

Prevalence of Erectile Dysfunction in Males with Alcohol Use Disorder: A Cross - Sectional Study

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Abstract: *Background:* chronic and persistent use of alcohol is known to induce sexual dysfunction (Premature Ejaculation, sexual pleasure, sexual desire, arousal, orgasmic function, and intercourse satisfaction). This study is specifically conducted to determine and correlate erectile dysfunction and Alcohol use disorder. *Aim:* The aim is to estimate the prevalence of erectile dysfunction in male subjects with alcohol use disorder. *Materials and Methods:* one hundred two patients with alcohol use disorder attending from out - patient and in - patient psychiatry department of the Tertiary Care Center were assessed for erectile dysfunction using International Index of Erectile Function - 5 (IIEF - 5) Questionnaire and alcohol dependence were assessed on severity of Alcohol Dependence Questionnaire (SADQ) for severity. *Result:* Higher prevalence of erectile dysfunction found in patients of alcohol use disorder. The amount of alcohol consumed appeared to be the most significant predictor of developing erectile dysfunction. *Conclusion:* Erectile Dysfunction is common in patients with alcohol use disorder. Heavy drinking proportionately increases the risk. Clinicians need to routinely assess sexual functioning in alcoholic patients.

Keywords: Alcohol Use Disorder, sexual Dysfunction, Erectile Dysfunction, IIEF - 5, SADQ

1. Introduction

- Erectile dysfunction is a condition in which a men is unable to achieve an erection sufficient for sexual intercourse.
- In some cases the men is able to achieve an erection but unable to maintain it long enough to complete a sexual act.
- Alcohol is a nervous system depressant and can actually block nerve impulses and messages between the brain and body.

Erectile Dysfunction and Alcohol Dependence

- During an erection, the penis fills with blood then the vessels close, preventing backflow, so that the penis remains erect.
- In the short term, overconsumption of alcohol causes the blood vessels in the penis to expand, allowing for more blood flow, but prevents those vessels from closing.
- As a result, the penis may become erect but not remain so, as there is nothing to prevent backflow.

Aims and objectives

- To assess prevalence of Erectile Dysfunction in males with alcohol use disorder.
- To assess the severity of Erectile Dysfunction in males with alcohol use disorder.

2. Methodology

- Cross - sectional study
- Duration: 18months
- Sample size: 102

- Considering Prevalence of Erectile Dysfunction in Alcohol Use Disorder as 25% with C. I.95% and 10% precision

Calculated by open EPI version 3

Criteria for Recruitment

Inclusion criteria

- Male patients who are diagnosed as alcohol use disorder
- Age between 18 - 45years.
- Patients of alcohol use disorder who give consent.

Exclusion criteria

- Dependence or use of any other psychoactive substance apart from alcohol, caffeine and nicotine.
- Patients with co - morbid psychiatric and other chronic medical or surgical disorder.
- Those on medications which may affect sexual function.
- History of primary sexual dysfunction unrelated to alcohol use disorder.

Data Collection Tools

- Semi - structured proforma:
 - Socio - demographic variables
 - Severity of Alcohol Dependence Questionnaire (SADQ)
 - The International Index of Erectile Function (IIEF - 5) Questionnaire

Data Analysis

- Microsoft excel used for data entry.

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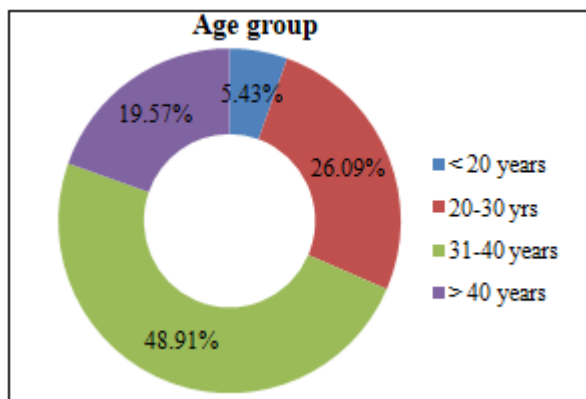
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- 2) Statistical analysis was done by using Statistical Packaging for Social Studies (SPSS) Software.
- 3) Chi square test was applied as a test of significance.
- 4) Statistical significance was assumed at a P - value <0.05

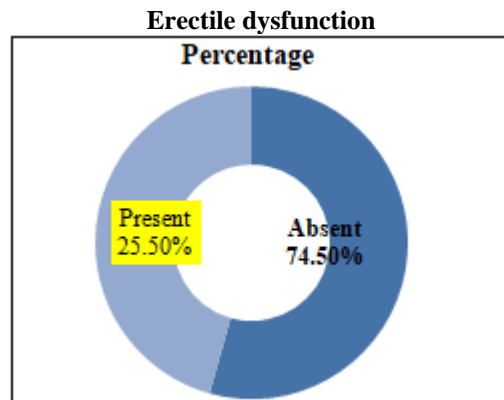
3. Result

- 1) The 102 patients had mean age of 36.22yrs (min - 18, max - 45)
- 2) The mean age of onset of alcohol drinking was 20.14 (minimum - 17, maximum - 30).
- 3) 45% of the patients also used Nicotine [chewing and / or smoking].
- 4) 63 patients (61.9%) had family history of alcohol use disorder



