



Drug Addiction and Drug Abuse

K. MALLESWARI*

NALANDA INSTITUTE OF PHARMACEUTICALS SCIENCES
KANTEPUDI(V),SATTENAPALLI(M),GUNTUR(Dt), 522438.

D.RAMA BRAHMA REDDY

NALANDA INSTITUTE OF PHARMACEUTICALS SCIENCES
KANTEPUDI(V),SATTENAPALLI(M),GUNTUR(Dt), 522438.

¹M.SAI VENKATA KUMAR REDDY

NALANDA INSTITUTE OF PHARMACEUTICALS SCIENCES
KANTEPUDI(V),SATTENAPALLI(M),GUNTUR(Dt), 522438.

²M.NAVEENKUMAR

NALANDA INSTITUTE OF PHARMACEUTICALS SCIENCES
KANTEPUDI(V),SATTENAPALLI(M),GUNTUR(Dt), 522438.

³M.NARENDRA

NALANDA INSTITUTE OF PHARMACEUTICALS SCIENCES
KANTEPUDI(V),SATTENAPALLI(M),GUNTUR(Dt), 522438.

CORRESPONDING AUTHOR: K. MALLESWARI

NALANDA INSTITUTE OF PHARMACEUTICALS SCIENCES
KANTEPUDI(V),SATTENAPALLI(M),GUNTUR(Dt), 522438.

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Abstract:

Drug addiction affects both brain and behaviour. It has multifaceted impacts on the patients' body, mind, and nervous system. Drug with psychologically active is used to induce consciousness. This can be modifying the perceptions, feelings, and emotions of the user. When a psychological active drug intake to the body, it induces an intoxicating effect. Some of the persons may use recreational and medical practitioner suggested drugs without becoming addicted, many persons who start using drugs converted to physically and emotionally dependent on them. So the Drug abuse causes vary greatly, depending on each individual and the extent of his or her addiction. The psychological effects of drug addiction come from the reason the user is addicted to drugs, as well as the changes that take place in the brain once a person becomes a drug addict. Initially, many people start using drugs to cope with stress or pain an effect of drug addiction is creation of a cycle where anytime the user encounters stress or pain, they feel the need to use the drug. This is one of the psychological effects of drug addiction involved in "craving" of the drug. Various Medicinal Plants used for Addiction Treatment.

Key words: Addiction, Consequences, Dependence, Neurobiology, Pleasure, Rehabilitation.

I. Introduction:

Drug addiction affects both brain and behaviour. It has multifaceted impacts on the patients' body, mind, and nervous system. There are different types of drugs that cause addiction as marijuana, opium, cocaine, heroin, meth and pain medications. Drug abuse is considered as a great challenge to social and public health in the world. To date, 185 million addicts are there around the world. According to the statistics, with 1,200,000 permanent drug abusers and 600,000 occasional abusers, herbal medicine has a long history in treatment of diseases and the majority of people have tendency to use such medications. But there are a lot of questions because of the novelty of this treatment method in treating addiction, this lack of information are more evident. In this review, we highlighted on some herbal and drugs derived from them in treatment of addiction. These polymers used for modified release. Modified release systems² are designed to reduce the frequency of dosing by modifying the rate of drug absorption has



been available from many years. This type of release dosage³ forms is far better than the conventional release dosage forms. Mucoadhesive⁴ are synthetic or natural polymers that will interact with the mucus layer which is present in the body at buccal cavity, and gastric mucosal layers. Antibiotics⁵ can be used for preparation of tablets. The specific approach to their use is dependent on the individuals affected and stage of the disease. Researchers⁶ are developing customized picoparticles the size of molecules that can deliver drugs directly to diseased cells in your body. Antibiotics⁷ are also used to treat this disease. Oral modified⁸ drug delivery systems can be classified in to two broad groups Single Unit dosage forms and multiple unit dosage forms. The advances⁹ and progress made by pharmaceutical industry have greatly contributed in terms of treatment of disease, thereby enhancing the quality of life. Mucilage and Gums are hydrophilic polysaccharides¹⁰. Smoking is bad for your health. A drug is any substance (other than food that provides nutritional support) that, when inhaled, injected, smoked, consumed, absorbed via a patch on the skin, or dissolved under the tongue causes a temporary physiological (and often psychological) change in the body. However, heavy use of some drugs is socially stigmatized. Recreational drugs include alcohol (as found in beer, wine, and distilled spirits) cannabis and hashish; nicotine (tobacco); caffeine (coffee and tea); and the controlled substances listed as illegal drugs in the Single Convention on Narcotic Drugs (1961) and the Convention on Psychotropic Substances (1971) of the United Nations. What controlled substances are considered illegal drugs varies by country, but usually includes methamphetamines, heroin, cocaine, and club drugs. In 2015, it was estimated that about 5% of people aged 15 to 65 had used illegal drugs at least once (158 million to 351 million) [1].

