

Review Article**Qualitative Analysis of Iranian Crack to Determine the Active Ingredient in Committing Crime in order to Determine Criminal Punishment**

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ABSTRACT:

Crime (the basis of criminal law) is the behavior that intentionally leads to violation of legal orders and one of the things that hinder the realization of criminal liability is the condition called insanity. People lacking the healthy will, or unaware of the essence of the consequences their acts if they commit crimes they are not addressed in the law and do not have criminal responsibility. In a cross sectional study in Khuzestan forensic toxicology lab after 61 TLC samples of crack street, drug recognition tests were done by HPLC and GC / MS. Examination of data (V22) SPSS (p value <0.05): % 93/4 of crack samples were containing morphine, % 83/6 with caffeine, noscapine or dextromethorphan, % 27/9 heroin and codeine, % 37/7 six mono-acetylphloroglucinol morphine, % 34/4 acetyl codeine, % 13/1 narceine and acetaminophen, % 16/4 diazepam and % 9/8 chloramphenicol and other components of methyl amphetamines, diphenhydramine, lidocaine, thebaine, amoxicillin, amitriptyline and nortriptyline % 6/6 of samples were a mixture of methyl amphetamine - diphenhydramine and acetaminophen, it was a special type of Iranian crack, due to the existence of amphetamines play a major role in dementia and mental illness like schizophrenia. Iranian crack is not only different from a real crack (cocaine), but differs in the types, number and amount of additives drug, Opioid and diluent. Crack has different amount of effective substances on the central nervous system pharmacological and non-pharmacological and psychedelic properties. Different clinical manifestations like dementia and lack of determination that leads to crime. As a result, the need to determine the ingredients in the crack used in the examination of crime and helping the criminal justice system in determining the penalty is definite.

Key words: Forensic Toxicology, Iranian crack, GC-MS, HPLC, crime, criminal penalty

INTRODUCTION

The basis for the proposed law is constituted by the unlawful behavior. Crime is a voluntary behavior that leads to the violation of the legal orders and the only creature that can have an aware will is the human. One of the points that is

an obstacle to the realization of criminal responsibility and has the exact representation of all human societies is the condition called insanity mental diseases. People who either do not have the healthy will or are not conscious of the nature

of the consequences acts. If these people commit crimes they are not addressed by the law and do not have criminal responsibility. The legislature considers necessary the lack of will or power of recognition for patients to prohibit punishment in the amended of the Islamic Penal Code, is included to a broader range for the Mental Disorders in the Islamic Criminal Law and the expansion possibility of Insanity Defense is provided in Iranian criminal law. From the beginning Iran's Penal Code brings into consideration the criminal responsibility of the insane and each one according to its approach to madness and mental disorder have been legislated and in the last amendment of the bill, has considered the lack of will or ability to distinguish the as the criterion of lack of responsibility that is defined as the very definition of criminal capacity as well as the spiritual element. (1 and 2)

Drug abuse and narcotics have consequences as mental disorders, physical and detrimental social, cultural and economic consequences, especially threatens public and personal hygiene. Expansion of urban life and increasing consumption of narcotic drugs, especially synthetic drugs is encouraging the international community to cooperate to control and repress actions that promote and behaviors leading to the misuse of these substances to issue the 1971 Convention on narcotic Substances United Nations as its best manifestation. Iranian legislator also necessarily took action in the related narcotic drug law (adopted in 1354) to the criminalization of some acts that is related or led to the abuse of narcotic drugs. But diversity and spread of drug abuse of these substances, along with its extremely detrimental effects to public health indicates the need to amend the law relating to the suitable anticipated effective support measures and measures to create appropriate suppression. On the other hand misuse of narcotic drugs, sometimes leads to mental disorder and shake the foundations of and criminal liability and committing crime that in the examination of individual criminal liability at this point is an

important issue. In this study we tried to identify the types of drugs (crack) on and then survey the committing criminal liability in the consumption of these materials and committing different crimes. (3 and 4)

The term Drug Abuse has several definitions in different societies and cultures. Drug Abuse is different from Drug Misuse. Drug abuse is referred to any deliberate use of drugs for non-medical use, including changing the mood, fitness and... (10)

Drug abuse leads to mental disorders, physical consequences detrimental social, cultural and economic consequences, especially threats individual and public health.

