Case Report

Case of Toluene Abuse

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Introduction

Inhalant or volatile substances are emerging as a major drug of abuse in the preadolescent and adolescent age group in recent times [1]. Among these substances, toluene is highly preferred by abusers. The commonest source is typewriter erasing fluid and thinner which contains toluene [2]. It is a poorly recognized risk for both morbidity and mortality in the young all over the world. Inhalants are preferred by young due to its easy availability, cost effectiveness, convenient packaging, lack of legal restrictions, instant high and acceptance by peers.

We present a case report of an adolescent who presented with toluene abuse and responded well to treatment.

Case Report

A 17 year old son of a serving junior commissioned officer (JCO) was brought by his mother with a history of frequent absenteeism from school and remaining withdrawn for the last two months. The JCO was serving in field and the family was staying in a rented accommodation close to the cantonment. The boy was studying in Class XII in Kendriya Vidyalaya. Parents had noted gradual deterioration in his academic performance over the last one year. He used to remain lost in his thoughts and was easily irritable. He used to go out of house at odd hours and at times one had to search for him to get him back home. There was no significant past or family history.

The boy offered no complaints and denied any addiction initially. But on probing gave the history that he used to smoke cigarettes with friends occasionally. He came to know that some of his friends used to sniff a liquid in the class room. Upon interacting with them he came to know that they were in the habit of inhaling correction fluid (Eraz-ex of Kores) to which he was also introduced. He used to put the fluid onto the handkerchief and keep smelling it during the class hours. He used to feel relaxed and happy with the inhalation. Initially he used to buy a packet (costing Rs. 25/- each) from the market with the money given by his mother for purchase of groceries for the home. Gradually over the next few months he was consuming about 4-5 bottles every day. To finance the habit, he started stealing money from home and from the relatives. His concentration in studies became poor, he started missing classes and was found to loiter around in the neighbourhood. He used to feel restless when he could not get the drug. Then he used to become irritable, lacked concentration and remained preoccupied with thoughts of arranging money to procure the drug.

Physical examination was normal. Mental status examination showed an ill kempt young boy, cooperative with low tone coherent speech, evasive of drug abuse, anxious affect, reduced psychomotor activity, no perceptual disturbance and reduced biodrives.

Investigations including hemogram, liver function tests, blood sugar and blood urea were normal. He was counselled on harms of drug abuse and put on Tab Naltrexone 50 mg OD as an anticraving measure. Regular counselling sessions were given and family members were involved in the therapy. He responded well, gradually got weaned off the drug and in the follow up was found to be abstinent after three months. He changed the peer group and showed improvement in academics.

Discussion

Abuse of organic volatile substances in children has become a social health problem that has been increasing in the recent years. Kurtzman et al [3], noted that higher rates are seen in those from lower socioeconomic background, chaotic broken homes and abusive families. The National Epidemiological Survey of Alcohol and Related Conditions conducted in USA reported that 0.02% of 18 years or older met the criteria for inhalant abuse for past year [4]. From India, studies on abuse of kerosene [5] and petrol [6,7] had been described in the past. Basu et al [2] had described a case series involving erasing fluid and thinner.

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Inhalant abuse disorders include volatile solvents that readily vaporize. The various methods of abuse are sniffing (from an open container), bagging (from a bag), glading (through an aerosol) or huffing (from a cloth soaked with the drug) like in our case. The effect is immediate with an excitatory stage followed by prolonged CNS depression. Various adverse effects of long term inhalant abuse have been described including chemical pneumonitis, encephalopathy, interstitial nephritis, toxic hepatitis, aplastic anaemia, teratogenicity and Sudden Sniffing Death Syndrome [8].Toluene has been implicated in long term alteration in the function of NMDA and GABA receptors [9] and damage to CNS myelin [10].

The diagnosis is made on history, clinical presentation of signs and symptoms and distinct odor in the breath or clothes. Severe drying of facial skin and mucous membrane or perioral and perinasal pyoderma (Huffer's rash) may be seen that can be considered as a definite marker of inhalant abuse if present. Physical withdrawal features are rare. Management is generally supportive including health education, family involvement and enhancing coping skills. Anticraving drugs may also be added like in this case. However the golden dictum of Addiction Psychiatry that "Prevention is better than cure" is valid in case of inhalant abuse also.

Conflicts of Interest

None identified

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Answers to MCQs

(1) d	(2) c	(3) a	(4) c	(5) c
(6) d	(7) d	(8) b	(9) c	(10) c
(11) b	(12) a	(13) c	(14) d	(15) d