

A Case Study of Drug Abuse

*Islam RN,¹ Noor-E-Tabassum,² Shamsuzzaman AM,³ Rahman MA⁴

There has been increasing incidence of addiction to certain drugs amongst people belonging to various strata of society particularly amongst young people in our country as well as western countries. Our patient is a 24 year old male with a history of Phensidyl addiction for 4.5 years. Without having it he can't do anything. If he cannot take it, peevish temperament occurs and he doesn't wish to work or even talk. He collects drugs from the local spots or a particular person. This condition is very much dangerous both to the individual and socio-economic condition of a country. Drugs addiction is a condition of periodic or chronic intoxication produced by the repeated consumption of a drug or drugs by and individual effect of which is detrimental to the individual or to the society. A more intensive research, action program, and social movement are needed. It is also needed to strengthen family and social values and religious ethics in order to maintain a stable and drug-free society. We studied a case of multiple drug abuse in boy of 24 years in Bangladesh which described in this article.

[Dinajpur Med Col J 2013 Jan; 6 (1):100-104]

Key words: Drug, abuse

Introduction

Drug abuse directly influences the economic and social aspects of a country. In Bangladesh it is a growing national concern. There are millions of drug-addicted people in Bangladesh and most of them are young, between the ages of 18 and 30. Bangladesh is situated in the central point between the 'golden triangle' (Myanmar, Thailand and Laos) and the 'golden crescent' (Pakistan, Afghanistan and Iran) in terms of geographical location. Bangladesh with its easy land, sea and air access is becoming a major transit point. Traffickers who supply drugs in the markets of Northern America, Africa, and Europe are routing their shipments through Dhaka, Chittagong,

Comilla, Khulna, and other routes in Bangladesh. It is believed that with the increasing quantity of the wares more and more people are likely to get involved in drug business. In this way it ultimately contributes to the number of drug abusers as well. To procure money for buying drugs, addict makes himself associate of criminal group and commit crimes.¹ In a statistics it is shown that among 253 drug abusers 31% is addicted in cannabis, 26% in alcohol, 24% in Phensidyl, 10% in heroin and 9% in diazepam, antihistamine etc. The male: female ratio is 20:1. The predominant age group are- 5% is in between 10-15 yrs, 58% is in between 18-35 yrs, 20% is in between 35-50 yrs and rest is above 50 yrs of age.²

1. *Dr. Rifat Naoreen Islam, Assistant Professor, Department of Forensic Medicine, Medical College for Woman and Hospital, Uttara, Dhaka-1230, Bangladesh
2. Dr. Noor-E-Tabassum, Associate Professor, Department of Pharmacology, Medical College for Woman and Hospital, Uttara, Dhaka-1230, Bangladesh
3. Dr. AKM Shafiuzzaman, Lecturer, Department of Forensic Medicine, Dhaka Medical College, Ramna, Dhaka-1000, Bangladesh
4. Dr. Md Abedur Rahman, Assistant Professor, Department of Physiology, Dinajpur Medical College, Dinajpur, Bangladesh

*For correspondence

Case Report

The victim of this case is a young chap. Though he is 24 years of age, he looks like a man of 40 years. Firstly, his friends introduced him to drugs as a means of enjoyment. Gradually he became addicted. He started with 'Ganja'. He sometimes changes his drugs to meet his satisfaction level. He changes drugs one after another from 'Ganja' 'Wine' to 'Phensidyl'. Now he is fully addicted to 'Phensidyl' for 4.5 years, and has to take it four times in a day. Without having it he can't do anything. He spends Tk. 300-500 everyday for drug purposes. For the excess money, sometimes he takes loan from friends or steals his own household materials. He collects drugs from the local spots or a particular person. On physical examination he was uncleanliness, anxious looking and irritated. Speech was slowed. Physique was lean and emaciated. Mild anaemia and jaundice was present. Nothing abnormality was detected in heart, lungs and kidneys.

Feelings and Reactions of Drug

The body relaxes and the mind feels fresh after taking drugs. If he cannot take it, peevish temperament occurs and he doesn't wish to work or even talk. He feels anorexia, fever, headache, itches in his body and sometimes vomiting also occurs.

Phensidyl

Pharmacologically act as a antitussive and expectorants



Figure 1: The bottle containing Phensidyl.

Composition

Each 5 mL contains Promethazine Hydrochloride-3.6 mg, Codeine-9.0 mg and Ephedrine Hydrochloride-7.2 mg³.

