ORIGINAL RESEARCH

Adult attention deficit hyperactivity disorders among patients with opioid-dependence syndrome

Dr. Sandeep Govil

Assistant Professor, Department of Psychiatry, Rama Medical College Hospital & Research Centre, Hapur, Uttar Pradesh, India

Corresponding Author
Dr. Sandeep Govil
Assistant Professor, Department of Psychiatry, Rama Medical College Hospital & Research Centre, Hapur, Uttar Pradesh, India

Received: 15 April, 2017 Accepted: 19 May, 2017

ABSTRACT
Background: The neurodevelopmental illness known as attention-deficit hyperactivity disorder (ADHD) is typified by recurrent patterns of impulsivity, hyperactivity, and inattention that impede daily functioning and growth. The present study was conducted to evaluate adult attention deficit hyperactivity disorders among patients with opioid-dependence syndrome. **Materials & Methods:** 112 patients with opioid-dependence syndromeof both genders were selected. The Mini International Neuropsychiatric Interview 5.0, the Maudsley Addiction Profile, and the adult ADHD self-report screening scale were used to evaluate the patients. A range of sociodemographic, drug use, and clinical variables were examined between those who tested positive for adult ADHD (ADHD+) and those who tested negative (ADHD−). **Results:** Education level was primary level in 68 and secondary level in 44. Family type was alone in 83 and nuclear in 29. Marital status was unmarried/separated/divorced in 61, married/widowed in 51 subjects. Type of opioid use was heroin in 32, natural opioid (opium etc.) in 40, prescription opioids in 22 and mixed in 18 subjects. Comorbid substance use was alcohol dependence in 10, cannabis dependence in 16, sedative/hypnotic dependence in 34, and nicotine dependence in 52 subjects. The difference was significant (P< 0.05). In ADHD positive and ADHD negative patients, mean COWS score was 1.82 and 1.18 respectively. The mean physical health score was 16.3 and 14.1. The mean anxiety score was 6.1 and 4.3. The mean depression score was 8.5 and 5.6 respectively. The difference was significant (P< 0.05). **Conclusion:** Adult attention deficit hyperactivity disorders were highly prevalent in opioid-dependence syndrome patients.

Keywords: Attention-deficit hyperactivity disorder, cannabis dependence, opioid-dependence syndrome

INTRODUCTION

The neurodevelopmental illness known as attention-deficit hyperactivity disorder (ADHD) is typified by recurrent patterns of impulsivity, hyperactivity, and inattention that impede daily functioning and growth. ADHD can last throughout adulthood and usually starts in infancy.[1,2] Symptoms include forgetfulness, trouble focusing, casual errors, trouble planning tasks, and being quickly sidetracked by irrelevant stimuli. restlessness, excessive chatting, trouble sitting sat, fidgeting, and being on the go all the time. acting impulsively, talking over other people, not waiting one's turn, and answering questions without thinking.[3,4]

ADHD has been associated with a higher prevalence of substance use disorders (SUDs) in adulthood. Additionally, compared to the general population, patients with SUDs seem to have higher incidence of ADHD. A meta-analysis found that ADHD affects 23.1% of individuals with SUDs.[5] Opioid use disorder, which affects over 15 million people globally, has a persistent relapse pattern. Significant medical, financial, and social costs are associated with the condition. ADHD is still not properly diagnosed or treated in patients with SUDs. Treating ADHD patients with concurrent SUD can be challenging, particularly due to concerns about methylphenidate, a stimulant, being diverted. The lack of published research makes it equally difficult to formulate recommendations on this topic.[6]However, some evidence suggests that patients with opioid dependence may benefit from medication to alleviate their ADHD symptoms. There appears to be a substantial treatment gap as less than 3% of patients undergoing treatment for opioid dependency have been prescribed medication for ADHD.[7]The present

study was conducted to evaluate adult attention-deficit hyperactivity disorders among patients with opioid-dependence syndrome.

