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A Study on Sexual Dysfunctions in Alcohol Use Disorder Patients

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Abstract

Sexual dysfunctions are common among alcohol use disorder patients. Various psychosocial and neuro endocrinal factors play a role in such dysfunctions. Yet, there is still a dearth in the research and literature in this aspect. Our study aims to assess the prevalance of sexual dysfunctions among alcohol use disorder patients with an objective to evaluate the associated clinical correlates and its association with severity of alcohol dependence. 51 male subjects diagnosed as Alcohol use disoder patients using DSM 5 were assessed for sexual dysfunctions using ASEX questionnaire and its association with severity of alcohol dependence was evaluated. Our results showed sexual dysfucntion was present in 68.6% with decrease in desire being the most common domain affected. There was a significant association between SADQ and decrease in desire, erection and orgasm. There was signigicant association of sexual dysfunction with duration of alcohol consumption. This study highlights the need to assess sexual function regularly in Alcohol use disorder patients in addition to other physical evaluation.

Keywords: Alcohol use, severe dependence, sexual dysfunction.

Introduction

The persistent and chronic use of alcohol is known to induce sexual dysfunctions, even though alcohol may foster the initiation of sexual activity by relieving anxiety and inhibitions. Sexual dysfunction has been reported in 40 – 95 per cent of alcohol-dependent patients, the rates being consistently higher than in the healthy controls (1). The common sexual dysfunctions reported are erectile dysfunction, premature ejaculation, retarded ejaculation and decreased sexual desire and orgasm (2).

These sexual dysfucntions might be due to various psychological factors such as lack of arousability and disinterest in sex in partners – due to aversion, rejection, retaliation for her husband's undesirable drinking behavior, and psychiatric comorbidities such as anxiety and depression as well as those induced by psychotropic medications.(3) The inhibition of the hypothalamic gonadotropin-releasing hormone and pituitary luteinizing hormone and alteration of the hypothalamo–pituitary–adrenal and the hypothalamo–pituitary–gonadal axis causing reduction in plasma testosterone is the considered to be the most important postulate for the sexual dysfunctions caused by alcohol use. It is mediated by the increased inhibitory activity of gamma-amino butyric

acid receptor and decreased excitatory activity of glutamate receptor in central nervous system(4,5). The oxidative damage due to alcohol consumption may be due to increase in toxic radicals or decrease in the level of antioxidants thereby further damaging the testosterone production from the testes.(6) Lipid peroxidation of the testicular memberane due to chronic alcohol use may further lead to gonadal dysfunction.(7)

Sexual dysfunction is of high clinical relevance in patients with alcohol dependence syndrome, as it often leads to low self esteem, treatment nonadherence and sexual or marital disharmony, and is a common contributor of relapses (8) Yet, it is often neglected and unexplored in routine clinical care. This is also reflected by the limited research in this area.

Our current study aims to assess the prevalence of sexual dysfunctions in Alcohol use disorder patients. The objectives of our study were to evaluate the clinical correlates and socio demographic factors associated with sexual dysfunctions in alcohol use disorder patients and to study the association of severity of alcohol dependence and sexual dysfunctions.

Materials And Method

Our study was cross sectional in nature, conducted in the Department of Psychiatry, Govt. Kilpauk Medical College, Chennai after approval from the Institutional Ethics Committee. Consecutive male patients attending our out patient clinics or getting admitted in our Psychiatry ward, diagnosed as Alcohol Use Disorder by DSM 5 criteria were screened. The study was done for a period of two months between August 2018 to September 2018. We included only those patients in the age group of 21-50 years and who were married or having a stable heterosexual sexual partner for this study.

We excluded 1) those individuals with chronic comorbid medical illness which may cause sexual dysfunction like hypertension, diabetes, thyroid dysfunction, cardiovascular disorders, renal dysfunctions, cirrhosis and neurological disorders 2) who had acute intoxication of alcohol or in an acute withdrawal state 3) Comorbid psychiatric disorders – delirium and other organic disorders, mental retardation, psychotic disorders such as schizophrenia, delusional disorder, mood disorders, and anxiety disorders 4) history of trauma or surgery in the pelvic area 5) Those on medications which may affect sexual function such as antidepressants, antipsychotics, disulfiram, antihypertensives, steroids, etc.