Cocaine

The history of cocaine use can be traced back thousands of years. When the inhabitants of South America, used coca leaves for their effect breezy and it gave them more energy and felt less tired and hungry. (6) They are often called the coca plant as a "gift of God".

In the 1980s (A.C.), the chemists and manufacturers could obtain cocaine using the method to condense it out of hydrochloride and earned almost % 100 pure cocaine.

Within not too long after the emergence of the dangers of condensed cocaine, cocaine crack replaced it. Crack cocaine is the crystal form of cocaine can be made by adding baking soda and water to hydrochloride and drying it. Public misconception is that same crack cocaine is the same as condensed cocaine while the chemical form of crack is completely different from condensed cocaine. Crack looks as small opalescent stones or pebbles. Hence, it is titled as the rock that is usually distributed in small plastic bags or small jars of medicines. The major narcotic ingredient was extracted from coca leaves was called "aritrivacilycine". In 1860 (A.D.), the chemist Albert Niemann extracted the narcotic substance to almost 100% purity and called it "cocaine". Coca leaves contains only % 0.1 to % 0.9 percent of their weight of the cocaine. By identifying the major narcotic material

extracted from coca leaves and mixing it with beverages such as wine and drinks containing cocaine even soft drinks such as Coca-Cola, it entered in the world market.

Medicinal use of cocaine was discovered in the nineteenth century. At the time, it was found that cocaine as an anesthetic agent (or numbness) acts strongly and it can be used in different local numbness in surgery such as, ear, nose, eye, throat surgery. Cocaine sometimes was used to relieve toothache. Because cocaine causes narrowing of the blood vessels, sometimes it is used to control bleeding and healing heart disease, including irregular heartbeats. German soldiers in World War II were given cocaine to increase the steadfastness in physical activity and military maneuvers.

In 1912, America's government announced 5,000 deaths resulting from cocaine use. Finally, in 1914, "Harrison Narcotics Act" was passed. Following the Harrison law enforcement, taking recreational drugs such as cocaine and heroin were diverted to the underground black market.

Crack came to the fore:

Crack for the first time in the late summer and early fall of 1985 entered the New York market. Usually by chemical reactions cocaine becomes freebase, (7) This means that cocaine hydrochloride is turned to pure cocaine. This is pure cocaine that is resistant to heat and can also be consumed through smoking. This substance referred to is called Crack.

This substance today has entered in the country market since 1384 as the crack is a new substance which is nothing like the crack from cocaine. And symptoms of its use are similar to cocaine, not cocaine. Appearance of this substance is usually like a lump of earth-shaped, cream-colored and has lint is like cotton candy. And it is also very similar to the pieces of curd with low density and light weight.

In recent years the new material has entered on the market of Iran and has led many addicts when referring to the drug dealers to take opium or heroin, the new material was introduced that

worked faster and was easier to use, it was easier to hide and, above all, low-cost. The new material is crack. (20)

Crack Street (Street Crack)

According to studies undertaken on street crack referred to Iranian forensic toxicology laboratories the Iranian crack contains a high percentage of heroin and narcotic pills and other additives (Adulterants). These additives are mainly from the category affecting the central nervous system (benzodiazepines, barbiturates, etc.) and materials increasing the volume (starch, talc, etc.). Identifying the compounds in the crack obtained from the accused by the judiciary and law enforcement are submitted to forensic toxicology laboratories. It includes a wide range of investigations of toxicology laboratories. Identifying the components in samples of obtained crack and getting the relative frequency of components could help in unison proper treatment protocol in dealing with patients poisoned by these chemicals and issues related to security and judiciary.