MATERIALS & METHODS

The present study consisted of 112 patients with opioid-dependence syndromeof both genders. All gave their written consent to participate in the study.
Data such as name, age, gender etc. was recorded. The Mini International Neuropsychiatric Interview 5.0, the Maudsley Addiction Profile, and the adult ADHD self-report screening scale were used to evaluate the patients. A range of sociodemographic, drug use, and clinical variables were examined between those who tested positive for adult ADHD (ADHD+) and those who tested negative (ADHD−). Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Sociodemographic data

Parameters	Variables	Number	P value
Education	Primary level	68	0.02
	Secondary level	44	
Family type	Alone	83	0.01
	Nuclear	29	
Marital status	Unmarried/separated/divorced	61	0.73
	Married/widowed	51	
Type of opioid use	Heroin	32	0.05
	Natural opioid (opium etc.)	40	
	Prescription opioids	22	
	Mixed	18	
Comorbid substance use	Alcohol dependence	10	0.47
	Cannabis dependence	16	
	Sedative/hypnotic dependence	34	
	Nicotine dependence	52	

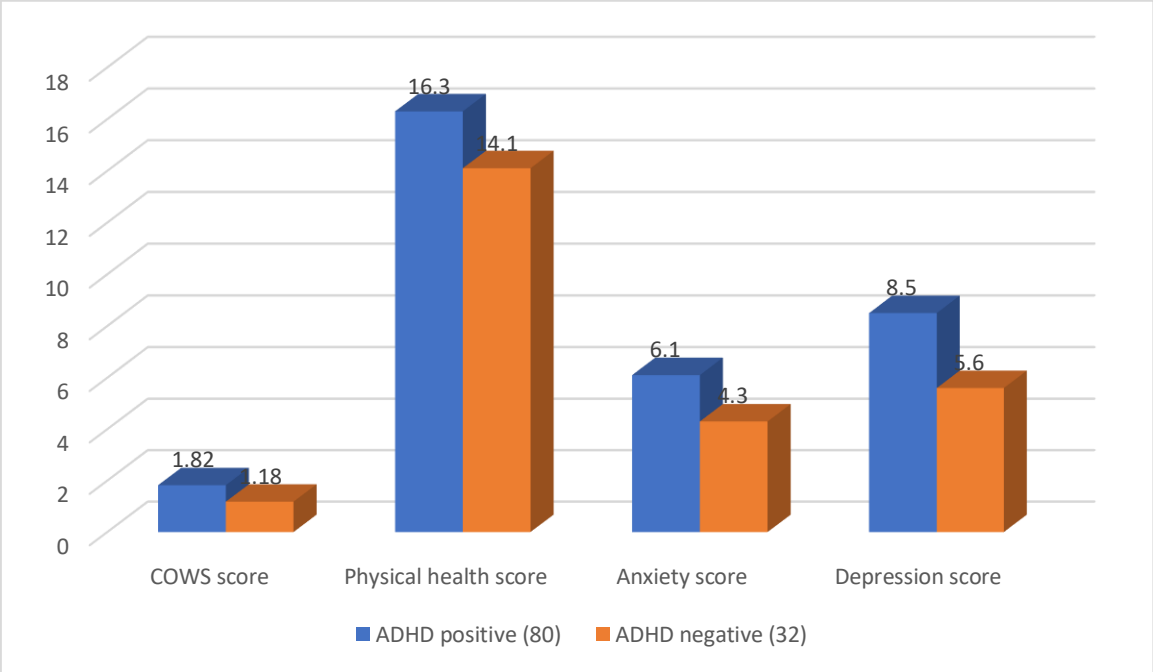
Table I shows that education level was primary level in 68 and secondary level in 44. Family type was alone in 83 and nuclear in 29. Marital status was unmarried/separated/divorcedin 61, married/widowed in 51 subjects. Type of opioid use was heroin in 32, natural opioid (opium etc.) in 40, prescription opioids in 22 and mixed in 18 subjects. Comorbid substance use was alcohol dependence in 10, cannabis dependence in 16, sedative/hypnotic dependence in 34, and nicotine dependence in 52 subjects. The difference was significant (P< 0.05).

