

Review

Substance abuse and its medico-legal considerations

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Drug abuse and dependence ‘represents different ends’ the same disease processes. Over the long-term, this dependence results in physical harms, behavioral problems and association with people that have seen seems abused. The actions of drugs are misused in all fields. This misused is not limited to therapeutic purposes, but to terminate the frustrated lives as well. During the past few years, dramatic changes have occurred in the field of drugs abuse. Magnificent increases is everywhere in the number of drug users who are the member of dominant culture. These users turn to some form of crude amateur crime like burglary, robbery and even the prostitution to support their habits. Juvenile’s addiction in the larger cities has become a major problem causing substantial harm to the society. The medico legal, social, moral and ethical issues will be briefed here.

Key words: Substance abuse, drug dependence, legal issues, drug traffic.

INTRODUCTION

The World Health Organization estimates that one third of the world population (15 years and above) abuses tobacco in some form or other (Sainani et al., 1998). In 2009 in the United States, about 21% of high school students have taken prescription drugs without a prescription (CDC Newsroom Press Release, 2010) and earlier in 2002, the World health Organization estimated that around 140 million people were alcohol dependent and another 400 million suffered alcohol-related problems (Barker, 2003).

In the field of substance abuse, the terminology has changed frequently leading to a great deal of confusion. The World Health Organization defined substance abuse as “the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs” (Taking IT Global, 2009). People who use drugs for pain relief may become dependent; though it may be rare in those who do not have a history of addiction; it is becoming increasingly common in our youth today. The use of none medically useful or illegal drugs is usually called drug abuse and the line between drug abuse and dependence can be crossed without the user even realizing it; even the use is moderate and leads to no harm.

Drug abuse and dependence represent different ends of the same disease process. Over the long-term, this dependence results in physical harm, behavior problems,

and association with people who also abuse drugs. Stopping the use of the drug can result in a specific withdrawal syndrome (http://www.emedicinehealth.com/drug_dependence_and_abuse/article_em.htm) and usually carry the opposite symptoms than the effects of the substance used.

Other substances like solvent “abused usually by the young male teenagers” which is the deliberate inhalation of toluene, gasoline, etc. and gaseous substances may be inhaled directly thorough plastic bag are also some of popular substances of abuse. Effects resemble like alcoholism, behaves totally irrationally and may injure or kill self (Reddy, 1999). The term “abuse” when used by it, merely refers to the use of an illicit drug, or the use of an illicit drug outside the legitimate medical practice (Lowinson et al., 1985).

Drug abuse is not a matter of moral weakness or faulty willpower. It is a vicious cycle that actually causes change in the brain, leading to stronger and impulses to use. Without help, drug abuse destroys families and takes lives (Mahanta et al., 2009).

CAUSES AND RISK FACTORS

The majority of drug victims are neurotic individuals who



Figure 1. 94 years old lady caught handed in airport checked point with packed drugs.

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 (Reddy, 1999). However, the hereditary factors, peer pressure, anxiety, emotional disturbances, environmental stress, depression, unstable personality, recreation, too much gain, adverse social reactions, physical inability to do a job, curiosity, chronic pain from cancer, etc., are some of the causes of drug addiction. Peer pressure can lead to drug use or abuse, but at least half of those who become addicted have depression, post-traumatic stress disorder and ADD (attention deficit disorder). Those children who grow up in a society of illicit-drugs use first see their parents using drugs. This may put them at a higher risk for developing an addiction later in life for both environmental and genetic reasons.

Drug dependence results from series of factors, including social and family issues, availability or fashion trend. Personality is another factor that may play an important role in the predisposition, precipitation or perpetuation of abuse or dependence behaviours (LeBon et al., 2004). When young adolescents start this experimental use, they feel that alcohol and drugs are fun and they learn that every time they use, it makes them feel more outgoing. They lose their inhibitions and they become more curious and open to the idea of trying more dangerous drugs such as cocaine or heroin, which can be more addictive than marijuana and alcohol. Many young teenagers like to take risks. This leads to peer-pressure; they feel that life is not as much fun without the excitement of using alcohol and other drugs (McCarron and Wood, 1983).

