

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/315057196>

Inhalant induced mania: An unexplored entity

Article in *Asian Journal of Psychiatry* · March 2017

DOI: 10.1016/j.ajp.2017.03.009

CITATIONS

0

READS

2

3 authors, including:



Sulochana Joshi

Patan Academy of Health Sciences

2 PUBLICATIONS 0 CITATIONS

[SEE PROFILE](#)



Pawan Sharma

Patan Academy of Health Sciences

18 PUBLICATIONS 0 CITATIONS

[SEE PROFILE](#)

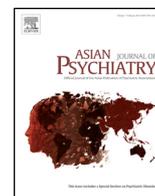
Some of the authors of this publication are also working on these related projects:



Integration of Mental Health in Primary Health Care Setting [View project](#)

All content following this page was uploaded by [Sulochana Joshi](#) on 06 April 2017.

The user has requested enhancement of the downloaded file. All in-text references [underlined in blue](#) are added to the original document and are linked to publications on ResearchGate, letting you access and read them immediately.



Editorial

Inhalant induced mania: An unexplored entity



ARTICLE INFO

Article history:
Received 3 January 2017
Available online xxx

Keywords:
Inhalant dependence
Inhalant induced mania
Adolescents

ABSTRACT

Inhalant abuse is one of the common presentations in de-addiction clinic among children and adolescent age group. Psychiatric morbidity is high among inhalant users but there is very little evidence to consider it a direct result of it. We present a case of 17-year-old boy with symptoms of mania which had time event correlation with inhalant use. He was successfully treated with antipsychotic medications and is maintaining well. The case highlights the need of strong suspicion of inhalant abuse in young patients who present with acute onset of psychiatric symptoms.

© 2017 Elsevier B.V. All rights reserved.

Volatile solvents are the largest and diverse group of abused inhalants which includes chemicals like toluene (adhesives, spray paint), butane, propane (paint, deodorant), 1-1-trichloroethane (cleaning agents and correction fluid), and aliphatic and aromatic hydrocarbons (gasoline, petrol), inhalants commonly used are paint thinners, typewriter correction fluids, glue, adhesives, deodorants (Williamset al., 2007). These are mostly abused by street children, adolescents as an independent or multi-substance dependence as they are inexpensive, legal and easily accessible (Waraichet al., 2003). They can become a gateway drug to other substance use like alcohol, cannabis, cocaine etc. especially in adolescents (Young et al., 1999). Though common very little is known about inhalant related psychiatric disorders.

A 17-year-old boy working as a labourer educated up to class 4 with no past history of medical and psychiatric illness was admitted in psychiatry ward for inhalation of dendrite and abnormal behaviour for 1 week from out-patient department. He had a family history of alcohol use in dependence pattern in mother. On further elaboration he used to sniff glue for last 2 years, the amount and frequency of which had gradually increased over time. He also had strong desire or sense of compulsion to take it and neglect of alternative pleasures or interests because of its use. However, the change in behaviour was acute in onset characterized by increased talkativeness with religious content, singing songs and dancing at inappropriate places, hitting self with stones saying he doesn't feel pain and decreased need for sleep. Patient was restless, irritable and difficult to calm requiring physical restraint. On questioning it was seen that during for last 2 weeks he had increased the frequency and amount of glue that he used to sniff. On examination patient was distractible, euphoric, and energetic with delusion of grandiosity saying he was Krish, a superhero of Indian movies and could jump the hills like him. Disinhibitory behaviour was present in the form of trying to hold hands of female

staffs in ward. On physical examination he was averagely built and had an abrasion on nasal bridge and forehead. His vitals were stable. No abnormalities were detected in systemic examination. Baseline investigations; complete blood count, liver function test, kidney function test, serum electrolytes, chest X-ray (P/A view), ECG were within normal limits. An ICD-10 diagnosis of Mental and behavioural disorders due to use of volatile solvents comorbid with Mania with psychotic symptoms was made. However, a conceptual diagnosis of inhalant induced mania was entertained. He was started on Table Olanzapine 5 mg/day and increased to 10 mg/day within three days. Within nine days of admission patient's agitation improved gradually and there were no behavioural symptoms. Motivation regarding abstinence and relapse prevention was continued during the hospital stay. Patient was then discharged on 12th day of admission after reaching the premorbid state.