Table II Assessment of parameters among ADHD positive and ADHD negative

Parameters	ADHD positive (80)	ADHD negative (32)	P value
COWS score	1.82	1.18	0.05
Physical health score	16.3	14.1	0.03
Anxiety score	6.1	4.3	0.05
Depression score	8.5	5.6	0.02

Table II, graph I shows that in ADHD positive and ADHD negative patients, mean COWS score was 1.82 and 1.18 respectively. The mean physical health score was 16.3 and 14.1. The mean anxiety score was 6.1 and 4.3. The mean depression score was 8.5 and 5.6 respectively. The difference was significant (P< 0.05).

Graph I Assessment of parameters among ADHD positive and ADHD negative



DISCUSSION

ADHD can have an impact on a number of facets of daily living, such as social interactions, professional functioning, and academic achievement.[8] To reduce the negative effects of ADHD on general functioning and quality of life, early detection and intervention are crucial.[9,10] Learning challenges, anxiety disorders, depression, and oppositional defiant disorder (ODD) are among the problems that frequently coexist with ADHD. Effective management of these coexisting disorders may need thorough evaluation and therapy.[11] Despite the fact that ADHD is frequently identified in children, symptoms may continue throughout adolescence and adulthood. Optimizing results and lowering long-term impairment require appropriate supervision and assistance throughout the lifecycle.[12]The present study was conducted to evaluate adult attention deficit hyperactivity disorders among patients with opioid-dependence syndrome.

We found that education level was primary level in 68 and secondary level in 44. Family type was alone in 83 and nuclear in 29. Marital status was unmarried/separated/divorced in 61, married/widowed in 51 subjects. Type of opioid use was heroin in 32, natural opioid (opium etc.) in 40, prescription opioids in 22 and mixed in 18 subjects. Comorbid substance use was alcohol dependence in 10, cannabis dependence in 16, sedative/hypnotic dependence in 34, and nicotine dependence in 52 subjects. Comorbidity patterns between substance use disorder (SUD) treatment-seeking patients with and without adult attention deficit hyperactivity disorder (ADHD) were identified by Van Emmerik et al.[13] In this SUD sample, 13.9% of adults had DSM-IV adult ADHD. ADHD (+) patients were more likely to have ASPD [odds ratio (OR) = 2.8, 95% CI = 1.8-4.2], BPD (OR = 7.0, 95% CI = 3.1-15.6 for alcohol; OR = 3.4, 95% CI = 1.8-6.4 for drugs), MD in patients with alcohol as the primary substance of abuse (OR = 4.1, 95% CI = 2.1-7.8), and HME (OR = 4.3, 95% CI = 2.1-8.7) than ADHD (-) patients ($P < 0.001$). These findings also show that alcohol is a more common primary substance of misuse than drugs, with higher levels of BPD and MD. When compared to SUD patients without ADHD, comorbidity patterns varied by ADHD subtype, with higher BPD in all subtypes ($P < 0.001$), higher HME and ASPD in the hyperactive/impulsive ($P < 0.01$) and combined subtypes ($P < 0.001$), and higher MD in the inattentive and combined subtypes ($P < 0.01$). Compared to 37% of SUD patients without ADHD, 75% of ADHD patients had at least one additional comorbid condition.

We found that in ADHD positive and ADHD negative patients, mean COWS score was 1.82 and 1.18 respectively. The mean physical health score was 16.3 and 14.1. The mean anxiety score was 6.1 and 4.3. The mean depression score was 8.5 and 5.6 respectively. Gupta et al[14] examined the frequency of adult ADHD in people with opioid dependence and its associations, as well as how those with adult ADHD felt about receiving treatment. 132 consecutive inpatients with opioid-dependence syndrome participated in the survey. The Mini International Neuropsychiatric Interview was used to evaluate the patients. 5.0, Maudsley Addiction Profile, and Adult ADHD Self-Report Screening Scale. Approximately one-fifth (n=24, 18.2%) of the opioid-dependent individuals had positive adult ADHD screening results. Only half (n=3) of the participants were willing to pay, whereas one-third (n=8, 33.3%) were eager to receive any form of treatment. There was a

greater chance of having ADHD+ status if opioid use began earlier in life (relative risk: 0.01; 95% CI: 0.003, 0.85; P = 0.036).