Signs of Drug Addiction:

You keep taking a drug after it's no longer needed for a health problem. You need more and more of a substance to get the same effects (called "tolerance"), and you can take more before you feel an effect. You feel strange when the drug wears off. You may be shaky, depressed, and sick to your stomach, sweat, or have headaches. You may also be tired or not hungry. In severe cases, you could even be confused, have seizures, or run a fever. You can't stop yourself from using the drug, even if you want to. You are still using it even though it's making bad things happen in your life, like trouble with friends, family, work, or the law. You spend a

lot of your time thinking about the drug: how to get more, when you'll take it, how good you feel, or how bad you feel afterward. You have a hard time giving yourself limits. You might say you'll only use "so much" but then can't stop and end up using twice that amount. Or you use it more often than you meant to. You've lost interest in things you once liked to do. You've begun having trouble doing normal daily things, like cooking or working. You drive or do other dangerous things (like use heavy machines) when you are on the drug. You borrow or steal money to pay for drugs. You hide the drug use or the effect it is having on you from others. You're having trouble getting along with co-workers, teachers, friends, or family members. They complain more about how you act or how you've changed. You sleep too much or too little, compared with how you used to. Or you eat a lot more or a lot less than before. You look different. You may have bloodshot eyes, bad breath, shakes or tremors, frequent bloody noses, or you may have gained or lost weight. You have a new set of friends with whom you do drugs and go to different places to use the drugs.

Effects of drug addiction (physical and psychological) :

Psychological effects of drug addiction:

The psychological effects of drug addiction come from the reason the user is addicted to drugs, as well as the changes that take place in the brain once a person becomes a drug addict. Initially, many people start using drugs to cope with stress or pain an effect of drug addiction is creation of a cycle where anytime the user encounters stress or pain, they feel the need to use the drug. This is one of the psychological effects of drug addiction involved in "craving" of the drug. Craving is an effect of drug addiction whereby the addict is obsessed with obtaining and using the drug, to the exclusion of all else. One of the psychological effects of addiction involved in craving is the belief the addict cannot function or handle life without use of the drug. Other psychological effects of drug addiction include: Wild mood swings, depression, anxiety, paranoia, violence, Decrease in pleasure in everyday life, Complication of mental illness, Hallucinations, Confusion, Psychological tolerance to the drug's effects creating a desire to do ever-increasing amounts of the drug, Desire to engage in risky behaviour.

Physical effects of drug addiction:



Physical effects of drug addiction vary by drug but are typically seen in all systems of the body. Some of the primary physical effects of drug addiction take place in the brain. Drug addiction changes the way the brain functions and impacts how the body perceives pleasure. These effects of drug addiction are because the drug repeatedly floods the brain with the chemicals dopamine and serotonin during drug use. The brain adapts and comes to expect, and depend on, these drug-induced highs. Physical effects of drug addiction are also seen in babies of drug abusers as well as in mortality statistics. One effect of drug addiction is: children born to drug-using mothers can be cognitively affected throughout life. Regarding mortality, one-in-four deaths are due to the effects of drug addiction. Other physical effects of drug addiction include: Contraction of HIV, hepatitis and other illnesses, Heart rate irregularities, heart attack, Respiratory problems such as lung cancer, emphysema and breathing problems, Abdominal pain, vomiting, constipation, diarrhea, Kidney and liver damage, Seizures, stroke, brain damage, Changes in appetite, body temperature and sleeping patterns.

