

Study of attention deficit hyperactive in alcoholic use disorders in Maharashtra population

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Abstract

Background: Attention deficit Hyperactivity disorder (ADHD) is of great clinical importance not only because of its high prevalence but also due to the frequent co-morbid illness that are connected with this disorder. Several studies proved that ADHD constitutes a significant risk factor for the exacerbation of habit forming illness of addiction. **Method:** 85 adult alcoholic patents having symptoms of ADHD were studied. SADQ scale, CIWA scales to monitor the withdrawal syndrome. ASRS it an instrumental scale to assess adult ADHD was used. DSM-5 scale to study the symptom of ADHD. **Results:** Social manifestation were – 21 (25.6%) were illiterate, 30 (36.5%) had primary education, 19 (23.1%) were matriculate, 12 (14.6%) had passed intermediate education. The marital status was – 32 (39%) were married, 33 (46.3%) un-married, 11 (13.4%) were divorcee. The monthly income was > 5000 in 58 (70.7%) patients, <5000 in 24 (29.2%) patients. The CIWA score was <9 in withdrawal patients. There was comparison between confirmed 16 (19.5%) patients and non-confirmed 66 (8.9%) ADHD patients SADQ score in ADHD patients was 37.8 (± 1.38), 32.5 (± 2.63) in non-confirmed ADHD patients. Study of age related to alcohol use, onset of craving, onset of withdrawal symptoms, age of onset of salience years was compared in both confirmed and non-confirmed groups and p value was highly significant ($p < 0.00$). **Conclusion:** These results reveal that, habit forming illness can be associated with high co-morbidity with ADHD, expressed in the form of alcohol abuse. These findings underline the great importance of early and adequate diagnostics and therapy of ADHD for the prevention of habit-forming illness.


Keywords: SAD Q Score, ASRS scale, CIWA scale, AUD, Maharashtra

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INTRODUCTION

Attention deficit Hyperactivity disorder (ADHD) is a chronic disorder often persists into adulthood.¹ Adults with ADHD are at increased risk of alcohol and/or drug abuse or dependence² ADHD doubles the life time risk of developing an addiction, with co-morbid depression, anxiety and conduct disorder potentially further increasing

such risk. Majority of adults untreated ADHD have a substance use disorders (SUD), conversely, studies also show that, approximately 11-35% of adults with different forms of SUD experience ADHD³ substance use disorder that is co-morbid with ADHD typically has an earlier onset, in more severe and less responsive to treatment and has a longer duration than SUB without ADHD using extended release formulations of stimulants or the non-stimulant atomoxetine may be associated with lower risk of abuse, misuse, and/or diversion Compared with other agents and formulations.⁴ The aim of this study to evaluate the baseline ADHD symptoms or drinking behaviour were predictive of ADHD or alcohol use outcomes and compare the relationship between ADHD symptoms with drinking subjects.

MATERIAL AND METHOD

82 patients admitted at alcoholic de-addiction ward of psychiatry department of Prakash institute of medical

sciences and researches Islampur Dist-Sangli, Maharashtra-415409 were studied.

Inclusion Criteria: Meeting the diagnostic criteria for AUD according to DSM 5; age between 20 to 60 years were selected for study.

Exclusion Criteria: Patients having substance use disorders (SUD) except, nicotine dependence, patients admitted primarily for another major psychiatric disorder patient having intellectual disability or mentally retarded were excluded from the study.

Method: All patients admitted at de-addiction ward of psychiatry department were clinically interviewed. Patients presenting with an index diagnosis of Alcohol use disorder (AUD) according to DSM-5 and co-operating for study is recorded. The patients underwent an assessment with SADQ to assess the severity of alcoholism and CIWA scale to monitor the withdrawal symptoms⁵ patients also undergone adult ADHD self-report scale (ASRS) after completion of detoxification and the CIWA score being <9.⁶ The patients who screened positive for ASRS score were taken for diagnostic confirmation using DSM-5. Clinical interview ASRS is an instrument used for screening adult ADHD and consists of two parts A and B. The scale was applied in English and Marathi forms which have been validated and translated by WHO. The diagnostic conformation of ADHD was done using DSM-5 by clinical interview method. The diagnostic criteria for adult ADHD were according to DSM-5⁽¹⁾ Patients had at least five of the inattention or hyperactivity and impulsivity symptoms.² Several symptoms were present prior to the age of 12 years³ Symptoms occur in more than two settings and⁴ symptoms cause social and occupational dysfunction. All patients admitted for alcohol de-addiction underwent both pharmacological and psychological interventions as part of the treatment protocol for managing withdrawal states and relapse prevention. The duration of study was from April-2020 to May-2021.