The limitation of the study is the small sample size.

CONCLUSION

Authors found that adult attention deficit hyperactivity disorders were highly prevalent in opioid-dependence syndrome patients.

REFERENCES

1. Matthys F, Soyez V, van den Brink W, Joostens P, Tremmery S, Sabbe B. Barriers to implementation of treatment guidelines for ADHD in adults with substance use disorder. J Dual Diagn2014;10:130-8.
2. Kalbag AS, Levin FR. Adult ADHD and substance abuse: Diagnostic and treatment issues. Subst Use Misuse 2005;40:1955-81.
3. Arias AJ, Gelernter J, Chan G, Weiss RD, Brady KT, Farrer L, et al. Correlates of co-occurring ADHD in drug-dependent subjects: Prevalence and features of substance dependence and psychiatric disorders. Addict Behav2008;33:1199-207.
4. Tamm L, Trello-Rishel K, Riggs P, Nakonezny PA, Acosta M, Bailey G, et al. Predictors of treatment response in adolescents with comorbid substance use disorder and attention-deficit/hyperactivity disorder. J Subst Abuse Treat 2013;44:224-30.
5. Fatseas M, Debrabant R, Auriacombe M. The diagnostic accuracy of attention-deficit/hyperactivity disorder in adults with substance use disorders. Curr Opin Psychiatry 2012;25:219-25.
6. Eme R. Male adolescent substance use disorder and attention-deficit hyperactivity disorder: A review of the literature. Int Sch Res Not 2013. Available from: https://www.hindawi.com/journals/isrn/2013/815096/.
7. Storebø OJ, Rasmussen PD, Simonsen E. Association between insecure attachment and ADHD: Environmental mediating factors. J Atten Disord2016;20:187-96.
8. Gerra G, Leonardi C, Cortese E, Zaimovic A, Dell'agnello G, Manfredini M, et al. Homovanillic acid (HVA) plasma levels inversely correlate with attention deficit-hyperactivity and childhood neglect measures in addicted patients. J Neural Transm (Vienna) 2007;114:1637-47.
9. Jacobsen T, Huss M, Fendrich M, Kruesi MJ, Ziegenhain U. Children's ability to delay gratification: Longitudinal relations to mother-child attachment. J Genet Psychol 1997;158:411-26.
10. Khantzian EJ. The self-medication hypothesis of substance use disorders: A reconsideration and recent applications. Harv Rev Psychiatry 1997;4:231-44.
11. Lugoboni F, Levin FR, Pieri MC, Manfredini M, Zamboni L, Somaini L, et al. Co-occurring attention deficit hyperactivity disorder symptoms in adults affected by heroin dependence: Patients characteristics and treatment needs. Psychiatry Res 2017;250:210-6.
12. Pani PP, Maremmani I, Trogu E, Gessa GL, Ruiz P, Akiskal HS. Delineating the psychic structure of substance abuse and addictions: Should anxiety, mood and impulse-control dysregulation be included? J Affect Disord2010;122:185-97.
13. Van Emmerik-van Oortmerssen K, van de Glind G, Koeter MW, Allsop S, Auriacombe M, Barta C, et al. Psychiatric comorbidity in treatment-seeking substance use disorder patients with and without attention deficit hyperactivity disorder: Results of the IASP study. Addiction 2014;109:262-72.
14. Gupta S, Bhatia G, Sarkar S, Chatterjee B, Balhara YP, Dhawan A. Adult attention-deficit hyperactivity disorders and its correlates in patients with opioid dependence: An exploratory study. Indian J Psychiatry 2020;62:501-8.