Classification of drugs according to their main effects:

- Central Nervous System Depressants: a) Alcohol b) Hypnotics: Barbiturates and non-barbiturates c) Anxiolytics: diazepam d) Narcotic analgesics: i. Opium and derivatives: Heroin, morphine, codeine, etc. ii. Synthetic narcotics: methadone, etc. e) Antipsychotics (major tranquilizers)
- Central Nervous System Stimulants a) Alertness stimulants. i. Major: amphetamines, cocaine ii. Minor: nicotine, xanthenes (coffee, tea, cocoa, etc.) b) Mood Boosters: antidepressants
- Central Nervous System Perturbants (psychedelic) a) Hallucinogens: mescaline, LSD, etc. b) Derivatives of cannabis: marijuana, hashish c) Volatile solvents: glue, etc. d) Designer drugs: MDA, MDMA, etc.

Effects of Drugs:

As already mentioned, drugs act on the central nervous system (i.e., they affect the individual's neurological functioning). The physiological correlates and effects vary according to each substance; there are specific mechanisms that involve precise receptors for each substance type. In this section we present some common aspects to the physiological effects of drugs. When

a substance enters the body it first affects the neuronal receptors, which are structures located within a neuron or in its membrane and are characterized by selective binding to a substance and the physiological effect that accompanies the union. The presence of a drug in the body affects the pre synapse, altering the production/ release of neurotransmitters. During the next step, the drug affects the synapses, by increasing the presence of neurotransmitters in the synaptic space. There can be a reuptake inhibition, blockade of reuptake channels, or inhibition of degradation. The activity of the drug in the body over a period of time comprises the processes of absorption, distribution, localization in tissues, biotransformation and excretion. Physical dependence emerges as the need to maintain certain levels of a substance in the body. Therefore, it involves the development of a drug organism link and neuroadaptation process.

Central Nervous System Depressants:

Alcohols:

The two main types of alcohol based on their chemical composition are: methyl alcohol (methanol), which is the simplest of the alcohols and is used as a solvent, antifreeze and in industrial applications; and ethyl alcohol (ethanol), which is what alcoholic beverages contain. Ethyl alcohol is obtained through the fermentation of sugars from different plants. After the distillation process, the amount of alcohol can be concentrated and significantly increased. From a physical standpoint, the short term effects of alcoholic beverage intake are impaired balance, movement, speech and vision, hurried and unintelligible expression, decreased ability to concentrate, drowsiness, and despondency, irritability, nausea, vomiting and/or headaches. Basic Concepts in Drug Addiction 6 Chronic alcohol consumption leads to serious physical and psychological problems.

a) Physical problems:

The mortality attributed to diseases brought about by alcohol abuse is estimated at between 20,000 and 25,000 cases per year. Some of the physical problems related to alcohol abuse occur in the short term. Others, however, such as coronary heart disease appear after ongoing use. Alcohol, consumed abusively, is harmful to all the body's organs. Among the consequences at the physical level the following stand out: Alcoholic dependency syndrome or alcoholism. Digestive tract disorders (esophagus and stomach): gastritis, gastrointestinal bleeding, varices in the esophagus, etc. Pancreas: pancreatitis, diabetes, etc. Liver



disease: cirrhosis, hepatitis, etc. Cancers: considered the second leading cause of death among alcoholics. The most common types are of the stomach, esophagus, liver and pancreas. Cardiovascular disorders: cardiac abnormalities such as arrhythmias or mitral valve insufficiency are associated with the prolonged use of alcohol. Malformations in the fetus: the use of any toxic substance, including alcohol, provokes alterations in fetal development, and may even cause an abortion. In the case of mothers who consume alcohol, a condition known as fetal alcohol syndrome appears. Children with this syndrome show morphological changes in the head, skeleton, heart and genitals, as well as mental retardation in approximately 50% of cases.

b) Psychological problems:

