

Prevalence, typology and clinical correlates of sexual dysfunction among men with alcohol dependence syndrome

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Abstract

Background: Chronic and persistent alcohol use is known to induce sexual dysfunction, but it is often unexplored and untreated in routine clinical practice. **Objective:** To study the prevalence and typology of sexual dysfunction and its clinical correlates among male patients seeking treatment for alcohol dependence. **Materials and Methods:** 60 male subjects (aged 18-50 years) meeting the criteria for alcohol dependence syndrome (ADS), according to DSM-IV were enrolled for the study. Data regarding socio- demographic and clinical details were recorded on a semi-structured proforma designed for the study. They were assessed for sexual dysfunction using a Sexual Dysfunction Checklist, constructed using items from the Diagnostic Criteria for Research (ICD-10) for sexual dysfunction and Arizona Sexual Experience Questionnaire (ASEX) and for severity of alcohol dependence using the Severity of Alcohol Dependence Questionnaire (SADQ). **Results:** 58.3% had one or more sexual dysfunction as per ASEX, the most common being inability to reach orgasm (60%), dissatisfaction with orgasm (58.3%) and erectile dysfunction (56.7%). As per sexual dysfunction checklist, dissatisfaction with own sexual performance (58.3%), anorgasmia (56.7%) and erectile dysfunction (53.3%) were the most common. 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. Anorgasmia is quite common in patients with alcohol dependence. Longer duration of consumption and dependence and heavy drinking proportionately increases the risk. Clinicians need to routinely evaluate sexual functioning in alcoholic patients and address the same.

Key words: Alcohol; Alcohol dependence syndrome; Sexual dysfunction.

Introduction

According to WHO Global Status Report on Alcohol and Health 2014, alcohol consumption in India has gone up. Around 11% of women and 32% of men over the age of 15 consume [1]. World Health Report in 2002 reported that 8.9% of the total burden of disease worldwide in 2000 was from the use of psychoactive substances [2]. Chronic and persistent alcohol use is known to induce sexual dysfunction (SD). It may leads

to marked distress and interpersonal problems among couples [3]. A review by Grover et al. suggests that prevalence of SD has ranged from 40- 95.2% across the studies and long term use of alcohol is associated with SD in all most all domains of sexual functioning.

The common SDs reported in this review was erectile dysfunction (ED) followed by premature ejaculation (PME), retarded ejaculation and decreased sexual desire among men, and dyspareunia and vaginal dryness among women [4]. Association between high amount of

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alcohol consumption and long-term use and SD has been widely reported [5,6].

A World Health Organization cross-cultural study for alcohol done across eight countries reported that 12% males in the general population consumed alcohol prior to first sexual intercourse to get positive effect and to improve sexual pleasure [7]. However persistent use impacts sexual functioning negatively and leads to the onset of sexual dysfunction [8].

However, sexual dysfunction among alcohol dependent patients has not caught the attention of clinicians and researchers as much as other complications. As a result, sexual dysfunction is often neglected, unexplored and unattended in routine clinical care of patients. Yet, it is clinically highly relevant as it affects psychological well being in terms personal inadequacy, guilt, low self esteem, worthlessness, unsatisfying personal relationship with partner leading to marital conflicts. Research in this area is highly limited especially from Indian subcontinent.

The present study is carried out to look for the prevalence, typology and demographic and clinical correlates of sexual dysfunction among alcohol dependent male patients.

Materials and Methods

Subject selection-The study was conducted in Shridevi Institute of Medical Sciences and Research Hospital, a tertiary care centre in southern part of India. All male subjects presenting to hospital with alcohol related problems were recruited and they were enrolled into the study if they fulfil the following inclusion and exclusion criteria.

Inclusion criteria- Men aged 18-50 years who were married or having stable heterosexual partner atleast for last one year with diagnosis of alcohol dependence as per Diagnostic and Statistical Manual of Mental disorders, fourth edition (DSM-IV) [9] and dependent on alcohol for at least 1 year.