DEMOGRAPHIC DISTRIBUTION OF ADDICTS (Karmakar, 2006)

Age group: More vulnerable age group is between 16 to

35 years. Juvenile delinquents and economically unsound adults are the more vulnerable group. Sex: Male predominates over female. Location: Urban people predominate over rural people. Educational status: More amongst bright boys, scholars. Social status: Common amongst one child of parents, child of broken home families, pampered child, slum dwellers, drug traffickers, ganja smoking and alcoholism.

GLOBAL CHALLENGES

The increasing burden of HIV care, death and deformity deal besides majestic increase everywhere in the number of drug users has threatens to overwhelm health-care providers and systems in the developing world. Transit of traffic of drugs is still expanding through the 'Golden Triangle' which includes Myanmar (Burma), Thailand, Laos and adjoining part of China and through the 'Golden Crescent' which include Pakistan, Afghanistan and Iran. 'Golden Quadrangle' is also playing an important part in drug trafficking in India.

Two common methods, 'Body packer' and 'Body stuffer' are exercises for illegal drugs smuggling by the smugglers. The practice of swallowing balloons, condoms, or plastic packets filled with illegal drugs for the purpose of smuggling is called "body packing" and the individual who does this is referred to as a "mule" (McCarron and Wood, 1983).

This must be differentiated from "body stuffing" in which an individual, who is on the verge of becoming arrested for possession of illegal drugs, swallows his illicit contraband to conceal the evidence (Roberts et al., 1986). A 94 year old woman was caught with marijuana at the Nogales, Arizona, (USA) port of entry a few days ago with 10.45 lbs of marijuana (Shortarmguy, 2010) (Figures 1 to 3). The incident has proved that the drug trafficker has no limit of age and place; they can do



Figure 2. 94 years old lady packed her body with drug for trafficking.

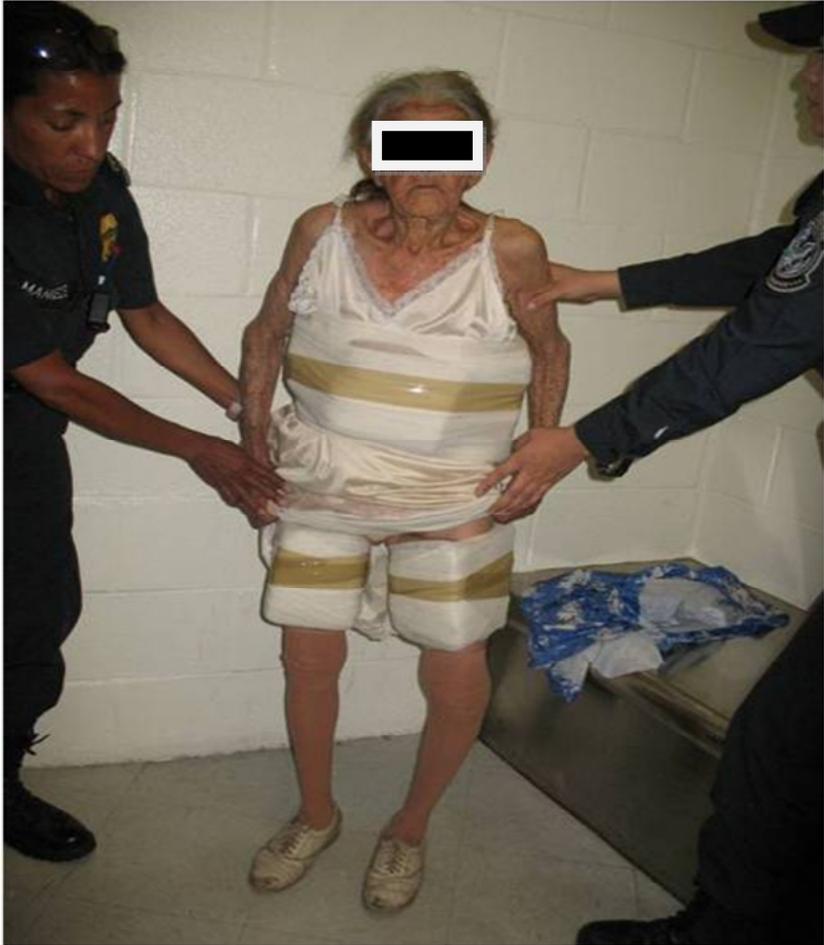


Figure 3. 94 years old lady 1 packed her body with drug for trafficking.

anything to support their habit.