Statistical analysis: Various parameters of ADHD alcoholic were studied and classified percentage. The patients with ADHD and without ADHD were compared with various parameters by applying z test. The statistical analysis was carried out in SPSS software. The ratio of male and female 3:1.

This research paper was approved by Ethical committee of Prakash Institute of Medical science and research centre Islampur – Dist Sangli, Maharashtra – 415409.

OBSERVATION AND RESULTS

Table 1: Social manifestation in alcoholic use disorder patient.

- A) Educational status – 21 (25.6%) were illiterate, 30 (36.5%) had primary education, 19 (23.1%) were matriculate, 23 (14.6%) were intermediate qualified.
- B) Marital Status – 32 (39%) were married, 38 (46.3%) were un-married, 11 (13.4%) were divorcee
- C) Monthly income of ADHD patients was 58 (70.7%) ≥5000 per month 24 (29.3%) ≤ 5000 per month.

Table 2: Comparison of characteristics with and without ADHD – The age of first exposure to alcohol (years) 20.8 (±1.2) in with ADHD, 23.9 (±2.3) in without ADHD subjects, t test 7.69 and p<0.000.

Age of regular use (year) 26.1 (±1.8) in ADHD 28.8 (±2.22) in without ADHD, t test 4.49 and p<0.000, Age of onset of craving (year) 25.6 (±1.30) in ADHD 28.2 (±2.29) t test 7.48 and p<0.000, Age of development of tolerance (year) 26.4 (±1.40) in ADHD patients, 29.6 (±2.10) t test 7.17 and p<0.000, The age of onset of withdrawal symptoms 27.3 (±1.28) in ADHD, 30.6 (±2.10) in without ADHD patient t test 8.07 and p<0.000, Age of development of loss of control (years) 27.3 (±1.30) in ADHD, 32.32 (±2.11) in without ADHD subjects, t test 11.8 and p<0.000, Age of onset salience (year) 27.3 (±1.29) in ADHD, 33.69 (±2.60) in without ADHD patients, t test 13.8 and p<0.000, Age of onset of early morning use (years) 29.8 (±1.30) in ADHD, 36.5 (±2.13) in without ADHD patients, t test 16.04 and p<0.000. Alcohol use in units, per day 24.2 (±1.42) in ADHD, 20.2 (±2.12) in without ADHD patients, t test 9.05 and p<0.000, SADQ score 37.8 (±1.38) in ADHD 32.52 (±2.63) in without ADHD patients, t test 11.2 and p<0.000. Mean value of longest duration of abstinence from alcohol (days) 4.13 (±1.270) in ADHD, 150.2 (±2.76) in without ADHD patients, t test 79 and p<0.000.

Table 1: Social Manifestations in ADHD alcoholics use disorder patients

Sl No	Manifestations	Number of Patients	Percentage
a	Educational Status		
	1) Illiterate	21	25.6
	2) Primary	30	36.5
	3) Matriculate	19	23.1
	4) PUC Inter medial	12	14.6
b	Marital status	32	39
	1) Married		
	2) Un-marred	38	46.3

	3) Divorce	11	13.4
c	Monthly Income per month	58	70.7
	> 5000 (more than)		
	< 5000 (less than)	24	29.2

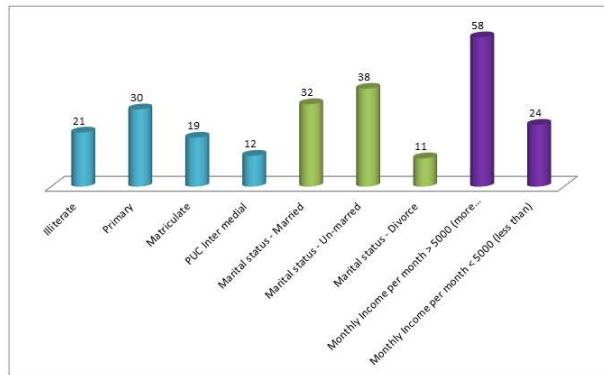


Table 1: Social Manifestations in ADHD alcoholic use disorder patients

Table 2: Comparison of characteristics of alcoholism in subjects with ADHD and without ADHD