Results

Socio-demographic profile- The analysis indicated that mean age at presentation was 38.38 years (S.D. = ± 7.477). Majority of the patients were Hindu (98.3%), married (75%), studied 10th class and above (48.41%), employed (83.3%), belong to nuclear family (51.7%), middle socio economic status (56.7%) and rural background (60%). Further details are given in Table 1.

Exclusion criteria

- Patient in acute intoxication or acute withdrawal state.
- Concurrent presence of other Substance Dependence, according to DSM-IV, other than Nicotine.
- History of SD prior to the onset of substance use.
- Concurrent presence of chronic co-morbid medical illness which can cause sexual dysfunction (hypertension, diabetes mellitus, thyroid dysfunction, alcoholic liver disease, renal dysfunctions, cardiovascular and neurological disorders like stroke, spinal cord lesions, peripheral neuropathy. These were ruled out by the needed history, physical examination and investigations.
- Co-morbid psychiatric disorders: schizophrenia, delusional disorder, anxiety disorders and mood disorders including dysthymia. Subsyndromal cases of depression or anxiety were included in the study.
- Use of drugs affecting sexual function (antipsychotics, antidepressants, antihypertensives, steroids, disulfiram etc.)

Data collection and clinical evaluation- Ethical committee approval was obtained for the study. Patients with a clinical diagnosis of alcohol dependence syndrome as per DSM IV and meeting the inclusion and exclusion criteria were approached for participation in the study. They were explained about the nature of the study and patients willing to participate and providing informed consent were recruited. Socio- demographic details, history, general physical examination and mental status examination were recorded on a semi-structured proforma designed for the study. Severity of alcohol dependence was assessed using the Severity of Alcohol Dependence Questionnaire (SADQ) [10]. They were assessed for the prevalence and typology of one or more sexual dysfunction experienced over the past 12 months using a Sexual Dysfunction Checklist, constructed using items from the Diagnostic Criteria for Research (ICD-10) [11] for sexual dysfunction and Arizona Sexual Experience Questionnaire (ASEX) [12]. Temporary and situational complaints were ignored.

Table-1: Socio-demographic profile.

Socio- demographic variable	n (%)
Mean age at presentation in years \pm S.D.)	38.38 \pm 7.477
Education	
Illiterate	7 (11.7)
Primary (6 th)	11 (18.3)
Middle (8 th)	13 (21.7)
High school (10 th)	16 (26.7)
College and above	13 (21.7)
Current occupational status	
Employed	50 (83.3)
Unemployed/ Home maker	10 (16.7)
Family type	
Joint	29 (48.3)
Nuclear	31 (51.7)
Location	
Rural	36 (60.0)
Urban	24 (40.0)
Marital status	
Unmarried	11 (18.3)
Married	45 (75.0)
Separated/ Divorced	4 (6.7)
Socio-economic status	
Low (Class V)	21 (35.0)
Middle (Class II, III, IV)	34 (56.7)
Upper (Class I)	5 (8.3)

Clinical Profile-Analysis revealed that mean age of onset of alcohol use was 25.03 years (S.D = \pm 4.26). Duration of use before seeking treatment and total duration of dependence was 13.32 years (S.D = \pm 6.61) and 7.37 years (S.D = \pm 5.7) respectively. Average quantity of alcohol (IMFL, Indian Made Foreign Liquor) consumption per day was 356.83 ml. 55% of patients were severely dependent on alcohol. Further details are given in Table 2.

Table-2: Clinical profile.

