



DRUG ADDICTION AND ORAL HEALTH COMPLICATIONS IN INDIA

Shadab Mohammad, Sana Farooqui* and Saurabh Srivastava

Department of Oral & Maxillofacial Surgery, King George's Medical University, Lucknow, UP, India.

***Corresponding Author: Sana Farooqui**

Department of Oral & Maxillofacial Surgery, King George's Medical University, Lucknow, UP, India.

Article Received on 12/07/2016

Article Revised on 01/08/2016

Article Accepted on 22/08/2016

ABSTRACT

Oral Health complications related with drug abuse are increasing on a rapid pace in India. Drug use gives birth to number of Oral health complications such as periodontal diseases, Oral precancer, oral cancer, bruxism, tooth loss etc. Not only this but it also gives lodgement to several social and psychological problems such as violence, anxiety, depression and stress. The habit of drug addiction has posed a great threat to mankind as it destroys the individual both physically and psychologically. There are several reasons held responsible for drug addiction. A person becomes addicted to it in order to alleviate from distress and anxiety. Sometimes due to the several social issues such as poverty, unemployment, unrest when a person does not find anyway in order to cope from such problems then he turns towards addiction. In India drugs such as Opiates, Cocaine, Nicotine, Cannabis are currently used. These drugs are highly addictive and harmful and the fact remains very clear that once a man start its use then he becomes habitual of taking it and so it becomes difficult for him to get free from it. Published evidences on drug addiction and health issues emphasizes that drug addiction is just a sickness and through certain preventive measures such as counseling of addicts, support of family and friends and governmental policies this problem can be curbed to a great extent This paper aims to review oral health complications associated with drug use, factors associated for its use and focuses on preventive strategies which support the addicts in changing their attitude towards more positive and healthy lifestyles.

KEYWORDS: Opiates, Cocaine, Nicotine, Cannabis.

INTRODUCTION

The Indian population is rising at a rapid pace and has crossed over 1 billion. This changing pattern of the Indian society and its culture has resulted into the loss of old traditional customs and values, disintegration of the joint family system, lack of social control and discipline and all this has brought with it, to the increased prevalence of drug addiction. Drug addiction is a global social problem and no part of the society is free from its curse. The problem of drug addiction possess serious danger both to the individual and the society. As the social organization becomes increasingly complex the rate of drug addicts also rises. According to the official data of the ministry of social justice and empowerment, India has an estimated 3.4 million drug addicts which excludes alcoholics, which figures around 11 million in the country. Controlling drug addiction has been a matter of priority for the Ministry of Health and Family Welfare. Due to increased industrialization and urbanization majority of the individuals remain maladjusted. On account of the increasing maladjustment the incidence of drug addiction is showing an upward trend.^[4,5,7,8,9,10] Drug addiction also have a chain reaction impact. If any particular member of the society or family is a drug addict then all the sections of the society are affected. It causes immense psychological problems like

depression, anxiety, frustration, complex feelings, distress, financial losses, increased crime, suicides and many more social issues. Drug addiction also gives birth to a lot of oral health complications and periodontal diseases such as oral precancer, oral cancer, alveolar bone loss, cleft lip and palate, bruxism etc. The risk for road accidents and maxillofacial trauma increases in drug users and drinkers.^[1-6] Drug addiction may be defined as the use of a legal drug for a nonmedical cause or the use of an illegally produced substance for the purpose for which it was not intended. A person becomes addicted to any form of drug in order to alleviate anxiety and depression as drugs have some type of mind altering effect likely to produce relaxation. A person becomes a drug addict when he develops physical and psychological dependence on a substance. Physical dependence of a drug may cause effects as vomiting, unconsciousness, tremors, bodily weakness etc, and psychological dependence produces symptoms such as feeling high, relaxation, and pleasure and the user again tries the drug to repeat the effect.^[12-15] Drug use and addiction is a major social problem. A drug is not like intake of other eatables like milk, cereals, fruits etc. If any of these eatables is not available the body and mind will not revolt. They will not become tense or anxious. On the contrary, if a drug is not available to a drug user then

both mind and body start to become hypertense and paranoid.

