(13.33%)	4(10.25%)	0.21(1)	0.65
Satisfaction with orgasm	20(33.33%)	5(12.82%)	5.26(1)	0.02

Abbreviations- ASEX-Arizona Sexual Experience Scale, df-degree of freedom, p value significant <0.05

DISCUSSION

In this study the inclusion and exclusion criteria were followed to ensure that the reported sexual dysfunctions were strictly due to harmful effects of alcohol on reproductive system.Only married male patients who were in an active heterosexual relationship and whose spouses did not have a sexual dysfunction, were included.The sociodemographic profile of our study group matched with that reported for alcohol dependence. The patient and the healthy control groups were comparable for sociodem ography. Hence, the difference in the presence of sexual

dysfunction in the two groups was not due to the sociodemographic variables. Mean age of onset of alcohol is similar to previous studies[22]. The mean duration of alcohol use of 11years.The CIWA- Ar rating and self and family reported mean duration of abstinence from alcohol of 9.69 days confirmed that none of the patients was in active alcohol withdrawal. As per the HDRS, and there being no difference in the prevalence of subsyndromal depressive symptoms in the studyand control groups leads to a conclusion that the sexualdysfunction in different groups cannot be attributed to the presence of syndromal depression. Our study group having significantly higher level of state andtrait anxiety compared to control group suggested that the difference in the prevalence of sexual dysfunctionbetween the two groups could have been influenced by this variable. Our result of 49%% sexual dysfunction was similar to previous studies having sexual dysfunction between 40-95.2%[23].The present study findings supported the previous findings that the most common alcohol-associated sexual dysfunction was erectile dysfunction, followed by sexual desire and premature ejaculation[23].

There were certain limitations of this study, the study was carried out in a small sample of clinic-based population, and hence the findings could not be generalized to other population groups. Future studies should try to overcome these limitations. In addition, future research should focus on longitudinal studies, on structured assessment of knowledge and attitude about the sex of alcohol-dependent men and on structured assessment of sexual dysfunction in partners of alcohol-dependent men.

Conflicts of Interest: None.

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