In reference books, the street heroin with the name of crack is not mentioned. According to books and articles on Crack, it is the street name for cocaine. (18) Etymology of crack comes from the breaking sound for this type of cocaine by the effect of heating. Crack or rock (Rock), in fact, is the solid form of cocaine which can be used through smoking or inhaled through sniffing. (10 and 11)

Crack use is very easy and fast so that even with a lighter can be consumed anywhere. Hence, the crack is entitled as 1, 2, 3 because it can be consumed by counting three. And that no certain smell can be felt while taking using substance and this is the advantage of this substance compared with other drugs. But the clinical effects and complications after crack use is very strong and terrible. (12)

It seems that the ingredients used manufacturing in the crack substance in Iran at the market does not have a fixed formula and its manufacturers use various materials. (13) Usually

heroin as a raw material base exists in all of them. Iranian crack, due to its many impurities compared to the American type is far more dangerous. (5)

Overall additives (Adulterants) primarily are substances with pharmacological properties or drugs that are to change the pharmacological effects of heroin, to which are added, the compounds can be administered acetaminophen, dextromethorphan, antihistamines, benzodiazepines, tri-cyclic antidepressants, barbiturates, stimulants of central nervous system cited such as caffeine. Alkaloids in opium as a source of morphine are used to provide heroin.

Other side products such as Acetylcodine induced from codeine acetylation of opium, papaverine, noscapine and other opium alkaloids are found in heroin. (14-15)

Diluent substances are such as starch or sugar, which serve to increase the volume or weight are added illegally to this substance.

Additives during production, before or after the smuggling and trafficking in time of micro-marketing availability can be added to heroin. (16) Due to major differences in the structure of the crack available in Iran comparing to the known crack in other parts of the world, it seems necessary to do research to determine the component of the crack referred to forensic toxicology laboratory.

On the other hand, the results of this study to guide physicians in treatment centers, addiction, poisoning and ...in adopting the appropriate treatment protocol due to nonspecific clinical signs and symptoms are valuable.

In a place that crack is consumed a certain bitter smell can be felt its atmosphere indicating the presence of heroin. Some crack consumers say some time ago when taking the drug a particular pickle smell was felt that may be caused by the presence of ammonia. Others say recently strong acidic compounds used in the manufacturing of cleaning drainage channels such as (Chante) is also used, in the preparation of crack.

Others believe in making crack hallucinogenic substances like methamphetamine is also used.

Crack clinical signs and symptoms:

Apart from the effects on the brain, cocaine and crack, cause the most problems cardiovascular system, including heart and blood vessels. In fact, with the release of adrenaline causes tachycardia. (17) Another neurological problems caused by cocaine, , by which the muscles of some parts of the body involuntarily contract, and causes a person to lose their movement control and like strong seizures or convulsions stroke fall on the ground.

Another cocaine harmful effect on the nervous system is disorders of movement. (In Huntington disease is known as "Dyskinesia disease") (17) In addition, abnormal movements caused by continuous use of cocaine are called "The Crack Dancing". People who frequently inhale cocaine often have nasal inflammation (rhinitis) and cartilage separating the nostrils is corroded. (17)

On the other hand crack is leaving other typical symptoms. For example, eye injury or inflammation refers to as the cornea crack that due to the frequent exposure of eyes to crack smoke. These vulnerable areas are susceptible to the virus or bacteria. (17)

Doctor Ali Farhoudian in scientific research meeting entitled "A Survey on the crack use as a narcotic" held at the Shaghayegh Cultural Complex, Said: All over the world crack is a name for the free form of the alkaloid cocaine. But in Iran, the clinical signs and symptoms of crack use and the withdrawal signs in suspension time of its dependent patients indicates that the crack in Iran market is different from the crack existing in other countries which is a form of cocaine. (17) Generally, the effects of crack and cocaine in consumers because of high density of active ingredients as well as various chemicals are far much stronger and the cases associated with deaths of the consumers are greater.

And excessive intake, especially of consumers using cocaine crack cocaine, the clinical symptoms are intensified and the person would suffer from confusion, chest pain, nausea, muscle spasms and convulsions and ultimately death.