Clinical variable	n (%)
Mean age of onset of use in years \pm S.D.	25.03 \pm 4.266
Duration of use before seeking treatment in years \pm S.D.	13.32 \pm 6.617
Duration of dependence in years \pm S.D.	7.37 \pm 5.707
Time taken to develop dependence in years \pm S.D.	6.02 \pm 3.10
Average alcohol intake in ml/ day (IMFL)	356.83 \pm 159.006
Quantity of alcohol intake/ day	
90 to 359 ml	19 (31.7)
360 and above	41 (68.3)
SADQ score >30	33 (55)
Tobacco dependence	
Smoking	33 (55.0)
Chewable	14 (23.3)
Family history of alcohol dependence	18 (30.0)

Prevalence and typology of sexual dysfunction-According to ASEX a person is considered to have sexual dysfunction if he has a total score of ≥ 19 or, has a score >5 on any one item or, has a score of >4 on any three items of ASEX. Additionally, a score of 4 or more can be used to define sexual dysfunction in a particular domain. Accordingly, 58.3% of the patients had sexual dysfunction. In terms of domains, highest prevalence was seen for dysfunction in the domain of ability to reach orgasm (60%), followed by satisfaction with orgasm (58.3%), erection (56.7%) and desire was least affected (30%). Further details are given in Table 3.

Table-3: Sexual Dysfunction as per ASEX.

Variables	n (%)
Desire/Drive	18 (30%)
Arousal	26 (43.3%)
Erection	34 (56.7%)
Ability to reach Orgasm	36 (60%)
Satisfaction with Orgasm	35 (58.3%)
ASEX-global scores (≥ 19)	29 (48.33%)
ASEX score 4 on 3 domains but global score of <19	5 (8.33%)
ASEX score 5 on 1 domain but global score of <19	1 (1.66%)
Total number of patients with sexual dysfunction	35 (58.3%)

As per sexual dysfunction checklist, highest prevalence was seen for dissatisfaction with own sexual function (58.3%), followed by anorgasmia (56.7%), difficulty in achieving (48.3%) and maintaining (53.3%) erection, premature ejaculation (46.7%) and frequency dissatisfaction (46.7%). Further details are given in Table 4.

Table-4: Sexual Dysfunction as per Sexual dysfunction checklist.

In the past 12 months	n (%)
Has the prospect of having sex with your partner produced such aversion, fear or anxiety that you avoided any sexual activity (Aversion to sex)?	0 (0)
Have you had a lack or loss of sexual desire, which has led you to initiating sexual activity with your partner or engaging in solitary masturbation, at a frequency clearly lower than previous levels (Low sexual desire)?	23 (38.3%)
Have you had a difficulty in getting an erection sufficient for intercourse (Difficulty achieving erection)?	29 (48.3%)
Have you had difficulty in maintaining erection (full erection occurs during the early stages of lovemaking but disappears when intercourse is attempted or before ejaculation if it occurs) (Difficulty maintaining erection)?	32 (53.3%)
Have you found that frequently (or always) you have ejaculated before you would like to: before entry?	28 (46.7%)
< 1 min?	20 (33.3%)
< 3 min? (Premature ejaculation)	8 (13.3%)
Have you frequently had problems in ejaculating even when erect (Inhibited / delayed ejaculation)?	2 (3.3%)
Have you ever ejaculated without getting full erection (Orgasm with flaccid penis)?	18 (30%)
Do you have difficulty in reaching the peak of pleasure at the time of ejaculation (Anorgasmia)?	34 (56.7%)
Have you felt pain in the genitals during sexual intercourse (Coital pain)?	18 (30%)
Are you satisfied with the frequency of sex (Frequency dissatisfaction)?	28 (46.7%)
Are you satisfied with your sexual relationship with your partner (Dissatisfaction of sexual relation with partner)?	9 (15%)
Are you satisfied with your sexual performance (Dissatisfaction with own sexual function)?	35 (58.3%)

Comparison of socio-demographic and clinical profile of those with and without sexual dysfunction (SD) as per ASEX.

On socio- demographic variables, those with and without sexual dysfunction as per ASEX did not differ on various parameters, except that mean age at presentation was significantly late for those with sexual dysfunction.

On clinical variables, patients with sexual dysfunction had consumed significantly more quantity of alcohol per day, for longer duration and remained dependent for more years compared to patients without dysfunction. Sexual dysfunction was significantly more common among patients with severe dependence as assessed by SADQ. Tobacco use was not found to be a significant determinant of sexual dysfunction. Further details are given in Table 5.