DRUG RELATED HARM [DRH]

Currently, tobacco abuse is said to be responsible for 3.5 million deaths worldwide every year, and if the trend continue, the figure is expected to be rise to 10 million deaths per year by 2020. The most commonly abused drugs (apart from alcohol and Tobacco) in India appear to be cannabis, opiates, and sedatives and tranquilizers. There are also indications of significant abuse of drugs such as cocaine and hallucinogens among the upper classes of society (Ramani and Thapa, 1999).

The harm may be of manifold starting from (a) injury, disease or death following accident, violence, overdose, HIV/AIDS, hepatitis C, and cancer; (b) crime (theft and corruption, prostitution); (c) community and family problems and finally the (d) economic loss. Substance abuse touches millions of people worldwide each year. It is estimated that about 76.3 million people struggle with alcohol use disorders contributing to 1.8 million deaths per year. The United Nations reported that around 185 million people globally over the age of 15 were consuming drugs by the end of the 20th century (http://www.emedicinehealth.com/drug_dependence_and_abuse/article_em.htm)

Most persons use drug of dependence with certain discrimination, and in such cases little harm result. 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 money for the drug, the addict often turns to prostitution or crime (Reddy, 1999).

It is important to note that substance abuse is a problem that affects us all differently, but that holds the same consequences of harm, withdrawal from the community, and even death for all the lives it touches (TakingIT Global, 2009). With the children, a change in the child's friends, withdrawn behavior, long unexplained periods away from home, lying, stealing, involvement with the law, problems with family relations, acting drunk or high (intoxicated), confused, impossible to understand, distinct changes in behavior and normal attitude and decreased school performance (http://www.emedicinehealth.com/drug_dependence_and_abuse/article_em.htm; Reddy, 1999; LeBon et al., 2004) are some significant sign of drug abuse in their early stages.

A strong relationship exists between the abuses of drugs and occurrence of various accidents and the acts of criminal behavior. Schizophrenia is associated with an increased risk of violent crime. This association was attenuated by adjustment for substance abuse suggesting a mediating effect (Seena et al., 2009).

In 2004, SAMHSA's DAWN (Drug Abuse Warning

Network) reported that an estimated 7,873 drug related emergency department visits, in the United State of America involved methylphenidate or amphetamine and dextroamphetamine, two medications used to treat ADHD (attention deficit hyperactivity disorder). The most frequent reason for these ADHD stimulant medication related visits was non-medical uses (48%), followed by adverse reactions associated with medical uses (34%), accidental ingestion (10%), and suicide attempts (8%) (The New DAWN, 2004.).

Data on suicidal attempts, suicidal thought and related behaviors were also available in SAMHSA's National Survey on Drug Use and Health and in SAMHSA's DAWN report. The most frequent psychiatric diagnosis was depression. According to SAMHSA's DAWN, in the year 2004 there were over 15,000 emergency department visits by adolescents aged 12 to 17 whose suicide attempts involved drugs. Pain medications were involved in about half of the suicide attempts. Almost three quarters of the drug related suicide attempts were serious enough to merit the patient's admission to the same hospital or transfer to another health care facility. Antidepressants or other psycho-therapeutic medications were involved in over 40% of the suicide attempts by adolescents admitted to the hospital (The OAS, 2004).