Crack works up to 8 hours after taking. In case quitting its use, the side effects such as lethargy and depression makes the possibility to leave zero. Vomiting and reducing the pain, feeling hot, hot flashes, itchy nose, heavy hands and feet and sedation, dry mouth and eventually cancers in the mouth and gums, reducing blood pressure, contraction of the pupil, big eye, ureteral and biliary smooth muscle contraction, disorders in the blood, weakening effect on blood platelets and white blood cells.

Long-term complications of crack: darkening of the skin, decreased libido, infertility, weight loss and malnutrition, multiple wounds in the body and delay wound healing, aging, dementia, psychological diseases like schizophrenia including visual and auditory hallucinations and paranoid mental illness like and aggression, behavioral or psychological changes (initially euphoric and then apathy, irritability and aggressiveness, restlessness or slow and impaired judgment) and finally, Dementia among the symptoms as a series of bad clinical functions manifests including memory disorders, language disorders, psychiatric and psychological changes, and impaired daily activities. Intravenous infusion reactions, abscesses, skin infections, endocarditis, tetanus, AIDS, hepatitis B and transferring them to others, all these symptoms and different clinical symptoms requires appropriate treatment protocol in dealing with drug abusers and malicious poisoning substance is required.

Analysis Method

This cross sectional study was conducted for six months on all crack samples referred to forensic toxicology laboratories in Khuzestan from the years 91-92.

All samples in miscellaneous section of toxicology laboratory were evaluated in regard to physical properties such as color, shape and weight.

To perform the sieve test these samples to the TLC (TLC) method of thin chromatography for initial laboratory investigation were first evaluated and tested.

Crack samples referred obtained for about 0.1 to 0.01 g depending on the amount of samples available in 10 cc of methanol% 99 were resolved and then the samples for 10 minutes were centrifuged in a centrifuge at around 13000rpm to remove impurities.

After the tubes were centrifuged supernatant of the experimental tube was used to perform TLC.

Each of the pellets contains samples of unknown crack with pharmaceutical standards in the laboratory (Opium, heroin, etc.). Two solvent systems were used for the screening test.

Tank with the above-mentioned solvents were made ready and are placed in the solvent tanks.

After climbing spots in the tank and separating the ingredients of the spot, plates were removed of solvent tank and were prepared to paint with acid Platinum iodide. It should be noted that the plates are dry before painting with Platinum iodide acids. After preparing the spray solution, the plates in the space under the hood were lightly sprayed with acid Platinum iodide to make the stains appear. After acidification approximately 2 to 3 hours (depending on volatility and percentage of solvent used in the mobile phase) In cases of noticing spots on the plate, the results of screening test is considered positive and a positive result in a more sensitive and more specific method such as HPLC and MS / GC is confirmed.

HPLC Method:

Column: Eruospher 100-5 C18 -250× 4/6mm with precolumn

Injection volume: 20ml

Flow rate: 1ml/min

Stationary phase: Methanol merk (Germany) / Dilution water (0.20×0.80)

Mobile phase:

Acetonitrile Merk (Germany) / phosphate buffer pH= 2/3 mixtures (0.63×0.37)

Agilent

GC Method: GC: 7890A

Column: HP5-MS30m×0.25 mm×0.25

Injection type: Splitless

Injection volume: 0.2

Oven Temperature: 60°C

Ramp 1:20°C/min up to 300°C
Inlet Temperature:250°C
Carrier Gas Flow: Helium 1.5 ml/min
MS Method: MS: 5975 C
Source Temperature: 230°C
Quardrapole Temperature: 150°C
Mode of Scan: Full Scan
HPLC Method: Column: Eruospher 100-5 C18
-250× 4/6mm with precolumn
Injeatiou volume: 20ml
Flow rate: 1ml/min
Staitionary phase: Methanol merk (Germany) /
Dilution water (0.20×0.80)
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Ramp 1:20°C/min up to 300°C
Inlet Temperature:250°C
Carrier Gas Flow: Helium 1.5 ml/min

MS Method: MS: 5975 C

Source Temperature: 230°C

Quardrapole Temperature: 150°C

Mode of Scan: Full Scan

All data related to the files will be kept in secret laboratory sectors.

