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COMMONLY USED DRUGS FOR DRUG FACILLITATED SEXUAL ASSAULT: A REVIEW

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ABSTRACT

Drug Facilitated Sexual Assaults (DFSA) has become a serious threat to society as the culprit in such cases is generally a known person. These assaults are facilitated by certain drugs known as 'Date Rape Drugs', 'Club Drugs' or 'Rave Drugs'. Date rape drug refers to any drug that assists in the commission of a sexual offense (generally rape). Recently these drugs are abused by youth to exploit young female sexual offenses. Under the influence of such drugs, the victims becomes physically and mentally dependable and is unable to refuse sex. These drugs also causes a sedative effect which renders the victim into deep sleep and is unable to recall anything during that period. The present study deals with certain date rape drugs –their effect on human body and recent scenario of their abuse. This review was done to provide better understanding to those who are working under his area of research.

Keywords: *Date Rape Drugs, Benzodiazepine, Rohypnol, Ketamine, Alcohol.*

I. INTRODUCTION

The term "date rape" is widely used but most of the experts prefer the term "drug-facilitated sexual assault." These drugs also often used in certain crimes like robbery and physical assault. They are used on both male and female. The term "date rape" also can be misleading because the person who commits the crime might not be dating the victim. Rather, it could be an acquaintance or stranger.[1]

Date Rape Drug have sedative, hypnotic, dissociative, and/or amnesiac effects, and the drug often have no color, taste or smell and are easily added to flavored drinks without the victim's knowledge. The drugs like benzodiazepines, gamma-hydroxybutyric acid (GHB or "Liquid X,"), Rohypnol or or "forget pills" ("roofies" or Flunitrazepam), Ecstasy ("E," or "MDMA"), Ketamine ("KT"," "Vitamin K," "Super Acid") are vetenarian anaesthesia like ketamine however, an. Alcohol remains the most commonly used date rape drug. Ketamine is an anesthetic used primarily with animals that has both pain killer and short time memory loss effects.[2,3,4]

MDMA was developed in 1914 as an appetite suppressant, but animal tests were unimpressive, and it was never tested in humans.[5] In the 1970s and 1980s, MDMA was thought to be a useful adjunct to psychotherapy due to the altered state of consciousness it produced [6]

Since the 1970s club scene, club-goers have used a range of drugs to enhance their experience on the dance floor such as amyl nitrite "poppers" and cocaine; in the 1990s, newer "club drugs" became popular, such as ketamine and Ecstasy (MDMA). Like these other "club drugs", GHB is taken because users feel that it enhances the experience of being in a club or at a party; small doses of GHB are thought to act as a stimulant and aphrodisiac.[7] Ecstasy and alcohol are common and used in most of the sexual and non sexual act of violence. and it is legal and readily available. American 1997 study showed that alcohol is still used.[8,9,10]

Rohypnol it first entered the financial market in Europe in 1975 as Rohypnol produced by Roche, and in the 1980s it began to be available in other nation. It first came in the U.S. in the early 1990s. DFSA are very dangerous and depending on the dosage and cause of physiological and harmful mental effects (mostly sedative or strong sedative) in particular time periods. These drugs are mixed in flavor drinks and alcohol. Sometimes drugs use with alcohol other drugs causes synergism and toxic effects, it may be responsible for death. Gamma-hydroxybutyric acid (GHB) and 4-hydroxybutanoic acid are natural substance found in central nervous system, wine, meat, small citrus

fruits, and almost animals in small quantity GHB has two specific binding sites in the central nervous system. GHB react at two receptor sites in the CNS 1- $GABA_B$ and 2- specific GHB receptors. Action at these two receptor sites have to the CNS depressant, stimulant and psychomotor damage effects of GHB. GHB is metabolized in the liver.[11]

In recent years the media has widely publicized incidences of sexual offense where the assassin have used drugs to injure the persons they offense. Yet the most common and prevalent date drug, alcohol, is still not readily recognized as a tool used by perpetrators.[11,12] In fact, almost half of the sexual offenses that young adults experience take place under the effect of alcohol. The use of date rape drugs clearly interpret how sexual offense are planned and intentional events. Assassin of sexual offense use date rape drugs as a method to weaken their victim and to ensure that she/ he will not be able to resist the offense. In addition, using date rape drugs ensures that the survivor will not recall enough details about the offense to prosecute the assassin. [1]

When given to humans it usually results in a state of intoxication that renders the particular temporarily unable to move, feel pain, or remember what took place while intoxicated by the drug. Depending on the drug that was used, some survivors of drug-facilitated sexual offense may have little memory of what took place or no memory of being sexually offended at all. Having symptoms of a sexual offense or having blacked out, and yet not recalling what happened, can lead to the survivor feeling as though she/he is "going crazy" or can lead others to mistrust what she/he is feeling. Because drugs or alcohol are involved in these offenses, survivors are even more likely to blame themselves for what happened. Survivors feel that they were at fault because they got intoxicated and "let themselves get out of control. In addition, consenting to consuming alcohol or drugs is not consenting to sex. These drugs can easily be mixed in alcohol drinks, effects of these drugs appears in few minutes and make victims unconscious for committing the crime. Some aspects of these drugs like pharmacology, desired and undesired effects which are used to commit crime and their forensic aspects of analysis are discussed in this review[13,14,15].