The violence of youth is very much related to the use of illicit drug was reported in USA. An estimated 14% of youths aged 12 to 17 year, approximately 3.5 million youths, had experienced at least one major depressive episode in their lifetime. Over 7%, an estimated 1.8 million youths, had lifetime major depressive episode and thought about killing themselves at the time of their worst or most recent episode. An estimated 712,000 youths had tried to kill themselves during their worst or most recent major depressive episode; this represents 2.9% of those aged 12 to 17 (The NSDUH Report, 2002, 2004).

The use of marijuana and its relation with delinquency among the young group was also reported in the UK. Hispanic females aged 12 to 17 were at higher risk for suicide than other youths (The NSDUH Report, 2002, 2004).

Drug abuse is one of the primary ways HIV is spread. It is estimated that more than five percent of all HIV infections are related to injecting drug use with infected needles. Risky sexual behavior under the influence of drugs, whether they are injected or taken some other way, is another leading cause of HIV transmission (United Nations Office for Drug Control and Crime Prevention, 2010). The spread of HIV is widespread in overcrowded prisons worldwide, creating a health risk for communities once inmates are released.

Although, not all abnormal people are criminals, habitual criminals are demonstrably abnormal. A professional criminal shows strong psychopathic tendencies. All addicts are not criminal, though legally they are, for violating narcotics laws whenever they possess drugs. Cocaine does not arouse criminal impulses in anyone, but it enhances that criminal's impulses in anyone, but it

enhances that criminal's mental and physical impulses into action. Beyond this, he becomes suspicious and fearful. They run away from imagined enemies, usually the police. They are in a paranoid state and commit act of violence. Such person would be incapable of planning and committing a deliberate murder or bank robbery.

Sudden death due to massive overdose can occur in either a body packer or a body stuffer, if one or more of the ingested packages burst within the gastrointestinal tract (Introna and Smialek, 1989). Addicts often die from complication like accidents while under the influence of drugs; or may commit suicide or homicide or other sexual offences which may result in death needing the help of professional expert in the field of investigation.

LEGAL ISSUES OF DRUG ABUSE

Most of the countries have designed legislation to criminalize certain types of drug use. These drugs are often called "illegal drugs" but generally what are illegal are their unlicensed production, distribution, and possession. These drugs are also called "controlled substances". Even for simple possession, legal punishment can be quite severe including the capital sentence. Laws vary across countries, and even within them, and have fluctuated widely throughout history.

Attempts by government-sponsored drug control policy to interdict drug supply and eliminate drug abuse have been largely unsuccessful. In spite of the huge efforts by the U.S., drug supply and purity has reached an all time high, with the vast majority of resources spent on interdiction and law enforcement instead of public health (Copeman, 2003). In the United States, the number of nonviolent drug offenders in prison exceeds by 100,000 the total incarcerated population in the EU, despite the fact that the EU has 100 million more citizens.

India has braced itself to face the menace of drug trafficking both at the national and international levels. Several measures involving innovative changes in enforcement, legal and judicial systems have been brought into effect. The introduction of death penalty for drug-related offences has been a major deterrent. The NDPS (Narcotic Drugs and Psychotropic Substances) Act, 1985, was enacted with stringent provisions to curb this menace. The Act envisages a minimum term of 10 years imprisonment expendable to 20 years and fine of Rs. one lakh expendable up to Rs. two lakhs for the offenders. The Act has been further amended by making provisions for the forfeiture of properties derived from illicit drugs trafficking.

India has bilateral agreements on drug trafficking with 13 countries, including Pakistan and Burma. Prior to 1999, extradition between India and the United States occurred under the auspices of a 1931 treaty signed by the United States and the United Kingdom, which was made applicable to India in 1942. However, a new extradition treaty between India and the United States

entered in to force in July 1999. A Mutual Legal Assistance Treaty was signed by India and the United States in October 2001. India also is signatory to the following treaties and conventions (Azad India foundation, 2010), 1961 U.N. Convention on Narcotic Drugs, 1971 U.N. Convention on Psychotropic Substances, 1988 U.N. Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances and 2000 Transnational Crime Convention.