SI No	Characteristic of Alcoholism	Subjects with ADHD (16)	Subjects without ADHD (66) Mean value	t test	p value
1	Age of first exposure to alcohol (years)	20.86 (SD±1.2)	23.91 (SD±2.3)	7.39	p<0.00
2	Age of regular use (year)	26.12 (SD±1.8)	28.6 (SD±2.6)	4.49	P<0.00
3	Age of onset (craving years)	25.62 (SD±1.30)	28.80 (SD±2.22)	7.48	P<0.00
4	Age of development of tolerance (year)	26.48 (SD±1.40)	29.60 (SD±2.10)	7.17	P<0.00
5	Age of onset withdrawal symptoms (years)	27.36 (SD±1.28)	30.68 (SD±2.10)	8.07	P<0.00
6	Age of development of loss of control (years)	27.39 (SD±1.30)	32.32 (SD±2.11)	11.8	P<0.00
7	Age of onset of salience (years)	27.38 (SD±1.29)	33.69 (SD±2.60)	13.8	P<0.00
8	Age of onset of early morning use (years)	29.88 (SD±1.30)	36.58 (SD±2.13)	16.04	P<0.00
9	Alcohol in Units per day	24.23 (SD±1.42)	20.24 (SD±2.18)	9.05	P<0.00
10	SADQ score	27.82 (SD±1.38)	32.52 (SD±2.63)	11.2	P<0.00
11	Largest duration of abstinence from Alcohol (days)	41.36 (SD±1.27)	150.26 (SD±2.76)	79	P<0.00

DISCUSSION

Present study ADHD in alcoholic use disorders in Maharashtra Population. The social manifestations in the patient were 21 (25.6%) were illiterate, 30 (36.5%) had primary education, 19 (23.1%) had passed matriculate, 12 (14.6%) were qualified up to PUC-II, 32 (39%) were married, 38 (46.3%) were un-married, 11 (13.4%) were divorce. The monthly income of the patient was 58 (70.7%) had > 5000 per month, 24 (29.2%) had < 5000 per month (Table-1). In the comparison of characteristics of alcoholism in the subjects with ADHD and without ADHD

– Age of first exposure alcohol, regular use age of onset age of development of tolerance, age of withdrawal symptom, age of development loss of control (years) age of onset of salience (years). Alcohol use unit per day. SAQ scale were highly significant (p<0.00) (Table-2). These findings were more less in agreement with previous studies.^{7,8,9} The severity of alcohol use was high and the time to relapse was shorter in patients with ADHD both of which are indirect indicators of higher severity of alcohol use in them. Further, this was underlying pathology increases the dropout rate from the treatment process.¹⁰

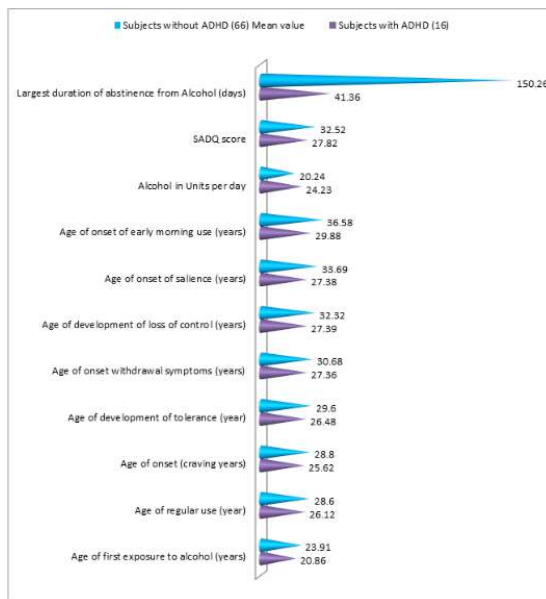


Table 2: Comparison of characteristics of alcoholism in subjects with ADHD and without ADHD

There are several reasons why there is such a high coincidence of ADHD and addictive illness. Firstly, it is fairly, evident that the “hyperactive – impulsive” and “combined type”. Patients are more curious and having reckless behaviour when it comes to drugs and alcohol. This explains the higher consumption of high risk of alcohol. Another reason for the high incidence of ADHD and addictive illness might be considered to be the unsuccessful attempt at self-treatment.¹¹ Patho-physiologically, the high prevalence of addictive illness in ADHD might thus be explained by the fact that, these substances stimulate the release of neurotransmitters – especially dopamine. Dopamine reduces the core symptoms of ADHD.¹² Patients with ADHD were at higher risk of developing another psychiatric disorder like hallucinations, paranoid reactions if they are not treated early.

SUMMARY AND CONCLUSION

Apart from the base line level of sobriety, no base line characteristic was identified as significant predictor of alcohol use or ADHD treatment out comes. However, reduced craving for alcohol from base line significantly corrected with improved ADHD symptoms in all patients, especially those receiving atomoxetine. Further studies are warranted to substantiate the efficacy of atomoxetine, elucidate mechanism by which atomoxetine treatment might attenuate alcohol craving or use in adults with ADHD because exact mechanism of atomoxetine is still unclear.

Limitation of study: AS location of our institution is in remote area hence we had limited number of patients to study.

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