II. ALCOHOL AND SEXUAL BEHAVIOR

Alcohol is a affected the central nervous system. It is depressants and slow the activity of brain system, lower inhibition, disturb motor skills and large amount of consume of alcohol get temporary coma.

Links between alcohol, dating and sexuality had been studied by Abbey et al. prior to 1996. They found that dating, sexual and misperception experiences and alcohol consumption during these experiences predicted assault group status and that alcohol consumption during consensual sex and sexual misperceptions were positively related to alcohol consumption during the sexual assault.[16] In other fields of research, links between alcohol consumption and behavior have indicated that the expectation of alcohol induced disinhibition leads to greater sexual risk- taking behavior such that individuals who hold this expectation require stronger skills and motivation in order to maintain safer sexual behavior.[17] Alcohol consumption, perception of vulnerability and intended behavior was examined by colleagues using a vignette or hypothetical situation, on 59 females aged 21–29 years. The researchers found that the consumption of alcohol created a positive perception of the male behavior; created a sense of more benefit and less risk with some behaviors which were likely to facilitate a relationship while increasing sexual vulnerability and that ital so created an anticipation of greater involvement in those behaviors.[18]

Other Drugs
Methamphetamine, Chloral hydrate produces a sedative/hypnotic effect similar to that of benzodiazepines. A drink that has been spiked with chloral hydrate is often called a Mickey Finn and is frequently used in crime including sexual crime.[1]

Characteristics of different types of Date Rape Drugs [19]

Table 1 General Characteristics of Date Rape Drugs

Effects	MDMA	GHB	Ketamine	Rohypnol
Available	Tablets, Capsule	Liquid , Mixed with Alcohol	Liquid , powder	Tablets
Taken	Oral/ Injected	Oral	Liquid / injected , Powder dissolve in liquid and used in Smoke	Typically ingested oral
Action time	Approximate 30 to 60 min	Approximate 15 to 30 min	Variables	15-20 min to 18-26 hour
Therapeutic use	-	Cataplexy associated with narcolepsy	Veterinary & human anesthetic	Insomnia
Natural mechanisms	Serotonin, Noradrenergic, dopaminergic, cholinergic	Dopaminergic, Cortical, Hippocampal	Serotonin, dopamine, norepinephrine, calcium channels	Chloride channels
Dependency	No	Physical Dependency	No	Physical Dependency

Table 2 Effects of Date Rape Drug on Human Body

Effects	MDMA	GHB	Ketamine	Rohypnol
Clinical Effect	Feeling of empathy, energy, Psychomotor drive, self confidence, depression, positive mood, sensory awareness, increase in the sensuality of sexual experience, inhibition of orgasm and erectile dysfunction , mydriasis.	Euphoria, Amnesia & hypotonic, anxiety Unconsciousness coma, reduction, enhances libido, agitation, nystagmus , ataxia, vomiting, muscle spasms, effect similar to alcohol.	Low dose- Relaxation, Higher dose- Hallucination ,visual distortions, sensation of near death experiences, nystagmus, increased tone, purposeful movements, amnesia, hallucinations, sympathomimetic symptoms, delirium.	Reduces anxiety, inhibition and muscular tension, anterograde, amnesi, lack of muscular control loss of consciousness .
Toxic effects	Irritability, fatigue, nausea, loss of appetite, weight loss, tachycardia, hypertension, tremors, tics, jaw clenching, serotonin syndrome, anxiety, bruxism, thought disorder/ psychosis, difficulty concentrating, hyperthermia, , neurotoxicity hyponatremia, Hypertension, liver toxicity, ataxia, rhabdomyolisis, disseminated intravascular coagulation (DIC), Seizures, Death	Sleep induction, tramors, Agitation, seizures, GI symptoms, CNG & respiratory depression, Dizziness, Confusion, hallucinations, apnoea, bradycardia, Unconsciousness, sudden reversible coma with abrupt Awakening and violence, death.	Increased heart rate, hypertension, cognitive and psychomotor impairment, Nausea, Respiratory depression, Recurrent flashbacks, delirium, Amnesia, Schizophrenic symptoms, Loss of Consciousness, Catatonia, Death.	Decreased body teaperature and blood pressure, sedation, cognitive and psychomotor impairment, Visual disturbances, dizziness, confusion, GI disturbances, urinary retention.
Long Term Effect	Possible: Cognitive Deficiencies, brain neurotoxicity		Cognitive Difficulties (Attention, Learning , Memory)	Depression, Memory loss, confusion, paradological agitation, stomach disorders

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III. CLUB DRUG IN INDIAN SCENARIO

Indian data on club drugs are very limited with little efforts being made to gather systematic data regarding the same. The first nationwide survey to obtain information on extent, pattern and magnitude of substance abuse in the country indicated new emerging trend of substance use in India with amphetamine like substances (ATS) are being more used in regions like Goa and Ahmadabad.[20] Most reports regarding club drugs are from newspaper articles; hence there is an urgent need for verified, authentic research data.