The information contained in duration of 6 months assessment and statistical analysis was analyzed.

The method of calculating sample size and the number:

The current cross-sectional study was conducted in the period of two years and the entire crack referred in this interval was analyzed. Now after the completion of the research, the total 61 samples are analyzed. All 61 cases were extracted from databases of the years 91-92.

In the present study, the crack street referred to forensic toxicology lab to Khuzestan province was qualitatively assessed. 61 cases of cracks were analyzed in the laboratory. The information

contained in duration of 6 months (the time of implementation) assessment, statistical analysis and was analyzed.

RESULTS

In terms of appearance, 52 (%85/2) cases were in the form of a cream-colored clods and 9 (%14/8) in the form of brown powder.

In the weight study it was found that of a minimum weight of 0/2 g, maximum weight of samples 5.55 an average weight of samples were 0/99 g.

Of the total samples, 36 (%59) cases weighing less than 1 gram, 14 (%23) cases weighted between 1 and 3 grams and 11 (%18) cases had the weight of more than 3 grams.

After qualitative analysis of data by the HPLC method the following results were obtained:

57 (93/4) cases of the total cracks referred contained caffeine, 50 (%83/6) cases had the noscapine or dextromethorphan, 10 (%16/4) cases had the diazepam, 8 (%13/1) cases had acetaminophen and narceine, 4 (%6/6) had diphenhydramine and Methyl-amphetamines.

Other components of referred cracks include phenobarbital, thebaine, Lidocaine, Amoxicillin, amitriptyline and nortriptyline.

After qualitative analysis of data by GC_MASS method, the following results were obtained using this method was more specific, and did not have the problems related to the lack of standards of heroin.

57 (%93/4) cases of the total cracks referred had caffeine, 50 (%83/6) cases had the morphine, noscapine or dextromethorphan, 23 (%73/7) cases had 6-mono acetyl morphine, 21 (%34 / 4) cases had Acetyl codeine, 17 (%27/9) cases had heroin and codeine, 10 (%16/4) cases had diazepam, 4 (%6/6) cases had diphenhydramine and methylamphetamines.

On the survey in the relationship between weight and components of the referred cracks to the Khuzestan forensic toxicology lab, following results were obtained.

From 36 (%59) cases were of the referred cracks weigh less than 1 gram and almost all (%100) had

acetyl codeine, heroin, dextromethorphan and chloramphenicol $p < 0/05$ This relationship was significant.

From 14 (%22/9) cases of crack samples referred that were weighing between 1 to 3 grams, all (%100) was observed to contain noscapine and none (%0) had morphine. $P(v) = 0$

- From 11 (%18) crack cases referred to Khuzestan forensic toxicology lab weighed more than 3 grams:
- From 7 (%6/36) cases had a mono-acetyl-morphine, acetyl-codeine, heroin, dextromethorphan were diazepam. $P(V) < 0/05$

In fact, the samples that were too heavy and too light had heroin.

Table 1: Frequency of pharmaceutical active ingredients, and much the street crack referred to the Khuzestan forensic by hplc method