Family history of Alcohol Drinking

Family History	No. of patients	Percent
Present	63	61.96%
Absent	39	38.04%

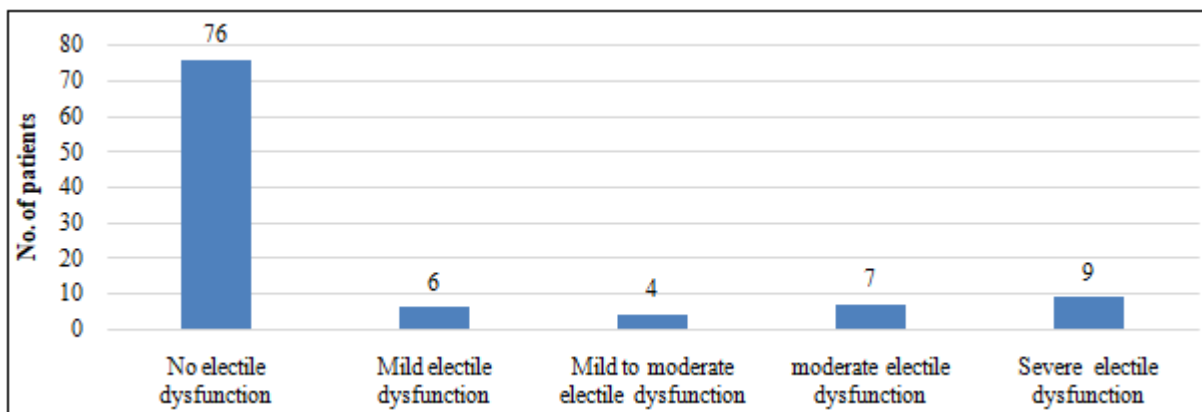


Alcohol Dependence

Year of alcohol dependence	No. of patients	Percent
<5 years	24	26.09%
> 5 years	68	73.91%

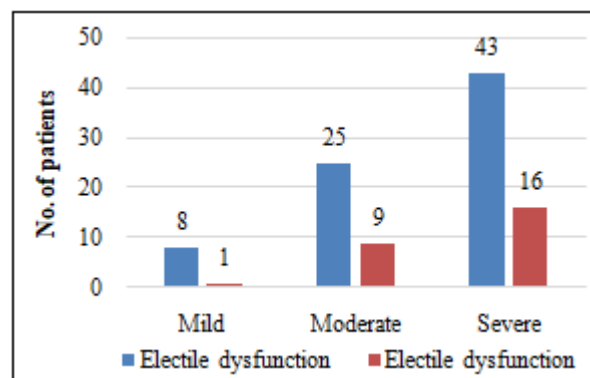
Severity of Erectile Dysfunction (IIEF - 5)

Erectile dysfunction	Number of Patients	Percentage
No erectile Dysfunction	76	74.51%
Mild Erectile dysfunction	6	5.88%
Mild to Moderate Erectile dysfunction	4	3.93%
Moderate Erectile dysfunction	7	6.86%
Severe Erectile dysfunction	9	8.82%
Total	102	100%



Association of alcohol use with Erectile Dysfunction

SADQ score	Erectile Dysfunction		No. of patients	P value
	Absent	Present		
Mild	8	1	9	$\chi^2=1.07$ P=0.89 (NS)
Moderate	25	9	34	
Severe	43	16	59	
	76	26	102	NS=not significant



4. Discussion

- 1) Chronic alcoholism affects sexual functions in men.
- 2) In the following study conducted in 102 patients of Alcohol Use disorder, amongst these the prevalence of Erectile dysfunction is 25.50% (26) with severe erectile dysfunction seen in 8.82% (9).
- 3) The 102 male patients had mean age of 36.22. The mean total IIEF score of 102 patients was (minimum - 5, maximum - 25) was 11.36.
- 4) This finding is correlated with previous study (Disiz M, et al) ¹. Twenty nine patients (65.9%) had erectile dysfunction.
- 5) This is similar to what has been reported in earlier studies (Fahrner EM, Bijil Simon Arackal, Jensen SB, Vijayasenana ME) ^{2,3}.
- 6) The patients were divided into three groups by SADQ scores as mild, moderate, severe alcohol dependents. Severe alcohol dependent groups had low IIEF scores and erectile function scores than moderate and mild groups.
- 7) This finding is correlated with previous studies (Krupnov AN, Mandell W) ^{4,5}. The increased quantity of daily alcohol consumption was associated with low IIEF scores and erectile function scores.
- 8) This finding is similar to previous reports (Lee AC et al, Mandell W) ⁶

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5. Limitations

- 1) Nicotine use is not excluded from the study.
- 2) Data on hormonal levels were not assessed for ruling out psychogenic Sexual Dysfunction.
- 3) Psychosocial factors such as relationship conflict were not specifically assessed.

6. Conclusion

- 1) Alcohol increases risk of erectile dysfunction
- 2) Risk increase with amount of alcohol and age of onset
- 3) Clinicians need to be encouraged to assess for sexual problems actively, as it is often under reported
- 4) Reversal of ED is possible with cessation of alcohol ⁷

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