Side Effects and Special Precautions

The most common side-effect of promethazine is sedation, varying from slight drowsiness to deep sleep, and including lassitude, dizziness and inco-ordination. Paradoxical CNS stimulation may occur especially with insomnia, nervousness, euphoria, irritability, tremors, nightmares, hallucinations, and convulsions. In high doses, CNS stimulation may be attributed to antimuscarinic activity. Extrapyramidal symptoms may develop.⁴

Other adverse effects include dry mouth, thickened respiratory tract secretions and tightness of the chest, blurred vision, urinary difficulty and retention, a reduction in tone and motility of the gastro-intestinal tract resulting in constipation and increased gastric reflux. At high doses, transient bradycardia followed by tachycardia with palpitations and arrhythmias may occurred. Photosensitivity, tinnitus, headache and paraesthesias have been reported. There may also be some blood disorders; including agranulocytosis, leucopenia, haemolytic anaemia, and thrombocytopenia.⁵

The most common side-effects of codeine phosphate are nausea, vomiting, constipation, drowsiness and confusion; tolerance generally develops with long-term use. Micturition may be difficult and there may be ureteric or biliary spasm; there is also an antidiuretic effect. Dry mouth, sweating, facial flushing, vertigo, bradycardia, palpitations, orthostatic hypotension, hypothermia, restlessness, changes of mood, hallucinations, and miosis may also occur. Raised intracranial pressure occurs in some patients. Muscle rigidity has been reported following high doses. The

euphoric activity of codeine and similar compounds has led to their abuse. Larger doses produce respiratory depression and hypotension, with circulatory failure and deepening coma.^{4,6} Central effects of ephedrine include fear, anxiety, restlessness, tremor, insomnia, confusion, irritability, and psychotic states. Appetite may be reduced and nausea and vomiting may occur. Effects on the cardiovascular system are complex. Stimulation of the alpha-adrenergic receptors produces vasoconstriction with resultant hypertension. The rise in blood pressure may produce cerebral haemorrhage and pulmonary oedema. There may also be a reflex bradycardia, but stimulation of beta-adrenergic receptors of the heart may produce tachycardia and cardiac arrhythmias, anginal pain, palpitations, and cardiac arrest; hypotension with dizziness and fainting, and flushing, may occur. Other effects that may occur with ephedrine include difficulty in micturition and urinary retention, dyspnoea, weakness, altered metabolism, sweating, and hypersalivation.⁷

Precautions

Promethazine should be used with care in conditions such as closed-angle glaucoma, urinary retention, prostatic hypertrophy, or pyloroduodenal obstruction, epilepsy, severe cardiovascular disorders, or in those with liver disorders. Promethazine may enhance the sedative effects of central nervous system depressants including alcohol, barbiturates, hypnotics, opioid analgesics, anxiolytic, sedatives, and neuroleptics. It has been suggested that promethazine could mask the warning signs of damage caused by ototoxic drugs such as aminoglycoside antibiotics.³

Codeine phosphate should be given with caution or in reduced doses to patients with hypothyroidism, adrenocortical insufficiency, impaired kidney or liver function, prostatic hypertrophy, shock, or inflammatory or

obstructive bowel disorders. Great care is also needed in patients with cardiovascular disease such as ischaemic heart disease, arrhythmia or tachycardia, occlusive vascular disorders including arteriosclerosis, hypertension, or aneurysms. An increased risk of arrhythmias may occur if ephedrine is given to patients receiving cardiac glycosides, quinidine or tricyclic antidepressants. The depressant effects of codeine are enhanced by depressants of the central nervous system such as alcohol, anaesthetics, hypnotics and sedatives, tricyclic antidepressants, and phenothiazines.⁶



Figure 2. A person taking heroine

Drug Addiction and Type of Drugs

The word addiction means getting habituated with something. In case of drugs when a human body gets dependent on some stimulating things, and after a certain period it creates a habit which means that the body has become dependent on the stimulant which is addiction. It creates different types of excitement both in the body and mind. Finally, it makes a person passionate to drugs. In the long run the user has to increase the dose day by day⁸. The World Health Organization (WHO) recognizes the following types of drugs which may cause dependence: Sedative- Barbiturate, Benzodiazepines, Alcohol and Minor

tranquilizers. CNS stimulants - Amphetamine, Cocaine. Opiates- Morphine, Heroin, Methadone. Major tranquilizers - Chlorpromazine, Haloperidol. Antidepressant- TCA, MAO inhibitors, Marijuana.⁹

Stages of Drugs Addiction

Drug abuse may exist with or without dependence and dependence may occur without abuse. Improper or excessive use of therapeutic drugs may be termed as abuse even in the absence of addiction. Addiction is defined as a chronic disorder characterized by compulsive use of drugs resulting in physical, psychological and social harm, and continued use despite evidence of that harm. Addiction evolves through the followings stages: Habituation, Dependence, Tolerance. Drug habituation is a condition resulting from the repeated consumption of a drug in which there is a psychological or emotional dependency on the drug. Physical dependencies defined as an alteration in neural systems which are manifested by tolerance and appearance of withdrawal phenomena when a chronically administered drug is discontinued or displaced from its receptor. Withdrawal illness occurs after abrupt discontinuation of the drug. Tolerance is an interesting phenomenon characterized by the need of increasing amount of a drug to obtain the same therapeutic effect. So that they may increase his drug dosage causes toxicity and death.¹⁰