Acute alcohol intoxication (drunkenness): although alcohol is a neurological depressant, at low doses it produces a generalized José Pedro Espada and Daniel Lloret Irlés 7 behavioral disinhibition, euphoria, talkativeness and attention loss. When ingested in higher quantities, it brings about greater motor incoordination, aggression and loss of consciousness. Alcohol poisoning can lead to coma and even death. Alcohol withdrawal syndrome: it can appear at any point after 24 hours of last use, with symptoms ranging from tremors, nausea, sweating and vomiting, to hallucinatory syndrome known as delirium tremens. Alcohol dementia: entails an overall intellectual deterioration. It is estimated to affect between 50% and 70% of alcoholics (Caballería, Caballería y Parés, 1996). Depression: often alcohol acts as an antidepressant and anxiolytic, but simultaneously can cause rebound anxiety and a greater degree of major depression with strong feelings of guilt (De la Serna, 1996). Suicides: various authors have written about the relationship between alcohol abuse and suicide. Thus, Pons y Berjano (1999) note that about half of suicide attempts in women and two thirds in men occur under the influence of alcohol. Alcoholic jealousy: also known as alcoholic paranoia, characterized by delusions of infidelity. In males, this disorder is related to impotence caused by alcoholism, which affects the alcoholic's self-esteem and encourages him/her to think that his/her partner is unfaithful [2].

Opiates:

Opiates Opium is a narcotic drug obtained from a type of poppy originating in Asia Minor and known as white opium. The psychoactive effects are produced by the alkaloids contained in opium,

which can be classified into two types depending on the action they produce and their chemical composition: Morphine, codeine, thebaine, which act on the nervous system. They are analgesics, narcotics, and addictive. Papaverine, which acts on the muscular system resulting in relaxation. It is non addictive. Morphine is the principal alkaloid found in opium. It is a psychodysleptic, a substance that disrupts mental activity and acts as a powerful painkilling sedative and anxiolytic. The mechanism of action of morphine is based on the presence of opioid receptors in the Central Nervous System of the human body. When morphine enters the body, it accumulates in the tissues through the blood, acting on said opiate receptors and affecting the Central Nervous System, smooth muscles of the abdominal organs and skin. Among the most noted effects of morphine are analgesia, drowsiness, mood changes and mental confusion. Morphine also has a miotic effect: pupils decrease notably in size. Heroin is a semi-synthetic substance derived from morphine after a process of acetalization. Its effects are more potent than morphine.

Barbiturates and Tranquilizers:

These two broad groups of substances are capable of diminishing Central Nervous System activity. Both create physical and psychological dependence. Barbiturates are drugs derived from barbituric acid. Depending on the dose and formula it may have sedative, hypnotic, anticonvulsant, or anesthetic effects. Tranquilizers or benzodiazepines are a group of substances used in the treatment of sleeping problems and anxiety. They are chemical compounds related to benzoic acid and diazepam. They are also known by the names of sedatives, tranquilizers and anxiolytics. Benzodiazepines have a sedative and anxiolytic effect. Both barbiturates and tranquilizers produce a very high dependency, and in the case of an interruption of their administration withdrawal syndrome appears [2].

Major Stimulants of the Central Nervous System:

Amphetamines:

Amphetamine is a synthetic compound chemically derived from ephedrine, a natural alkaloid with euphoric properties. Amphetamines cause variable psychological dependence and low physical dependence and generate tolerance rapidly. The effects of low or moderate doses are: a state of euphoria, sleep loss, decreased appetite, perception of an apparent improvement of overall fitness, increased breathing rate, and bronchial dilation, dry mouth and increased blood pressure



and body temperature. Prolonged use or high doses cause irritability and paranoia, hallucinations and delirium, respiratory and cardiac abnormalities and seizures.

Cocaine:

Cocaine is hydrochloride of cocaine, the result of a chemical process using coca plant leaves. The main physical effects include tachycardia, hypertension, tremors, increased body temperature and sweating. The psychological effects are related to states of euphoria, a sense of energy, more intense sensations of the senses and increased self-esteem. The major psychological problems resulting from cocaine use are reactive depression when consumption is suppressed or the cocaine psychosis that can spontaneously occur.