Table-5: Clinical profile patients with and without sexual dysfunction as per ASEX.

Clinical variable	With SD n (%)	Without SD n (%)	p- value
Mean age of onset of use in years (S.D.)	25.56 ± 4.388	24 ± 4.425	0.197
Duration of use before seeking treatment in years (S.D.)	14.56 ± 7.101	10.8 ± 5.385	0.040*
Duration of dependence in years (S.D.)	9.20 ± 6.788	4.60 ± 2.958	0.009*
Time taken to develop dependence in years (S.D.)	5.52 ± 2.888	6.20 ± 3.547	0.422
Average alcohol intake ml/ day (Whiskey/ IMFL)	410	324	0.067
Quantity of alcohol intake/ day			
90 to 359 ml	7 (20)	12 (48)	0.022*
360 and above	28 (80)	13 (52)	
SADQ score >30	23 (65.71)	10 (40)	0.048*
Tobacco dependence			
Smoking	17 (48.57)	16 (64)	0.236
Chewable	9 (25.71)	5 (20)	0.606
Family history of alcohol dependence	12 (34.28)	6 (24)	0.391

* p value <0.05

Discussion

Sexual dysfunction appears to be common among male subjects with alcohol dependence. 58.3% of the subjects with alcohol dependence complained of one or more problems with sexual functioning. Various studies done across the globe with sample sizes of 18-816, showed the rates of SD have ranged between 40-95.2%, with rates being consistently much higher in alcohol-dependent population than in the healthy controls or alcohol users [4].

As per the review by Grover et al. the common SDs reported were erectile dysfunction followed by premature ejaculation, retarded ejaculation and decreased sexual desire among men [4]. According to the study done by Arackal et al. on Indian population, most common problems were premature ejaculation, low sexual desire and erectile dysfunction. In the same study 14.58% reported anorgasmia and 19.79% dissatisfaction with own sexual function [13]. But in our

study patients reported inability to reach orgasm (60%), dissatisfaction with orgasm (58.3%) and dissatisfaction with own sexual function (58.3%) as the most common problems followed by erectile dysfunction. Many of the

patients may not be aware of the concept of orgasm and may find difficulty in reporting to the psychiatrist compared to decreased sexual desire, erectile dysfunction and premature ejaculation. This might be the possible reason for under reporting of anorgasmia in other studies.

Although studies have tried to characterise the correlates of SD in patients with alcohol dependence, there are very few consistently reported correlates. Advancing age has been reported as one of the consistent correlate of sexual dysfunction in patients with alcohol dependence [14,15]. In our study too mean age at presentation for patients with SD was

significantly late compared to those without SD. Studies have been found the chance of developing SD increases with the high amount of alcohol consumption per day [13,16], longer duration of intake and dependence [17]. Similar results have been found in our study. Higher quantity of alcohol intake may result in greater neurotoxic effects [18] and long term alcohol use may affect male reproductive hormones and semen quality [19].

Although some of the previous studies suggest that comorbid use of tobacco, increases the prevalence of sexual dysfunction in patients with alcohol dependence [13,20], results of this study do not support the same.

Present study focused on small number of alcohol dependent patients attending drug de-addiction and medical services in a tertiary care centre, hence results cannot be generalized to patients with alcohol dependence or use in the community. Future studies should focus on larger sample size and community based sample.

Conclusion

On the basis of the findings of the present study and existing literature, it can be concluded that SD is highly prevalent in patients with alcohol dependence and all domains of sexual functioning are affected. Hence, the clinicians should routinely enquire about SD and do motivational counselling for patients to abstain from alcohol use. Achieving orgasm being the most important component of sexual functioning and anorgasmia is the most common dysfunction reported by our patients. Longer duration of alcohol consumption and dependence, high levels of intake and sever dependence appeared to be the most significant predictors of developing sexual dysfunction.

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