The patients were taken up for the study after applying the inclusion and exclusion criteria. Informed consent was obtained from the study population. Semi structured proforma was used to collect the socio demographic details of the patient and the pattern of alcohol consumption.

Tools

1. DSM 5 to confirm the diagnosis of Alcohol use disorder.

2. Proforma for sociodemographic and alcohol related variables

- Sociodemographic variables – Age, education, occupation, religion, monthly income, domicile, famiy type
- Alcohol-related variables – Age at first drink, duration of morning drink, duration of alcohol dependence, quantity consumed per day, family history of alcohol dependence, duration of tobacco use/ dependence.

3. Severity of Alcohol Dependence Questionnaire (SADQ)

SADQ to assess the severity of alcohol dependence: A score of ≥31 indicates severe alcohol dependence, 16 to

30 – moderate dependence, and scores <16 indicates mild dependence.

4. Arizona Sexual Experiences Inventory (ASEX)

It is designed to measure 5 items identified as the core elements of sexual function. These elements are sexual drive, arousal, penile erection/vaginal lubrication, ability to reach orgasm, and satisfaction from orgasm. The items are rated on a 6-point Likert scale ranging from 1 (hyper function) to 6 (hypo function). Possible total scores range from 5 to 30, with higher scores indicating more sexual dysfunction. A total score of >18 on the Arizona Sexual Experiences Inventory (ASEX) or a score of 5 or greater on any one item or a score of 4 on 3 or more items is associated with clinical sexual dysfunction.

Statistical Analysis

Statistics was done using SPSS software version 20.0. Data were analyzed using descriptive statistics such as frequency and percentage for categorical variables and mean ± standard deviation for continuous variables. Chi-square test and Pearson's correlation were used to evaluate the statistical significance between the severity of alcohol dependence with various domains of sexual dysfunctions.

Results

We screened 62 cases and included only 51 cases for study. Remaining was excluded as they were on medications for hypertension and diabetes mellitus. The mean age in our study is 36.59 ± 4.468 years. Around 23.5% had completed their high school and around 11.8% had graduated. Most of them, around 39.2% were semi skilled workers followed by skilled laborers. (Table 1). Around 70.6% had their first drink between 16-25 years. However 19.6% started alcohol use even before 15 years of age. 51.0% were consuming alcohol for more than 16-30 years duration. (Table 2)

Table 1: Socio demographic variables

S.No	Variables		Frequency	Percentage
1.	Education	Illiterate	7	13.7
		Primary school	9	17.6
		Middle school	10	19.6
		High school	12	23.5
		Hr. Sec/Diploma	7	13.7
		Graduate	6	11.8
2	Occupation	Unskilled	8	15.7
		Semiskilled	20	39.2
		Skilled	13	25.5
		Clerk/Farmer	5	9.8
		Semiprofessional	5	9.8
3	Family type	Nuclear	43	84.3
		Joint	8	15.7

Table 2: Alcohol related variables

S.No	Variables		Frequency	Percentage
1	Age at first drink	≤ 15 years	10	19.6
		16-25 years	36	70.6
		> 25 years	5	9.8
2	Duration of alcohol use	≤ 5 years	2	3.9
		6-15 years	23	45.1
		16-30 years	26	51.0
3	Amount of alcohol per day	Upto 360 ml	12	23.5
		360-720 ml	28	54.9
		>720 ml	11	21.6
4	Smoking	Yes	36	70.6
		No	15	29.4
5	Family H/o psychiatric illness	Yes	3	5.9
		No	48	94.1
6	SADQ	Mild	10	19.6
		Moderate	20	39.2
		Severe	21	41.2

Dysfunctions were present in 35 cases (68.6%). Decrease in desire was the most common dysfunction detected in our study, in 28 cases (54.9%) followed by decreased erection, in 19 cases (37.3%) (Table 3)

Table 3: Profile of Sexual dysfunctions

S.No	Variables	Frequency	Percentage
1	Sexual dysfunction	35	68.6
2	Decreased desire	28	54.9
3	Decreased arousal	12	23.5
4	Decreased erection	19	37.3
5	Decreased orgasm	9	17.6
6	Premature ejaculation	12	23.5

There was a significant association between severity of alcohol dependence and sexual dysfunctions (p value = 0.003). On the basis of domains of sexual dysfunctions, severity of alcohol dependence had significant association with decreased desire (p value = 0.006) and erectile dysfunction (p value = 0.000) and orgasm (p value = 0.046). There was no significant association between severity of alcohol dependence with arousal and premature ejaculation.