In India people get drug addicted due to the existence of many myths and legends that glorify the use of Drugs. The first myth is that the use of a drug promises great peace and tranquility. On a surface glance, the drugs do provide these, but these are only momentary. Once that momentary effect is over, confusion takes over and drug manifests its other effects of anxiety, claustrophobia, escape from responsibility, reduced sexual controls, reduced controls on mood and temperament.

The second myth is that drugs are non addictive and that the drug user has a choice, whenever he wants to give them up he can easily walk out of the trap. This is a wrong notion. Opiates and other drugs are habit-forming within a few days of its use. This is a biologically verified fact and medical opinion and findings are on the record concerning it. The third myth is that use of drugs is not harmful to the health. The myth is gradually being exploded by research. At any rate a drug user gives the clear indication of not being healthy.

The above myths have many variants in them and the final toll may be quite disastrous. Drug use begins in a social setting but ends being a solitary activity. Drugs pervert the normal functioning of the control mechanisms in the human brain. They destroy motivation and create fear and anxiety complexes in ordinary and normal human beings. The present review highlights the factors responsible for addiction, types of drugs, effects of drug abuse, oral health complications and focuses on how to tackle it and deal with this situation.

DISCUSSION

Drugs have many dimensional effects on human body and mind which are highly harmful. Physically, the body of a drug – user begins to feel extremely lethargic when the effect of the drug is wearing off. When the drug is taken afresh there is a quick burst of energy which makes the addict do things in great haste. In this stage for a few minutes all seems right with the world, and the user feels quick high. In the second stage the drug creates a stupefying effect in which all positive emotions are numbered, and the user is what is called a “stoned”. This stoned state is extremely negative one in which the addict is willing to fight with and argue against anyone who dares or cares to oppose his way of thinking, living, speaking or dressing. Psychologically, the drug makes the addict extremely aggressive without cause and creates anxiety complex. A great feeling of insecurity settles in the mind of the user. Infantile regression also tends to take place making the addict hate the parents even if he is dependent on them. On the whole, a drug – addict is in a most abnormal state of mind.

Addiction to drug follows some standard steps. It all begins, in most of the cases, with an innocent use of a

drug without knowing what it means. Its constant use follows thereafter. With time addiction becomes more and more deeply rooted in the system and becomes a most deep habit which cannot be interrupted. The curse of addiction is that an addict is very prone to take the drug even if he has been cured and this makes the cure a most precarious thing. The number of addicts who were cured for a while and then slipped back into the drug maze is phenomenal. Such a slip into the direction of the drug suddenly takes over the entire reasoning mechanism of the addict and makes his life drug centered.^[3, 6,7,14,17,18]

Factors responsible for Drug Use: While persons of all the ages and at all places are open to drug use the most susceptible among them are the urban youth. It has been observed that Drug abuse is more commonly prevalent in males, but in this era even females are not being left untouched by this problem. 15–24 years age group is the most vulnerable age group for starting substance abuse. Genetic predisposition also plays a vital role as first-degree family members of alcoholics are more prone to start alcohol abuse at younger age. Firstly, In the Indian situation, the family is still a potent factor, due to the faster pace of life that one witnesses today in the Indian setting, many evils are coming into being. A person often finds that he is not getting sufficient attention from his parents. He turns to drugs. The reduction of inhibition that is caused by drugs creates for the addict relationships which do not last long but are often intense and sexual. This is a substitute for normal flow of emotions that would be available in a family setting.

Secondly, the generation gap that has come into existence between the younger generation and the older one, between parents and children is a major and serious phenomenon. This is because parents are by and large different to the new developments in this world. Moreover the parents themselves are so much entrapped in their own business of life that they hardly have any time or desire left to take in the problems the young one is faced with. Parents often fail to genuinely sympathize with the young ones. This makes the latter turn to drugs.