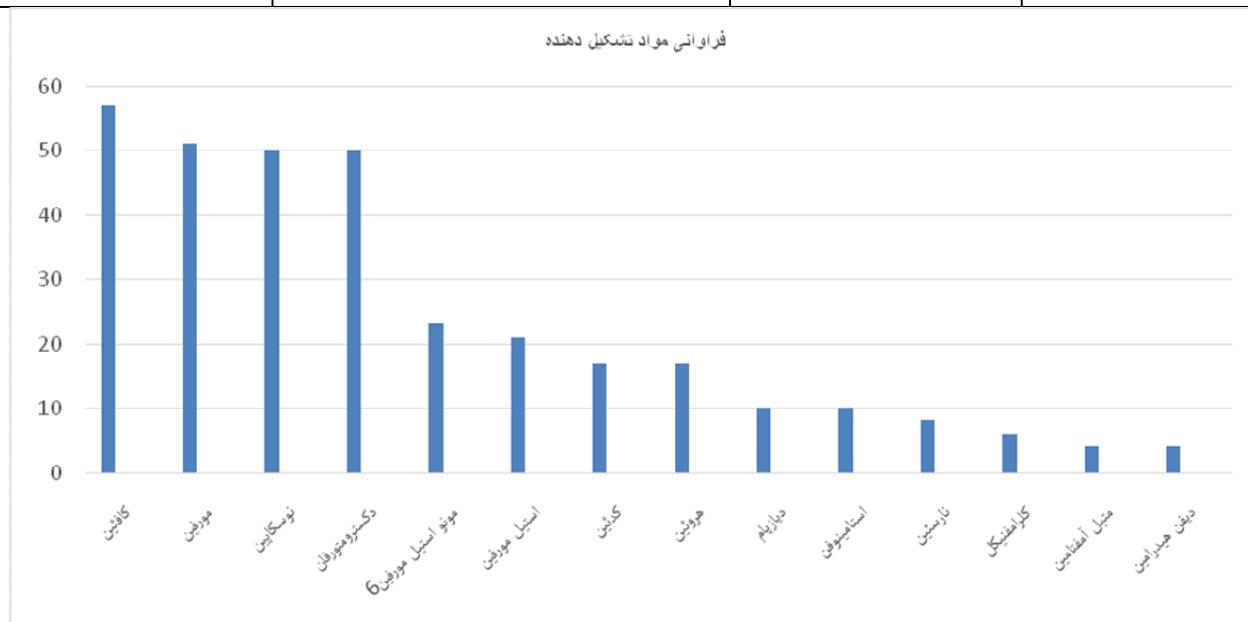
effective material	Drug Category	cracksreferred number	Crack frequencyreferred
Caffeine	Opiumalkaloid	57	%93/4
Noscapine	Opiumalkaloid	50	%82
Narceine	Opiumalkaloid	8	%13/10
Dextromethorphan	A non-opioid Anti cough	50	%82
Chloramphenicol	Antihistamine	6	%9/8
Diphenhydramine	Antihistamine	4	%6/60
Diazepam	Benzodiazepines	10	%16/40
MethBenzodiazepines	Amphetamines	4	%6/60
Acetaminophen	pain reliever	10	%16/40
Amoxicillin	Antibiotics	1	%1/60
Amitriptyline	Tri-cyclic antidepressants	2	%3/25
Nortriptyline	Tri-cyclic antidepressants	2	%3/25
Lidocaine	Local anesthetic and anti-arrhythmic	2	%3/25
Phenobarbital	Barbitrates	1	%1/60
Thebaine	Opiumalkaloid	2	%3/25
total		206	

Table 2: Frequency of active ingredients and pharmaceutical categories in crack referred to the Forensic Khuzestan by GC-MASS method

effective material	Drug Category	cracksreferred number	Crack frequencyreferred
Morphine	Alkaloid of opium	57	%93/4
Codeine	Alkaloid of opium	17	%27/90
Caffeine	Alkaloid of opium	57	%93/4
Noscapine	Alkaloid of opium	50	%82
Dextromethorphan	A non-opioid Anti cough	50	%82
monoacetylphloroglucinol6	Acetylated derivative of opium alkaloids	23	%37/70
Acetyl codeine	Acetylated derivative of opium alkaloids	21	%34/40
Heroin	Acetylated derivative of opium alkaloids	17	%27/90
Chloramphenicol	antihistamine	6	%9/80
Diphenhydramine	antihistamine	4	%6/60
Diazepam	Benzodiazepines	10	%16/40
Methyl amphetamine	amphetamine	4	%6/60

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Lidocaine	A local anesthetic mucosal	2	%3/25
Phenobarbital	Barbiturates	1	%1/60
Thebaine	Alkaloid of opium	2	%3/25
total		264	



Graph 1: The frequency components referred Crack

In this study, we examined 61 sample cases referred to the Khuzestan Forensic Medicine, and we found that constituents of the street crack using two methods of HPLC and GC-MASS contains caffeine, morphine, noscapine, dextromethorphan, 6-mono acetyl morphine, acetyl codeine, heroin, codeine, narceine, diazepam, acetaminophen, diphenhydramine, methamphetamine, papaverine, thebaine, lidocaine, chloramphenicol, phenobarbital, amitriptyline, nortriptyline, and Amoxicillin.