A recent assessment by United Nations Office on Drugs and Crime (UNODC).[20] has found that after substantial increases in the late 1990s, the use of synthetic drugs (e.g., amphetamines and Ecstasy) in North America, Europe and Oceania has stabilized, albeit at high levels. But the problem has shifted to new markets, particularly in East and South-East Asia and the Middle East over the past few years. With technological advancement and particularly the information technology sector coming up in a big way in India (often as outsourcing for overseas-based multinational companies), suddenly there is a neo-rich young generation. This is often coupled with the need to escape temporarily from the severe work pressure and social isolation created by this lifestyle. With dug licensing and controlling authorities focusing more on licit and traditional illicit drugs (e.g., opioid, cannabis), club drugs have caught the fancy of this neo-rich young generation. Table II lists the various factors/reasons behind the significance of this new and emerging phenomenon in the Indian drugs scenario and why we should be concerned.

The rave parties of Goa are said to be started by the Hippies.[21] Earlier Rave parties meant loud music, alcohol and cannabis abuse. Since the late eighties, psychedelic culture in the northern village of Anjuna became increasingly concentrated on free outdoor parties with a particular subgenre of electronic dance music, which by 1994 was known as Goa trance and later became much darker, more minimal and aggressive, called psytrance.[21] Rave parties in Goa happen in every tourist season (November to May) which are attended mainly by foreigners from the UK, Israel, Germany, France and Japan.[22] The bars organizing such parties sell Ecstasy or LSD.[23] In last few years upper-class Indians have massively taken to Ecstasy and clubbing and there are more women amongst them. [21] Later on, with government interventions and regulatory norms, drug abuse came down as these were declared illegal by law. Goa police recently admitted about the unorganized and the organized channels for ketamine in Goa. [22] The CK1 pill is one of the trendy party drugs manufactured locally in Goa. The pill is a combination of cocaine and the anesthetic ketamine. CK1, also known by its street names Blizzard and Calvin Klein, is easily available in the north Goa beach belt.

In the north, Himachal Pradesh Kullu valley is now known for its full-moon-night jungle rave parties. A large number are Israelis, most of them fresh from the frazzle of military service dance to psychedelic music on full moon nights and smoking hashish.[23]. Bangalore is baptized the Silicon Valley of India and has turned into a rave hotspot.[24] The spot lights in the clubs create an atmosphere between cozy and disco, everybody drinks, most smoke and a few take psychedelic drugs.[25] Most raves in the city do get busted by the police.[26]

In Pune, 280 people were arrested during a pre-dawn raid on a rave party in March 2007. The ravers were allegedly using California drops. [27] A California drop is acid that is put on a stamp, which is then chewed; the cost of each drop is put between INR 350 and 500. Like the Irish woman suspected of supplying drugs at the Pune party, foreigners have been arrested for peddling illegal LSD, Ecstasy and cocaine at various rave parties in Bangalore and Mumbai.[22] Sometimes police directly raid rave parties in plain clothes and catch ravers red-handed. People who are found in the Rave Party are often booked under Section 27 of the Narcotic Drugs and Psychotropic Substances Act of 1985[28] and Section 294 of the Indian Penal Code.[29]

IV. CONCLUSION AND FUTURE PROSPECTS

The misuse of date rape drugs have increased rapidly in developed and developing Country. A lot of information have been provided the woman about Date Rape drug regarding her safety . Date rape drugs are not only use at particular location like Pubs and Bars, The sexual assaults center has been seen in many cases where date rape drugs can used also at house parties, restaurants, and while camping. In addition, these statements are almost

always directed at women, but men can also experience drug-facilitated sexual offense. Within the past few years, the massage that alcohol consumption alone without the addition of other so-called date rape drugs, can expose a person to unwanted or risky sexual activity has appeared.[37-39] It is also stated that, sometimes victims end up drinking too much and insist that they were drugged when in fact they overestimated their tolerance for alcohol.[41]

The practical aspects of the management of cases of sexual assault now need to be reconsidered in the light of current evidence of binge drinking. Suggestions in the report following Operation Matisse include the incorporation of a questionnaire into the standard forensic medical examination to aid analysis and interpretation of the findings; the use of early evidence kits by non- medical personnel and the need for further research into the forensic examination of hair samples in order to detect GHB. Recommendations have also been made to raise public awareness of any potential threat together with advice on reducing the potential of becoming a victim.[42] Various techniques are being used for the analysis of forensic samples for the date rape drugs. New techniques need to be developed for the fast and accurate analysis of these drugs.[1].

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