Thirdly, the young ones in the pursuit of independence from the family setting tend to become obsessive with this thought. However conditions do not permit all of them to get jobs of their choice which creates yet another dilemma. Thus some of these fall off the track and find a good companion in drugs.

Fourthly, due to poverty and higher degree of unemployment people are unable to fulfil even their basic requirements of food, clothing and shelter. Hence in order to cope out from their problems they turn towards addiction to relieve them from mental stress and depression.

Last but not the least factor in aggravating the situation is the easy availability of the drugs. The introduction of synthetic drugs in the market has added a new dimension

to the problem. In short the Indian youth is at crossroads where it is increasingly found that young men and women are taking the path of making nuclear families. These nuclear families have their seed in dissension with parents and elders. Drug taking forms part of this syndrome.^[9-11]

Types of Drugs: Currently the below types of drugs use is highly prevalent in India.

- 1. Hallucinogens:** Such as LSD, Lysergic acid diethylamide, phencyclidine, mescaline, psilocybin, hashish, ganja and bhang. These drugs are psychologically addictive and lead to insecurity and fear, anxiety complexes.
- 2. Opiates:** Such as opium, morphine, heroin and pethedrine these are physically addictive and lead to physical pain and cramps. Preparations of these are smoked, ingested or injected. This group of substances sharply decrease the functioning of the nervous system. The lethality of opiates is often the result of the abuser having to use increasingly higher amounts to achieve the same level of intoxication, ultimately to the point that the dose needed to get high is the same as the dose that is lethal for that individual by halting the person's breathing (respiratory arrest).It may also badly effect the dental health.^[1]
- 3. Analgesics:** Analgesics include Disprin, aspirin etc. These are easily available and are physically addictive.
- 4. Tranquilizers:** Such as tryptanol, calmpose etc which calm anxieties, insecurities and regulate the mood of the user and induce sleep.
- 5. Ecstasy:** It is named as MDMA (methylenedioxymethamphetamine), this drug tends to create a sense of euphoria .It may cause jaw clenching. In overdose, it can increase body temperature and may lead to death.
- 6. Nicotine:** It is one of the most addictive substances that exists mostly in cigarettes. It is harmful and may lead to oral cancer and pre cancer, respiratory and heart arrest etc.
- 7. Volatile solvents:** Varnish, eraser fluids, petroleum.
- 8. Cannabis:** It is very harmful and highly addictive and consumed in both smoking and chewable form.^[1-5]

Various effects of drug addiction: As it is evident that drugs of all form lead to heavy loses so lets have a look on various hazards caused by them.

- 1. Physical problems:** Drug abuse makes a person physically weak. Problems such as respiratory impairment, heart problems, loss of appetite, constipation, nausea, lathargy, insomnia, bodily pains, tremors, loss of libido, etc. Maxillofacial trauma most commonly occur due to drug overdose and there is also increased risk of HIV.
- 2. Psychiatric problems:** Euphoria, fear and anxiety, irritability, loneliness, inferiority complex, distress, and depression are the commonly observed forms of

mental illness in drug abusers. Sometimes such people also develop hatred for others even for well wishers and they get angry without any major cause.

- 3. Other complications:** Mostly the drug addicts turn into criminals and cause violence, unsafe sex, clashes, theft and this leads to personality deterioration. These activities create unhealthy environment resulting in emotional pain and loss of lives also.^[1-8]