Conclusion

Regardless of the legal implications, a drug addict who is otherwise a respectable member of the dominant culture cannot be regarded as a criminal, simply because he uses drugs. He has an unfortunate personality defect. Treatment can not take place unless the individual attends for treatment. He must come to learn with the possibility of a life without drug taking. Unfortunately, drug takers, as a rule, have little or no motivation to undergo treatment. Alcoholics tend to deny that their consumption is abnormal; others openly defend their habits. Long-term treatment is not only a medical problem, but needs the cooperation of psychologists and sociologists. Strong family support, social rehabilitation and training for gainful employment are the most important components after weaning addicts away from drug dependency to prevent relapses. It is a disease and not a character defect. A person being treated for this condition requires the same respect as a person with any other medical condition.

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REFERENCES

- Azad India Foundation (2010). Drug Abuse in India. [cited 2010 Sept 30]; Available from: URL: <http://www.azadindia.org/social-issues/Drug-Abuse-in-India.html>
- Barker P. ed. (2003). Psychiatric and mental health nursing: the craft and caring. London: Arnold. p. 297.
- CDC Newsroom Press Release (2010). June 3, 2010. [cited 2010 Dec 31]; Available from: URL: <http://www.cdc.gov/media/pressrel/2010/r100603.htm>
- Copeman M (2003). Drug supply and drug abuse. CMAJ, 168(9): 1113.
- Emedicinehealth experts for everyday emergencies. Drug Dependence and abuse overview. [cited 2010 May 30]; [p-1]. Available from: URL: http://www.emedicinehealth.com/drug_dependence_and_abuse/article_em.htm
- Introna FJR, Smialek JE (1989). The "mini-packer" syndrome: Fatal ingestion of drug containers in Baltimore, Maryland. Am. J. Forensic Med. Pathol., 10: 21-24.
- Karmakar RN (2006). Forensic Medicine and Toxicology. 1st ed. Kolkata: Bimal Kumar Dhur of Academic Publishers. p. 375.
- Le Bon O, Basiaux P, Streel E, Tecco J, Hanak C, Hansenne M,

- Ansseau M, Pelc I, Verbanck P, Dupont S (2004). Personality profile and drug of choice; a multivariate analysis using cloninger's TCI on heroin addicts, alcoholics and a random population group. *Drug Alcohol Dependence*, 73: 175-82.
- McCarron MM, Wood JD (1983). The cocaine body packer syndrome. *JAMA*. 250: 1417-1420.
- Ramani P, Thapa VJ (1999). New Kicks on the block. *India Today*. (15): 50-56.
- Reddy KS Narayan (1999). *The essentials of Forensic Medicine and Toxicology*. 18th ed. Hyderabad: K. Suguna Devi. p. 491-497.
- Roberts JR, Price D Goldfrank L, Hartnett L (1986). The body stuffer syndrome: A clandestine form of drug overdose. *Am. J. Emerg. Med.*, 4: 21-27.
- Sainani GS, Bichile SK. Mehta PJ (1998). Tobacco epidemic. *J. App. Med.*, pp. 576-578.
- Seena Fazel, Niklas Långström, Anders Hjern, Martin Grann, Paul Lichtenstein (2009). Schizophrenia, Substance, Abuse. *JAMA*. May 20; 301(19): 2016-2023.
- Shortarmguy (2010). Old Lady Smuggler. [cited 2010 Oct 11]; Available from: URL: <http://www.shortarmguy.blogspot.com/2010/06/old-lady-smuggler.html>
- Taking IT Global (2009). Substance Abuse- Global Issues. Nineteen Jul [cited 2010 Sept 29]; Available from: URL: <http://issues.tigweb.org/substance>
- The New DAWN (2004). (drug abuse warning network) Report the UK.
- The NSDUH Report (2002; 2004). (National Survey on Drug Use and Health) the UK: Youth violence and illicit drug use.
- The OAS (2004). (Office of Applied Studies) Report the UK.
- United Nations Office for Drug Control and Crime Prevention (2010). Drug Abuse and HIV/AIDS: A devastating combination. United States National Library of Medicine. [cited 2010 Sept 18]; Available from: URL: <http://sis.nlm.nih.gov/hiv/substanceabuse.html>