

Crime Related Use of Benzodiazepine in District Peshawar

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ABSTRACT

Background: The number of reported crime in which the victims were first rendered unconscious; lacking awareness of his or her surrounding and later the planned crime ensued. Blood and urine samples were collected and tested for sedative hypnotics at the toxicology lab. The specimens, all of them were tested positive for benzodiazepine.

Study Design: Cross Sectional study.

Place and Duration of Study: This study was conducted at Toxicology Laboratory, Department of Forensic Medicine and Toxicology, Khyber Medical College, Peshawar from 01.01.2010 to 31.12.2010.

Materials and Methods: The study was conducted on 77 samples of urine and blood obtained from the victims who were brought over by police to the tertiary care hospitals in district Peshawar.

Results: The procedure to find out the exact subtype was with the help of High Performance Liquid Chromatography (HPLC) in the Toxicology laboratory. The chemical analysis revealed that all the samples obtained from the victims carried Clonazepam a subtype of Benzodiazepine.

Conclusion: Easy availability of benzodiazepine and other narcotic analgesics across the country renders these technically dangerous medicines into the hands of criminals resulting in heinous and monstrous consequences.

Key words: Benzodiazepine, Clonazepam, Crime, Toxicology, HPLC

INTRODUCTION

In the last two years, district Peshawar had more than 200 cases of car snatching in which 80% were taxicabs and 20% were private vehicles. The crime was committed after the criminals gave the driver some edibles, which after ingestion made the recipients unconscious. Police brought over these victims to casualty department of LRH, HMC or KTH in an unconscious state.

The chemical examination of the specimens, i.e. urine & blood taken from the victims at the casualty department, showed that they were given an overdose of Benzodiazepine. After collection of information it was decided to find out the exact substance that was used to commit the crime.

MATERIALS AND METHODS

The study was conducted on 77 samples of urine and blood obtained from the victims who were brought over by police to the tertiary care hospitals and the samples were then brought over to the Toxicology Laboratory, Department of Forensic Medicine & Toxicology, Khyber Medical College, Peshawar between the time period 01.01.2010 to 31.12.2010.

The procedure to find out the exact subtype was with the help of High Performance Liquid Chromatography (HPLC) in the Toxicology laboratory². The chemical analysis revealed that all the samples obtained from the victims carried Clonazepam a subtype of

Benzodiazepine. In 80% of cases Clonazepam drop preparations were used for committing crime.

Data revealed that less than 2% came into the category of accidental poisoning involving children, psychiatric patients and older people having senile dementia³. Teenagers and young adults sometime used it as an exhibitional poison.

RESULTS

Clonazepam is a Benzodiazepine having anxiolytic, anticonvulsant, muscle relaxant and hypnotic properties. Onset of action is within 20 minutes, duration of action is up to 8 hours, protein binding is 85% and half life is 19-50 hours. Time to peak serum concentration is 1-3 hours. Steady state is 5 to 7 days, its excretion is mainly in urine, less than 2% is unchanged and 98% is present as a glucuronide or sulphate conjugate⁹.

In tablets form Clonazepam is available in the dose of 0.5mg, 1mg and 2mg. Drops preparation contains 0.1mg of Clonazepam per drop, the solvent used in these drops is a highly volatile alcohol, this preparation is tasteless and odorless, the trade name of this preparation is Rivotril⁴.

Flumazenil acts as an antidote by binding to CNS Benzodiazepine receptors and competitively blocks benzodiazepine activation of inhibitory GABAergic synapses⁷. With Flumazenil, victims regain immediate consciousness, thus verifying the diagnosis of Clonazepam poisoning.

GABA is formed in the brain cells from glutamate and functions as an inhibitory neurotransmitter. Glutamate acts as an excitatory neurotransmitter and when bound to adjacent cells encourages them to evoke and send nerve impulse. GABA does the opposite and tells the adjoining cells not to elicit, not to send an impulse. Clonazepam enhances the availability of GABA and suppresses the spike and wave discharge by depressive nerve transmission in the motor cortex⁸.

Effects on the CNS can lead to ataxia, confusion, depression, dizziness, drowsiness, fatigue, hallucination, memory disturbance, slurred speech, vertigo, coma, intellectual ability reduction and psychosis⁸.

Neuromuscular effects can lead to co-ordination abnormalities, dysarthria, muscle weakness, tremors and myalgia. Ocular effects can cause blurred vision, abnormal eye movements, diplopia and nystagmus⁹. All the above effects when compounded can give an ideal situation for criminal to carry out his or her desired offence with minimal resistance on part of the victim. Ethyl alcohol, Cimetidine, Contraceptive pills, Flucanazole and Isoniazide enhances the CNS depressant effects of Clonazepam. Proton pump inhibitor increases serum concentration of Clonazepam.

DISCUSSION

Psychoactive products are chemicals that cross the blood brain barrier and act primarily upon the central nervous system and affect the brain functions, resulting in changes in perception, mood, consciousness, cognition, and behavior¹. These substances may be used by amateur to purposefully alter one's consciousness or for ritual and spiritual, purposes or be used as a tool to augment the mind, commit crime or used as a medication.

Since psychoactive substances bring about subjective modifications in consciousness and mood and these changes, which even are not included in its medicinal domain, lead to health risks and negative outcomes⁹.

Benzodiazepines are by and large one of the most ill-used psychoactive substances. Its misuse is steadily raising and is now a major problem for the law enforcing agencies. Invariably no one has focused on the intensity with which it's being abused and its frequent misuse alongside other narcotic drugs, especially alcohol, stimulants and opiates is an eye opener. Benzodiazepines have been used as a tool of murder by serial killers, and murderers. Benzodiazepines have also been used to assist in the crime of rape and robbery. With this drug, dependence has been linked to shoplifting due to the psychogenic fugue state caused by the chronic use of the drug. When benzodiazepines are used for criminal intentions against a victim, the drug is frequently blended with edibles and soft drinks; here the choice benzodiazepine is Rivotril drops.

Another psychoactive product, Restoril is the most common benzodiazepines used in rape cases. Alprazolam is another benzodiazepine seen abused for the purpose of carrying acts of incest and for corrupting teenage girls. Some benzodiazepines are associated with law-breakings in a bigger way when taken in combination with other narcotics in the crime syndicate¹⁰.

Another strong benzodiazepine flunitrazepam (Rohypnol) has strong amnesia-producing effects, this can lead these drug abusers to get pitiless and also cause feelings of being unbeatable¹¹. This has led to some acts of extreme violence to others, often leaving abusers with no remembrance of what they had done in their drug-induced state. Different benzodiazepines have dissimilar abuse potential; the more rapid the increase in the plasma level following ingestion, the greater the intoxicating effect and the more open to abuse the drug becomes.

CONCLUSION

In the medical setting, psychoactive drugs as a treatment for illness are widespread and generally accepted. But concern exists when one encounters free availability of these products in the market. Psychoactive drugs are commonly prescribed to patients with psychiatric disorders. However critics believe that certain doctors over prescribe drugs such as antidepressants and stimulants, which endanger patients' judgment and self-direction.

Although Clonazepam is the drug of choice for the supportive treatment of epilepsy. seizures, it is used as an anxiolytic and it has a potent role in burning mouth syndrome. The free availability of this drug preparation across the counter in our pharmacies makes it vulnerable for misuse by criminals, junkies and other antisocial elements. Clonazepam as a controlled drug should only be dispensed when prescribed by a registered medical practitioner

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