Drug abuse and oral health complications

Cannabis: Most commonly the cannabis abusers are found to have more poor dental health as compared to non users. The abusers are found to have decayed and missing teeth, they have dental caries, unhealthy gingival and suffer from periodontal diseases and xerostoma. Cannabis is equally harmful both in chewable and smoking form. Its continuous use may bring changes in the oral epithelium commonly known as cannabis stomatitis. The leukoedema of the buccal mucosa is also included in it. The chronic inflammation of the oral epithelium and leukoplakia may further progresses and leading to neoplasia. They are more prone to oral candidiasis, and other oral infections. During treatment such patients may experience stress, anxiety and dysphoria. From the studies done on oral cancer and drugs the fact remains very clear that those who consume marijuana are likely to develop cancer on the anterior floor of the mouth and the tongue. Marijuana smoke is more carcinogenous as compared to tobacco and it brings the dysplastic changes within the epithelium of the buccal mucosa which includes the abnormalities such as increased nuclear pleomorphism and mitotic activity. There is a increased risk of oral pre malignancies like leukoplakia and erythroplakia. Studies suggest that mostly the youngsters who are below the age of 50 are more addicted and hence they had the higher chances of developing oral pre cancer. Due to the Long term use of drug many times this pre cancerous stage progresses towards cancerous stage. The tumors become more aggressive which requires more radical treatment such as radiotherapy. The relation between the oral papilloma and cannabis smoking is related to the suppression of the immune response by cannabis. During the treatment the consultant must also consider poor denture hygiene and nutritional factors.

Cannabis use also gives birth to various periodontal diseases, painful, fiery red gingivitis and concurrent alveolar bone loss.^[20,21,22]

Cochaine: Studies suggest that after cannabis, cocaine is the second most commonly abused drug by adults aged 16 to 59. It has been found that one in ten adults have used cocaine, and 14% of people aged 16 to 59 year use cocaine more often than once a month. The chronic use of cocaine cause vasoconstriction in which the blood vessels are constricted which results in delivering less oxygen to the palate tissues, and so the palate start shrinking and this leads to palatal perforation. This is a

very adverse and serious problem in which the patient experience difficulty in speaking, laughing, eating and drinking. While drinking any kind of liquid it may pass through the palate and come out from the nose. During such situation the person feels uncomfortable. The palate contains the taste buds so the person is also not capable of tasting any food stuff. While speaking the sound is also affected badly because of the contact of the tongue with the palate. This problem is often ignored because it is not life threatening. The palatal perforation does not heal by itself hence it requires surgical procedures.

Opioid: Opioid dependents are found to have suffering from various oral diseases. The Opioid users are generally heavy tobacco and alcohol consumers and as we know that these substances are carcinogenic so these may develop Pre malignancies and malignancies. Many more oral complications have been observed such as oral candidosis, mucosal dysplasia and bruxism. Morphine effect on the phagocytosis of *Candida* by macrophages, which together with salivary gland hypofunction, may lead oral candidosis. Bruxism, is also observed in opioid addicts, which may lead to a general increase in neurosis. Opioid users may also be a victim of several periodontal diseases.^[18,19,20]

Tobacco and Nicotene: Nicotine is a colorless, natural alkaloid that turns brown and acquires the odor of tobacco on exposure to air. Nicotene is pharmacologically an active agent of tobacco. Nicotene is present in both smoking and non smoking tobacco. However it is highly carcinogenic and may cause oral pre malignancies such as oral sub mucous fibrosis leukoplakia, erythroplakia, dysplasia, hyperkeratosis, gingival recession, oral carcinoma, white oral mucosal lesion, sinusitis. Long term use of tobacco may result in increased pocket depths, alveolar bone and tooth loss, decreased mouth opening, coated tongue, cleft lip and palate and delayed wound healing.

Studies suggest that 50- 60% of the tobacco users develop oral pre cancer and cancer. The malignancies and pre malignancies mostly develop in the areas of the mouth where smokeless tobacco products are placed for a long time.^[21,22]

Drug- Cure

Drug addiction is a sickness. Like every other disease, drug addiction is also curable, although it needs quite an effort on the part of the patient, his parents and relatives and the society at large.

There are several steps in drug use. A few of these are as follows.