Minor stimulants of the Central Nervous System:

Nicotine:

Nicotine stimulates the Central Nervous System and has a vasoconstrictor effect on some internal organs such as the heart. The effects of tobacco gradually increase with time and consumption. Principal among the physical effects are increased heart and respiratory rates, arrhythmia and hypertension. While the major immediate psychological effects include increased alertness, concentration and memory, and stress reduction. The prolonged use of tobacco is associated with the onset of cardiovascular diseases, circulatory failure and cancers of the lung, oral cavity, larynx, esophagus and duodenum. Xanthines (caffeine, theophylline, etc) Chemical elements that are derived from purine, present in the nucleic acid of living cells. This group includes caffeine, theophylline and theobromine, which is found in various plants, such as coffee, tea, or cocoa. Caffeine intake by sporadic consumers or by people not accustomed to it has physical and psychological effects that manifest in better physical performance, stimulation of the psychic functions, facilitation of intellectual effort, and improved attention and concentration; however, it can also produce negative effects such as nervousness, excitement, tremors and restlessness. Among the most important effects of a high consumption of these substances are anxiety, sleeping problems, excitability, hypertension and upset stomach.

Hallucinogens:

Hallucinogens Included in this group of substances are those that produce alterations in perception and thought processes. They can cause hallucinations and sensory confusion. There are

natural hallucinogens such as Atropa Belladonna (belladonna) or Atropa Mandragora (mandrake). There are also synthetic ones, such as lysergic acid diethylamide (LSD). The psychedelic acetylcholine acts on the acetylcholinesterase, the enzyme responsible for connecting the brain to the peripheral nervous system. Included in this group are physostigmine, atropine and scopolamine. The psychedelic norepinephrine acts on norepinephrine, neurons that act as chemical transmitters. In this group are some synthetic drugs such as MDMA (ecstasy), mescaline, myristicin and elemicin. The psychedelic serotonin acts on serotonin, a neurotransmitter that regulates the functioning of the period of sleep and sensory perception. Included among them are lysergic acid diethylamide (LSD), dimethyltryptamine (DM), psilocybin and psilocin, or bufotenin. Among the psychedelic anesthetics are phencyclidine and ketamine. The physical effects of hallucinogens include dilated pupils, increased body temperature and blood pressure, dizziness, nausea, somnolence and paresthesias. Psychological effects include possible panic attacks and depressive disorders after experiencing the effects of the substance.

II. Cannabis:

Cannabis is the name of the Indica variety of Cannabis Sativa or hemp plant. The psychoactive component of the plant is THC (tetrahydrocannabinol). Cannabis sativa results in three different types of substances depending on the preparation and elaboration: marijuana, hashish and hashish oil. Marijuana is the most common form because the whole plant is utilized, drying it and then finely grinding the stems, leaves and flowers for later compression. It is then normally smoked, alone or mixed with common tobacco. Hashish has higher concentration of THC, reaching as high as 20%. Hashish is also normally consumed by smoking it. Hash oil has the highest intoxication power as it contains up to 70% of THC. It is chemically obtained by distillation, mixing hashish with solvents. The most notable effects of cannabis consumption are muscle relaxation, which can cause problems with coordination and balance, decreased muscle strength, and dilation of blood vessels, which causes the eyes to turn red. Other effects are increased pulse and heart rate, dry mouth and minor salivation. The long-term physical and psychological effects are: respiratory diseases, anxiety and panic disorder, disruption to appetite and sleeping patterns, diminished judgment and reflexes and impaired memory and concentration [3].



AS PER THE COMPREHENSIVE NATIONAL SURVEY ON EXTENT AND PATTERN OF SUBSTANCE USE IN INDIA CONDUCTED IN 2018, THE DETAILS OF DRUG ABUSE ARE AS UNDER:

| Sl. | Name of the Substance | Estimated no. of users (age 10-17 years) | Estimated no. of users (age 18-75 years) |
|-----|------------------------------------|--|--|
| 1. | Alcohol | 30,00,000 | 15,01,16,000 |
| 2. | Cannabis | 20,00,000 | 2,90,18,000 |
| 3. | Opioids | 40,00,000 | 1,86,44,000 |
| 4. | Sedatives | 20,00,000 | 1,05,80,000 |
| 5. | Inhalants | 30,00,000 | 51,25,000 |
| 6. | Cocaine | 2,00,000 | 9,40,000 |
| 7. | Amphetamines Type Stimulants (ATS) | 4,00,000 | 15,47,000 |