In our country studies were conducted by doctor Jokar and Akhgary and their colleagues on 80 samples of street crack referred to Tehran forensic Medicine and also by doctor Ali Farhoudian and his colleagues on the 18 samples street crack collected from the city of Tehran that after comparing the current study data and the results of this study, we observed differences and similarities.

In the 3 studies done, none of the street crack samples were found to contain cocaine. This shows the big difference between the street crack

and the real crack in the world which is the main ingredient of cocaine.

Amphetamine and diphenhydramine that about 6/6 were found in the referred crack samples were not observed in any of the previous studies.

Meanwhile, in 4 samples of the referred cracks, tri-compounds including Amphetamine, diphenhydramine and acetaminophen that this compound was not observed in any of the samples studied in the previous studies. Acetaminophen at a ratio of 16/4 in samples of crack was found that the amount of acetaminophen in the referred crack to Tehran Forensic Medicine in only one instance 2/2 of 80 cases and the survey of the cracks in the city of Tehran from 18 samples 22/2 had acetaminophen.

Amphetamine and diphenhydramine referred to in 6.6 crack were found in the samples were not observed in any of the previous study.

In the sample cases referred to Khuzestan forensic Medicine caffeine about 93/4 formed the largest percentage of the ingredients while caffeine was found in %80 of samples examined in Tehran.

Perhaps it can be said that the active ingredient of the referred cracks to Khuzestan forensic Medicine was caffeine while the active ingredient in the sample examined in Tehran had more than (%90) heroin.

Heroin in cracks referred to Khuzestan forensic Medicine was 9/27 that is to say the ratio of heroin had been reduced and the crack structure has changed.

In large quantities (Large scale) heroin traditionally is synthesized by a stage reaction of acetylation of raw morphine. To a large degree, three substances are used for acetylation of morphine: acetic anhydride, Acetyl chloride and Atilidyl diacetate.

In the cracks referred to Khuzestan forensic Medicine 6 -mono-acetyl- morphine 73 /7 acetyl-codeine 34/4 codeine 27 in the present study were found that the amount of these compounds in the study of doctor Farhoudian on 18 samples and in the study of doctor Jokar and Akhgary in 80 samples mono- acetyl morphine and acetyl-codeine at a ratio of about 80 and codeine about 35 have been found.

In fact, the amount of heroin and acetylated derivatives in the samples referred to Tehran forensic Medicine and the samples across the city of Tehran at that time has been more than Khuzestan that is an evidence for the changes in the structure of the street crack in specific time and geographical situation.

Dextromethorphan in the cracks referred to Legal Medicine in Tehran and Khuzestan provinces was found in more than 80 as an additive.

In the case of other compounds found in the present study it can be said phenobarbital, amoxicillin, amitriptyline, nortriptyline, lidocaine and thebaine is less in ratio that in the survey of the cracks referred to Tehran forensic medicine also these additive compounds with differences and similarities including phenobarbital, thebaine, pheneramyn, chloroquine, biperiden, and tramadol.

The diversity of these compounds is an evidence for the existence of types of impurities in the

existing cracks investigated and no fixed structural formula was found. In fact, these combinations include additives that the manufacturers use to make the cracks heavier.

DISCUSSION AND CONCLUSION:

Finally, we found that the street crack in Iran is not only different from a real crack in the world with its original material cocaine but also differ in the types and amounts of additives and opioid drug and diluents.

Due to differences in the components of Iranian Crack at different times in different studies, we found that Iranian crack does not have a fixed structure and every day it has undergone many changes and has varying amounts of effective on the central nervous system and other drugs containing pharmacological and non-pharmacological substances. And of course, the existing amphetamines in the cracks are highly important issue because a consequence of its taking is the dementia of the mind of the person would bring about frequent threats to the person, his family and the society.