1. Decision and will power: First and foremost, the drug addict must be made to make up his mind, against all odds, to give up drugs. The decision must be final and lasting for all times to come. For the adolescents initiates and the intermittent users this decision is enough. However in the case of chronic

addicts and that of relapsed addicts, further hospitalization and counseling is required.^[16,18]

- 2. Hospitalization and Counseling:** In this stage the drug cure is basically to keep the drugs, that the patient is addict to, away from him and substitute them for those that provide rest and induce sleep. Drugs are only substituted and not given up totally. But the drugs are administered under the watchful eyes of skilled physician. After a few days with this exercise when then the counselor feels that the patient has stabilized, the patient may be send out with a prescription of sedatives and tranquilizers which keep him away from indiscriminate drug use. Regular counseling sessions follows in which addict appears as an outpatient. At these sessions postcure problems are discussed and advice given.^[23]
- 3. Regular Exercise:** Regular exercises, walking and jogging help build up the drug weakened body and help strengthen it. These also reduce the nervous anxiety and tension. These are also recommended because drug addicts get into the habit of sleeping very late and are unable to make use of the better part of the day. Early morning walk and exercises do immense good to his system and help create confidence.
- 4. Balanced Diet:** Drug addicts are not used to caring for their diet. They need a balanced diet. Such a diet is essential not only to maintain health but also to recover it.
- 5. Removing all associations:** This step is required to prevent any feeling that may cause one to drug again. Thus all associations who were and are still drug addicts must be given up for otherwise in a weak moment the same cycle will begin. All instruments used for drugging must be thrown away and none of the drug retained. This is necessary for many drug addicts the drug becomes a kind of totem which they keep just to feel secure.
- 6. Keeping Busy:** A very important ingredient of drug cure process is that one should keep busy with a job reading a newspapers and journals, going to the cultural programmes, visiting friends and relatives, socializing etc. These activities are part of a normal active life and the drug addicts forsake them since they are lost in a drug maze.
- 7. Rehabilitation:** The rehabilitation of a cured addict is the most important stage. It is here with the parents, friends, relatives and the society at large must play a highly constructive role. They must not push him too hard and parents must remain vigilant and look for the tell- tale symptoms to keep a tab on the ex addict so that he does not go back to the drug.

Every drug – addict suffers from partial vision- he just sees the drug “High” and that is all. However the ex-addict sees the whole he sees that a drug elevates for a brief moment and then throws the user down to the worst. This is a crucial part of a total cure – the ability to see and release that there is no such thing as good trip and that the drug high is more than negated by the drug

hangover that follows. It is this that makes him release that drugs are not meant for mature responsible people and must be avoided. Seeing a complete picture the ex-addict is convinced and becomes himself a counselor for others.^[15,16,18,22,23,24]

CONCLUSION

Drug Addiction is very common practice in India. Drugs like Hallucinogens, opiates, Analgesics, Tranquilizers are addictive and dangerous. Drugs has the potential to cause immense harm to oral health as well as general health. Unless effective health actions are undertaken, and known addictive nature, children may carry this insidious habit into adulthood and conceivably to adopt other addictive habits including tobacco use and cigarette smoking. To diminish the use of drugs, the Indian Government should take certain measures for drug use eradication and should deem heavy taxes on it which would raise its price. Actively communicating its health risks to the public, strategy involving parents, teachers and local communities could be initiated to discourage drug use.^[23,24]