➤ **Drug abuse:**

Drug abuse is an intense and often willful misuse of drugs. The overuse of substance or drugs leads to addiction. In the eastern world the incidence shows a decline or a static pattern but the number of drug addicts is still enormous. The major abusive drugs are heroin and marijuana but designer drugs (cannabinoids) have shown on the peak. The aim of the study is to determine the ratio of the drug abuse in student. For this purpose we were selected different institutes, including two private universities and two government universities and conducted survey in 500 student. High proportion of students was found abusing drugs. From this study, we came across multiple factors which are the main cause of drug abuse in medical student including depression, anxiety, peer pressure, schizophrenia, as well as personality disorder. The most commonly abused drugs include stimulants, opioids, and benzodiazepines, antihistamines and LSD. Although survey have indicated high rate of illicit and prescription drugs misuse among college students. Drug abuse regarded as a personality disorder, also be seen as worldwide epidemic with evolutionary genetic, physiology and environmental influences controlling and affecting human behavior. Globally, the use has reached all time high. The study showed males are more drug abusers as compared to females. The drug abuse ratio in students of private sector is more as compared to

Government sector. substance abuse is defined as a maladaptive pattern of substance use leading to clinically significant impairment or distress, wherein the person may also suffer from tolerance and withdrawal (Gelder M et al). Substance abuse is not limited to mood altering or psychoactive drugs. Activity is also considered substance abuse when inappropriately used (as in steroids for performance enhancement in sports). Therefore mood altering and psychoactive substances are not the drugs of abuse. Some of the drug most often associated with this term includes alcohol, amphetamine, MDMA, barbiturates, benzodiazepines, cocaine, methaqualone, and opioids. Use of these drugs may lead to criminal penalty in addition to possible Physical, Social, and Psychological harm. Substance abuse is a common problem worldwide. (Majidshafique et al). Alcohol is widely consumed by various sections of the society, most notably by the very tributary and the impoverished [10].

Consumption of drugs:

Trends in drug use and abuse are reflected in official reports to the United Nations and unofficial reports from a variety of sources. Parties to the 1961 Single Convention have an obligation to report to the United Nations, although an analysis of this reporting process over the past decade reveals disappointing results. The United Nations Secretariat indicates that the information provided by governments over the period 1983-



1991 did not meet data collection objectives (7 and 8). Only 13 of the countries reported for each of the 9 years involved. Over this same period, 25 countries did not report at all. Information submitted was characterized by high variability from region to region and inconsistency within regions. There were also major regional gaps in information in official reporting with respect to the nine-year period 1983-1991. The average percentages of countries actually reporting over this nine-year period were as follows: in Europe (74%), the Americas (51%), the Near and Middle East (46%), Asia and the Pacific region (40%) and Africa (37%). In Africa, the region of the world where the fewest countries report to the United Nations, only about one-third of the countries have reported six or more times in the last nine years. The absence of systematic reporting for this region makes it even more vulnerable since trends that take place there may be unassessed or difficult to identify until long after they have occurred. Qualitative information summarized by UNDCP indicates that most governments report a much higher prevalence of drug abuse among men than women. However, abuse among women is reported to be increasing, often attributed to their recent gains in entering the labour market (8, section 11). Although drug abuse is common among all age groups, it occurs more frequently among young adults. Increases were noted in illicit drug demand in most countries in the Americas and in eastern Europe, where it was attributed to the socioeconomic crisis affecting these regions and, in particular, high unemployment. Opening European borders between East and West also facilitated contact and communication between traffickers as well as others, increasing the number of transit routes for drugs and the potential number of drug consumers. During the reporting period, illicit demand for drugs increased in western Europe, with some exceptions. Documents presented to the Commission on Narcotic Drugs (8, section 11) indicate that an increase in drug abuse has taken place across most regions of the world, although the specific nature of this trend of increasing drug abuse varies by country and often within country. The regions where these trends for increasing abuse occur are Africa, Europe (especially eastern Europe) and the Americas (except for the Bahamas, Canada, Ecuador and the United States of America). In the Asian and Pacific region, a mixed trend emerged, with as many countries reporting stable or slight decreases as increases. In the Near and Middle East, increasing abuse was found in Egypt, Israel, Pakistan and the Syrian

Arab Republic. 8 Several States reported overall decreasing patterns: Bahrain, Iran (Islamic Republic of), Kuwait, Qatar and Saudi Arabia [9].