Recommendations

Several fieldwork studies found that many people, especially the youths are eager to get rid of drugs. But unfortunately they can hardly find any way out. The departments of narcotics control, police, BDR etc. either do not work or/and even some how are related to drug smuggling/business. According to the discussion with the concerned people such as drug abusers, guardians, teachers, policemen,

it is clear that behavioural modification of the abusers is not enough to check the spread of drug taking and drug trafficking. The concerned people gave the following suggestions in order to control of drug addiction:

- Concerned administration should be reshuffled. Culprits, those who are hidden in the police, BDR and narcotics control department, must be punished. At the same time, rewards may be declared for good performance.
- Leaders of social institutions like schools, colleges, clubs etc. should come forward to build resistance against drugs.
- The NGOs can play a great role, especially in the awareness and rehabilitation processes.
- Rapid diagnosis and treatment.
- Mass education.
- Stop drug selling without prescription of a registered doctor.

Discussion

Drug abuse is a major medical problem with extensive legal, social and even political problems. A person made tolerant to a large dose of one narcotic is also cross-tolerant to many of the effects of another narcotic. Indiscriminate use of any of these drugs becomes dangerous and produces a gradual mental, physical and moral deterioration of the individual and sometimes also sexual perversions or crime. To obtain the money for the drug the addict often turns to prostitution or crime.¹ The majority of drug victims are neurotic individuals who are mentally unbalanced. A normal person has no tendency to become a drug addict and is most-unlikely to become one, even when all the facilities are available. Hereditary factors, abnormal mental conditions, frustrations in life, anxiety, chronic tensions, physical inability to do a job, curiosity, etc are some of the causes of drug addiction.¹⁰ Addicts fall in two groups: (I) Those who are originally used the drug for

some disease and thus have acquired the habit and (II) those who use the drug for its narcotic effect alone. The first groups are more easily cured than the second. The inability to discontinue the use of drug may be due to either to a desire for satisfaction or an anxiety to avoid the discomfort of withdrawal symptoms or both.^{8,11}

Conclusion

When a disease breaks out like an epidemic in all segments of the society, it indicates a social change. It is not only the youth, drug addiction has also grabbed the social leaders. Even the teachers and physicians who are supposed to guide the society are more or less getting addicted. Law enforcing agencies and other concerned authorities are in most cases either refraining from their job or associated with the drug business. Undoubtedly it is an awesome situation. Every disease has a cure. We must come out of this monopolistic deadly game. A more intensive research, action program, and social movement are needed¹. It is also needed to strengthen family and social values and religious ethics in order to maintain a stable and drug-free society.

References

1. Simpson DD, Joe GW, Dansereau DF, Flynn PM. Addiction treatment outcomes, process and change. *Addiction* 2010; 10: 1360-69.
2. Shamim SB. A study on drug abuser in mohakhali slum. *Journal of BIDS* 2005; 13: 13-18.
3. Tan CH, Kua EH, Lee EL. Cough mixture addiction. *Singapore Med J* 1988; 29(2): 186-89.
4. Peters RJ Jr, Kelder SH, Markham CM, Yacoubian GS Jr, Peters LA, Ellis A. Beliefs and social norms about codeine and promethazine hydrochloride cough syrup (CPHCS) onset and perceived addiction among urban Houstonian

- adolescents: an addiction trend in the city of lean. *J Drug Educ* 2003; 33(4): 415-25.
5. Perera I. What you need to know: addiction--cough mixture. *Singapore Med J* 2007; 38(3): 136-39.
6. Silva MI, Cito MC, Vasconcelos PF, Vasconcelos SM, Sousa FC. Codeine: historical background, neurobiology of the addiction and relapse and therapeutic perspectives. *Acta Med Port* 2010; 23(2): 247-58.
7. Tagaya H. Ephedrine: pharmacology, indication and potential of abuse. *Acta Med Port* 2010; 68(8):1550-55.
8. Luscher C. Drugs of Abuse. *Basic and Clinical Pharmacology*. 10th edition. Mc Graw Hill. Lange 2007: 511-25.
9. Luscher C, Ungless MA: The mechanistic classification of addictive drugs. *Annu Rev Physiol* 2006; 3: 447-53.
10. Reddy KSN. Drug dependence and Abuse. *The essentials of Forensic Medicine and Toxicology*. 26th edition. Hyderabad. K.Suguna devi 2007: 531-37.
11. Fujita W, Takahashi M, Tokuyama S. The mechanism of the development of drug dependence. *Prog Neurobiol* 2010; 64(8): 1445-50.