REFERENCES

1. Reisine T, Pasternak G. Opioid analgesics and antagonists. In: Hardman JG, Limbird LE, Molinoff PB, Ruddon RW, Goodman.
2. Gillman A, eds. Goodman and Gillman's The Pharmacological Basis of Therapeutics. 9th edn. New York: McGraw Hill, 1996; 521-555.
3. O'Brien CP. Drug addiction and drug abuse. In: Hardman JG, Limbird LE, Molinoff PB, Ruddon RW, Goodman Gillman A, eds. Goodman and Gillman's The Pharmacological Basis of Therapeutics. 9th edn. New York: McGraw Hill, 1996; 557-577.
4. Black S, Cresswell S. Drugs in NZ – A survey 1990. Alcohol and Public Health Research Unit, Auckland University., 1991.
5. National Protocol for Methadone Programmes in New Zealand. Drug Advisory Committee: Department of Health. New Zealand., 1992.
6. Klostermann K, O'Farrell TJ. Treatment of substance abuse: partner and family approaches. Soc Work Public Health., 2013; 28: 234–247. [PubMed]
7. Nunes EV, Weissman MM, Goldstein R, et al. Psychiatric disorders and impairment in the children of opiate addicts: prevalence and distribution by ethnicity. Am J Addict., 2000; 9: 232–241. [PubMed]
8. Salo S, Flykt M. The impact of parental addiction on child development. In: Suchman NE, Pajulo M, Mayes LC, editors. Parenting and substance abuse: developmental approaches to intervention. New York: Oxford University Press., 2013; 195–210.
9. Monti PM, Kadden RM, Rohsenow DJ, et al. Treatment of alcohol dependence: a coping skills training guide. New York: Guilford Press., 2002.
10. National Institute on Alcohol Abuse and Alcoholism (NIAAA) USDHHS Pub. No. (ADM) 92-1893. Rockville, MD: USDHHS; 1995. Twelve-step facilitation therapy manual.
11. Daley DC, Douaihy A. Group treatments for addiction: counseling strategies for recovery and therapy groups. Murrsville, PA: Daley Publications., 2011.
12. Bloom BL, Naar S. Self-report measures of family functioning: Extensions of a factorial analysis. Family Process., 1994; 33: 203–216. [PubMed]
13. Cavaiola AA. In search of a new metaphor for the impact of drug abuse on families. Family Therapy., 2000; 27(2): 81–87.
14. Clatts MC, Goldsamt LA, Giang le M, Colón-López V. Accelerated transition to injection among male heroin initiates in Hanoi, Vietnam: implications for early harm reduction interventions. Journal of Community Health., 2011; 36(6): 999–003. [PubMed]
15. Watson D, Clark LA, Tellegen A. Development and validation of brief measures of positive and negative affect: The PANAS scales. J Pers Soc Psychol., 1988; 54: 1063–1070. [PubMed]
16. Dadds MR, Spence SH, Holland DE, Barrett PM, Laurens KR. Prevention and early intervention for anxiety disorders: A controlled trial. J Consult Clin Psychol., 1997; 65: 627–635. [PubMed]
17. de Vries SO, Visser K, de Vries JA, Wong JB, Donaldson MC, Hunink MGM. Intermittent Claudication: Cost-effectiveness of Revascularization versus Exercise Therapy. Radiology., 2002; 222: 25–36. [PubMed]
18. Daley DC, Douaihy A. A family guide to addiction and recovery. Murrsville, PA: Daley Publications., 2010.
19. Morita N, Naruse N, Yoshioka S, Nishikawa K, Okazaki N, Tsujimoto T. Mental health and emotional relationships of family members whose relatives have drug problems. Nihon Arukoru Yakubutsu Igakkai Zasshi., 2011; 46(6): 525–541. [PubMed]
20. Aung AT, Pickworth WB, Moolchan ET. History of marijuana use and tobacco smoking topography in tobacco-dependent adolescents. Addic Behav., 2004; 29: 699-706.
21. Coffey C, Carlin JB, Degenhardt L, et al. Cannabis dependence in young adults: an Australian population study. Addiction., 2002; 97: 187-194.
22. Swift W, Hall W, Teesson M. Cannabis use and dependence among Australian adults: results from the National Survey of Mental Health and Wellbeing. Addiction., 2001; 96: 737-748.
23. Ramachandran V. The prevention of alcohol-related problems. Indian J Psychiatry., 1991; 33: 3–10. [PMC free article] [PubMed]
24. Movig KL, Mathijssen MP, Nagel PH, van Egmond T, de Gier JJ, Leufkens HG, et al. Psychoactive substance use and the risk of motor vehicle accidents. Accid Anal Prev., 2004; 36: 631–6. [PubMed]