Overview of opium/heroin and coca/cocaine:

Most of the world's opium is grown in Afghanistan, the Lao People's Democratic Republic and Myanmar. Several other countries also produce opium but in lesser volume. The development of significant populations of users and addicts in these countries indicates serious social changes that make it even more difficult to reduce drug production. While any social problem may be highly resistant to change, drug use exerts powerful effects, influencing not only the brain processes that influence or control individual behavior but also, ultimately, the social milieu. A portion of the illicit drug production that originates in remote areas of developing countries is invariably diverted along the way from the intended consumer to local individuals. In many cases, the local population provides a stable consumer base for illicit production. The distinction between producer and consumer country is not a rigid one, and the traditional categories of producer and consumer countries is being replaced by the recognition that consumption is a major problem in producer countries as well. For example, in Myanmar, which is one of the largest producers of opium, officials have reported a steady increase in the abuse of opium and heroin since 1970. In Afghanistan, another large producer, the areas of opium poppy cultivation increased in 1992 although the extent of consumption and addiction is unknown. In Pakistan, there were an estimated 650,000 heroin abusers with no end in sight for the increases. The coca leaf has been chewed by indigenous people in the Andes for centuries. The plant is grown primarily in Bolivia, Colombia and Peru, with Peru having the largest plant production. Smoking of coca paste, often mixed with tobacco or cannabis (basuco, pitillo etc.) is now frequent among the youth of Bolivia, Colombia and Peru. Cocaine is the principal active ingredient of the coca leaf, extracted from leaves and used to make other forms of the drug such as coca paste or crack. The largest single market for cocaine is the United States, which saw sharp increases in the 1980s. Deaths and injuries related to cocaine received widespread publicity, and high percentages of individuals arrested by the police tested positive for cocaine use. The enormous profits in the cocaine trade have fueled the creation of new production centres and expansion into new markets as well as infiltration into legitimate businesses and political parties in a

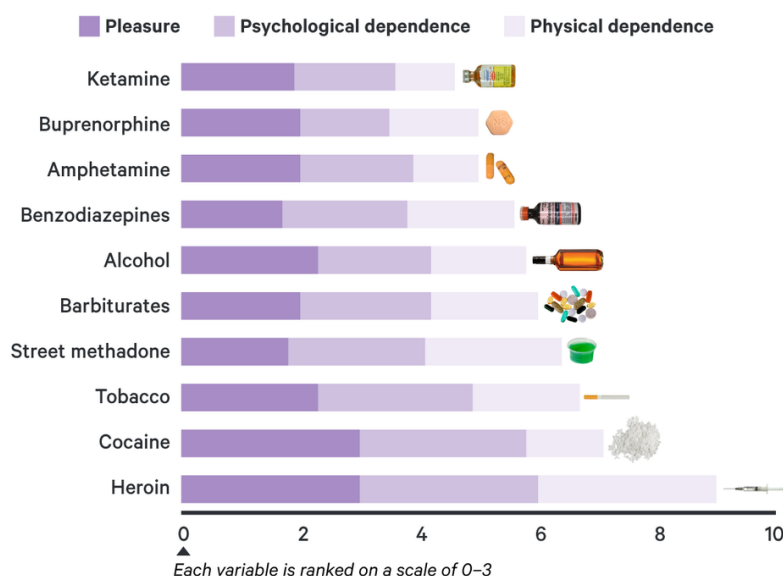


number of countries. The addictive nature of cocaine can lead to rapid escalation in frequency of use, amounts taken or use in combination with other drugs. Cocaine abuse has put a heavy burden

on communities in many countries, frequently overloading welfare, treatment and law enforcement agencies [14].