The change in the purity of ingredients of the street crack could bring high risks for consumers of these compounds and different clinical symptoms and complications for the consumers would appear and the need for appropriate treatment protocol in dealing with these consumers is a necessity.

The effects of dementia and mental impairment on the responsibility

The responsibility is the ability to bear the consequences for the criminal acts. On the amendment bill and especially on criminal liability a great importance is to attach to the criminal capacity. Criminal capacity is based on two principles: (6)

1-Awareness (sense of discernment): the ability to understand the nature of their behavior and assess its consequences

2- Will: simple adequate knowledge of the behavior committed is not enough and should

have a healthy will

A) The effect of psychological state in sentencing
In the Penal Code in this regard there was not a clear act issued or the person was with dementia and the punishment was eradicated from him even though he had common sense for recognition and was responsible. The only act that yielded the doubt was Paragraph 5 of Article 22 of the Penal Code that says: the court could alleviate if taking directions mitigating inhibitor punishment: the special situation of the defendant or his history a wide range of terms used so much that some believed, this lack of attention is due to abandoning Article 5 of the abovementioned from mental disorders or seems of legislation to It seems special status of defendant is absolute title and being at one of the mentally disordered situation and non prevents (eradication as interpreted by the law) the criminal responsibility is not ignored, therefore, in this case if there is a mental disorder the privilege is given to be the judge first if the case is brought before a judge to detect any mental disorder must be done by a specialist psychiatrist and secondly, after the diagnosis, the judge should be bound by the terms of her specialty because it is outside the scope of rights and social issues and Article 22 differs from other provisions in this respect (7)

Criminal responsibility is one of the most important issues of criminal law, that has principles i.e. having common sense is among the major principles and its absence is one of the obstacles of responsibility and punishment. Insanity in 1370 Penal Code has been recognized as factors to eradicate the punishment but in the amendment bill there is chapter called criminal responsibility which has a popular aspect has become and the legislative deleted the old divisions and all-justified causes and eradication causes were given under the constraints. It should be said the best verse of criminal responsibility, is the will (desire) and thinking (discriminating ability). If we view generally both laws, we will see that in amendment bill, mental health has been priority. The idea that court shall

consider in the first place the defendant's mental status is very good and interesting. Also, in the amended bill, the condition of criminal responsibility has changed and respectively comes the wisdom, maturity and authority. It seems that the legislator deliberately has replaced intellect as the first condition to create liability. For example, in Article 90 of the bill (8) regardless of maturity in people less than 18 years for creating criminal liability has lost its relevance and crime attributable in cases that:

- 1- Understanding the nature of the crime
- 2- Understanding its Reverence
- 3- There is no doubt in the perfection of their wisdom

On this basis, it can be said that the amendment bill on criminal responsibility and criminal capacity, holds a great importance and also in the amendment bill, there are two categories of mental patients to exempt from responsibility. The first group is those without a sense of discernment and, in fact, is insane and psychotic, that according to 1370 law, these people are irresponsible. This group is considered in the amendment bill as irresponsible and is exempt from punishment. But the Bill, the second category of mental illness that has a sense of discernment and these people are aware of their actions and behavior, but because of some mental disorders, have no control over their behavior, are subject to exemption. Therefore, insanity Defense Policy has become easier and the Bill was clearly more substantial. But does lack of the will and the sense of discernment from the perspective of psychiatric are also considered Insanity?

The amendment of insanity legal term is only concerned with cognitive ability and the ability of the person does not include emotional abilities or her feelings. It seems that the law had assumed that human imagination can be divided to different parts of the intellectual, emotional, cognitive and volitional. Of course, the division of human thought is impossible. David Aibrahmisen (1371: p 348) states that apparently, this problem in

defense of insanity and mental disorder is in all legal systems. (9)

As a result of the detection of the use of a variety of narcotic substances and determining the nature of these substances and their impact on a person's mental state when committing the crime is very helpful in determining criminal penalties. It is hoped that this study could contribute to the judicial system even though very trivial.

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