In two weeks follow-up he was maintaining well and not sniffing glue. In second follow-up (after 6 weeks of first follow-up) his earlier behavioural symptoms had emerged even on medication. On further evaluation, he was found to have started inhalants again. He was admitted in psychiatry ward for second time and continued on Olanzapine 10 mg/day. Rigorous sessions on motivation enhancement and relapse prevention were taken and discharged after two weeks.

The Naranjo algorithm in this case indicates 'possible' association between inhalants dependence and symptoms of mania in this case (Naranjo et al., 1981). Similarly, there is some degree of time pattern correspondence between increase in inhalation use and development of symptoms further suggesting association (Kiene et al., 2013). here are evidence in literature about the co-morbid presence of psychiatric disorders and inhalant dependence (Dinwiddie et al., 1990). The adolescents with inhalant abuse or dependence are more likely to meet lifetime criteria depression,

have attempted suicide compared with other adolescent patients who reported never using inhalants (Dinwiddie et al., 1990). Psychiatric morbidity is high among inhalant users but there is very little evidence to consider it a direct result of the practice. The presence of antisocial personality or conduct disorder is likely to be the cause of inhalant abuse rather than a result of it. There are evidences that inhalants dependence can have psychiatric comorbidities however, the evidence for cause effect relationship is very less (Ron, 1986). But the index case shows that there could be some causal relationship between mania and inhalant dependence. The rarity could be explained on the grounds of inadequate exploration of inhalant use in the adolescent age group who present with manic symptoms and more emphasis on the particular kind of substance like cannabis and alcohol. Another reason could be transient symptoms after the use of inhalants that is difficult to pick and attribute. This case highlights the need of strong suspicion of inhalant abuse and its screening in the adolescent age group whenever present with acute psychiatric symptoms especially mania.

References

- Dinwiddie, S.H., Reich, T., Cloninger, C.R., 1990. Solvent use and psychiatric comorbidity. *Br. J. Addict.* 85 (12), 1647–1656.
- Kiene, H., Hamre, H.J., Kienle, G.S., 2013. In support of clinical case reports: a system of causality assessment. *Glob. Adv. Health Med.: Improv. Healthc. Outcomes Worldwide* 2 (2), 64–75. doi:http://dx.doi.org/10.7453/gahmj.2012.061.
- Naranjo, C.A., Busto, U., Sellers, E.M., Sandor, P., Ruiz, I., Roberts, E.A., Greenblatt, D.J., et al., 1981. A method for estimating the probability of adverse drug reactions. *Clin. Pharmacol. Ther.* 30 (2), 239–245.
- Ron, M.A., 1986. Volatile substance abuse: a review of possible long-term neurological: intellectual and psychiatric sequelae. *Br. J. Psychiatry: J. Ment. Sci.* 148, 235–246.
- Waraich, B.K., Chavan, B.S., Raj, L., 2003. Inhalant abuse: a growing public health concern in India. *Addiction (Abingdon, England)* 98 (8), 1169.
- Williams, J.F., Storck, M., the Committee on Substance Abuse, Committee on Native American Child Health, 2007. Inhalant abuse. *Pediatrics* 119 (5), 1009–1017. doi: http://dx.doi.org/10.1542/peds.2007-0470.
- Young, S.J., Longstaffe, S., Tenenbein, M., 1999. Inhalant abuse and the abuse of other drugs. *Am. J. Drug Alcohol Abuse* 25 (2), 371–375.

Sulochana Joshi*
Nidesh Sapkota
Pawan Sharma

*Department of Psychiatry, Patan Academy of Health Sciences,
Lalitpur, Nepal*

*Department of Psychiatry, BP Koirala Institute of Health Sciences,
Dharan, Nepal*

*Department of Psychiatry, Patan Academy of Health Sciences,
Lalitpur, Nepal*

* Corresponding author.

E-mail address: dr.sulochana@hotmail.com (S. Joshi).

Received 3 January 2017

Available online xxx