Sexual dysfunction had a significant association with the duration of alcohol dependence. (p value = 0.011). However no association was established between sexual dysfunctions and amount of alcohol consumed, age at first drink. Although tobacco use has been a significant determinant of sexual dysfunction in many studies, no significant association was found in our study.

Table 4 : Association of sexual dysfunctions with SADQ

S No	Variables		SADQ			p value
			Mild	Moderate	Severe	
1	Sexual dysfunction	Yes	3	13	19	**0.003**
		No	7	7	2	
2	Decreased desire	Yes	1	14	3	**0.006**
		No	9	6	8	
3	Decreased arousal	Yes	0	7	5	0.103
		No	10	13	16	
4	Decreased Erection	Yes	0	3	16	**0.000**
		No	10	20	21	
5	Decreased orgasm	Yes	1	1	7	**0.046**
		No	9	19	14	
6	Premature ejaculation	Yes	1	3	8	0.116
		No	9	17	13	

Table 5: Association of sexual dysfunction with alcohol related variables.

S.No	Variables		Sexual dysfunctions		p value
			Yes	No	
1	Amount of alcohol	<360 ml	7	5	0.236
		360-720 ml	22	6	
		>720 ml	6	5	
2	Duration of alcohol	<5 yrs	0	2	**0.011**
		6-15 yrs	13	10	
		16-30 yrs	22	4	
3	Age at first drink	<=15 yrs	8	2	0.658
		16-25 yrs	24	12	
		>25 yrs	3	2	
4	Smoking	Yes	30	5	0.694
		No	13	3	

Discussion

In our study, 51.2% had severe degree of alcohol dependence. Sexual dysfunctions were present in 68.6% of cases in our study. This is in concordance with the study by Aswal *et al.*, where the prevalence of sexual dysfunction was 76.0% (9). Sexual dysfunction had a significant association with the duration of alcohol dependence in our study is in concordance with the results of study done by Saha et al., where the chance of developing sexual dysfunction appears to increase with increasing years of alcohol consumed. (10) This detrimental effect of chronic alcohol use can be due to decrease in the nitric oxide synthesis, an important vasodilator due to effect of free radicals. The cytotoxic effects of alcohol on the hepatic functions, immunity, general health and gonadal system might be a mediator of association between sexual dysfunction and alcohol consumption.

Comorbid tobacco dependence was present in 70.6% patients which is in concordance with study by Prabhakaran et al. However it was not associated with significant dysfunction in our study group. Decrease in desire was the most common domain of sexual dysfunction affected in around 54.6% of patients which is similar to results of Pendharkar et al.(3), where the decrease in arousal followed by reduced desire was most common finding. Similarly, Vijayasenan ME noted decreased sexual desire in 56% cases in his study group

(11). The significant association of alcohol use severity with decrease in the orgasm, erection and desire in our study proves the long-term detrimental effects of alcohol consumption. This could have been due to the neurotoxic effects of heavy usage of alcohol.

Limitations

A larger sample size would be required for better generalization of the results. Moreover, the study being conducted among patients in a tertiary care hospital also narrowed the chances for generalization of the findings. Cross-sectional nature of our study shows association rather than causality. The data on alcohol, tobacco, and sexual function-related parameters were based on self-report, which is vulnerable for bias.

Conclusion

Dissatisfaction in sexual life is often associated with increased rates of marital violence, suspiciousness, less warmth and unity in relationships, with frequent breakups – all of which may lead to worsening of the alcohol consumption. Sexual dysfunctions could also lead to depression and aggravate the anxiety, which further perpetuates the alcohol use disorder. Our study implies the need for comprehensive, easily approachable psychosocial/sexual services for patients with alcohol dependence having sexual dysfunction. Moreover, this study also enlightens the need to regularly assess sexual function in Alcohol use disorder patients similar to that of other physical evaluation, so that we may prevent them from reaching quacks for cure of sexual problems.

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