DEPENDENCE AND PLEASURE OF VARIOUS DRUGS

The 10 most addictive drugs



Drug abuse treatment and rehabilitation:

a) Detoxification: stabilization phase of treatment:

Medical detoxification is the initial and acute stage of drug treatment. Such programmes provide medically supervised detoxification to people with a drug dependence. People who are heavy, consistent abusers of certain drugs (opioids and sedative and hypnotic drugs) and are likely to experience withdrawal complications require medically supervised withdrawal (detoxification). A withdrawal syndrome that can develop after stopping the use of a drug will vary according to the type of drug the person was using. Common general features can include craving for the substance, anxiety, restlessness, irritability, insomnia and impaired attention. Dependent users of psychostimulants, in particular amphetamines and cocaine, may also require medical supervision during the acute withdrawal phase following cessation of use. While there may be no direct physical withdrawal effects (and no prescribing of an agonist to minimize discomfort), the individual may have severe psychological problems (including

induced psychosis) and sleep disturbance that may be managed by prescribing suitable medication. The main goal of detoxification programmes is to achieve withdrawal in as safe and as comfortable a manner as possible.

Outpatient or community-based detoxification:

Persons with a substance-induced disorder who are considered likely to be able to withdraw successfully in the community are suitable for assessment for outpatient or community-based detoxification services. Detoxification is usually initiated at the programme facilities or at the home of the client, with a period of stabilization using substitution agents. Following stabilization, the client is gradually withdrawn over a period ranging from a few weeks to several months. During that time, the client can be encouraged to receive counselling, medical treatment and other support services. In many ways some of those programmes are broadly comparable to outpatient or community-based maintenance programmes.

Short-term inpatient or residential detoxification:



Persons who have a substance-induced disorder associated with a withdrawal syndrome or symptoms thereof, who are unlikely to be able to withdraw successfully in the community, and who may therefore need a controlled and medically supervised environment, are suitable for assessment for a short-term inpatient or residential programme. Most of those programmes proceed through a detoxification stage to a fairly brief structured relapse prevention, counselling and education phase with the offer of onward referral. It is important to note that some people in withdrawal will have additional physical and psychological problems (which may interact with the management of drug or alcohol withdrawal), and short-term inpatient programmes can provide an important opportunity for screening or managing those problems.

(b) Rehabilitation: relapse prevention phase of treatment:

Residential rehabilitation programme:

Two types of residential programme are available: short-term residential rehabilitation and long-term residential rehabilitation. Short-term residential rehabilitation programmes usually include a detoxification programme as a first stage and last for between 30 and 90 days. Long-term residential rehabilitation programmes generally do not provide medically supervised withdrawal and last for between six months and one year. The long-term residential rehabilitation model most commonly used is the "therapeutic community". Residential rehabilitation services share several features in common, including: communal living with other drug users in recovery group and individual counselling on relapse prevention; individual case management; improved skills for daily living; training and vocational experience; housing and resettlement services; and aftercare support. They are usually closely aligned with mutual-help groups such as Narcotics Anonymous and Cocaine Anonymous. Some residential programmes have second-stage or so-called halfway houses, which are semi independent group living environments that are usually close to the main residential programme. They offer the client group the opportunity to prepare for their return to the community, while continuing to provide formal support as needed [15].

III. CONCLUSION:

Drug addiction affects both brain and behavior. It has multifaceted impacts on the patients' body, mind, and nervous system. A

psychoactive drug is to induce consciousness for pleasure, by modify the perceptions, feelings, and emotions of the user. When a psychoactive drug enters the user's body, it induces an intoxicating effect. While some people can use recreational and prescription drugs without becoming addicted, many individuals who start using drugs become physically and emotionally dependent on them. Drug abuse causes vary greatly, depending on each individual and the extent of his or her addiction. The psychological effects of drug addiction come from the reason the user is addicted to drugs, as well as the changes that take place in the brain once a person becomes a drug addict. Initially, many people start using drugs to cope with stress or pain an effect of drug addiction is creation of a cycle where anytime the user encounters stress or pain, they feel the need to use the drug. This is one of the psychological effects of drug addiction involved in "craving" of the drug. Various Medicinal Plants used for Addiction Treatment are Ginseng extract, Passion flower, *Caulis Sinomenii*, *Camellia sinensis*, *Nigella satvia*, *Peganum harmala*, *Chamomile*, *Datura*, *Berberis*, *Valeriana*, *Asafetida*, *L-Tetrahydropalmatine (L-THP)*.

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