

MEDICO LEGAL EXAMINATION OF ALCOHOLICS

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ABSTRACT

Introduction: Alcoholism is drinking alcoholic beverages at a level that interferes with physical health, mental health, and social, family, or job responsibilities. The use of alcoholic beverages is very common in western society. To examine alleged alcoholic intake with the objective to assess whether clinical evaluation is sufficient to declare the case as positive for alcoholism.

Patients and Methods: The study includes examination of 100 cases in the office of additional Police Surgeon GMMC Hospital Sukhur over a period of 01 year from January 2009 to December 2009.

Results: All the subjects were males and they were 16 – 35 years of age. All the cases belonged to Sukhur city. Majority were from labour class (40%) and followed by business community, and others. Among them 95% were Muslim. Clinically 85% were positive but laboratory tests showed 70% positive cases in 5% the report was misplaced or pilfered.

Conclusion: We found that laboratory confirmation should be done before declaring the cases positive; to avoid the pilferage of samples they should be sent to laboratory through proper and fool proof mechanism.

INTRODUCTION

Alcoholism is drinking alcoholic beverages at a level that interferes with physical health, mental health, and social, family, or job responsibilities. The use of alcoholic beverages is very common in western society. In U.S.A 17.6, million adults are alcoholics, whereas in Pakistan alcohol consumption is unlawful but many people still use it. In the United States, a standard drink is the one that contains 0.6 ounces (13.7 grams or 1.2 tablespoons) of pure alcohol. Generally, this amount of pure alcohol is found in 12 – ounces of regular beer or wine cooler, 8 – ounces of malt liquor, 5 – ounces of wine, 1.5 – ounces of 80 distilled spirits or liquor (e.g., gin, rum, vodka, whiskey).

The alcoholism is a chronic progressive and often fatal disease. The biological mechanism of dependence is not known, however, in majority of people alcohol consumption passes little or no danger of addiction. The are likely responsible factors are social, environmental emotional health and genetic predisposition. Among the alcohol consuming individuals 10 to 23% are considered alcoholics.

It is divided into two categories i.e. alcohol abuse and alcohol dependence. Alcohol abuse, means engaging in excessive drinking that causes health or social problems, but you aren't dependent on alcohol and haven't fully lost control over the use of alcohol. Hence, the alcohol abusers don't feel the same compulsion to drink and usually don't experience physical withdrawal symptoms when they

don't drink.³ Alcohol dependence – alcohol addiction – occurs gradually as drinking alcohol alters the balance of some chemicals in the brain. Alcohol also raises the levels of dopamine in the brain, which is associated with the pleasurable aspects of drinking alcohol.

The alcohol produces various sign and symptoms at different blood alcohol concentrations (BAC). At BAC 0.05 – 0.15%, mild symptoms are produced like decreased inhibitions, slight visual impairment, slowing of reaction time and increased confidence. At BAC 0.15 – 0.30% moderate symptoms are produced like ataxia, slurred speech, decreased motor skills, decreased attention, diplopia altered perception, and altered equilibrium. At BAC 0.30 – 0.50% the symptoms are severe in the from of visual impairment and stupor. At BAC above 0.50% patients go into coma ultimately respiratory failure. Ninety to ninety eight % absorbed alcohol is metabolised and 2 – 10 and is excreted unchanged mainly through lungs, kidneys and small amount in sweat, tears, bile, gastric juice and saliva. Smell of the alcohol can be perceived in the breath and collection of breath analyser provides a spot test. However blood samples and urine samples are sent to laboratory for confirmation.

Alcoholic is associated with broad range of psychiatric, social, legal, occupational and economical family problems (like divorce, spouse abuse, child abuse, neglect and criminal behavior). It is their criminal behaviours which calls for an action by law

enforcement agencies. It ranges from driving under the influence of alcohol to abusive, aggressive and assaultive behaviour in drunken state. The use of alcoholic beverages is very common in western societies many people are under the influence of alcohol while involved in day to day activity such person are accountable when the blood alcohol concentration exceeds permissible limits of that country. As the intake of alcohol is prohibited under law, defaulters are caught by police and are produced before authorised medical officer for examination. The clinical judgment is based upon various signs and symptoms and confirmed by laboratory detection of alcohol in urine and blood. The study is designed to see that how many cases can be clinically assessed and what percentage is alcohol positive on laboratory investigations.

PATIENTS AND METHODS

The study included 100 cases brought by police at the office of additional police surgeon Sukhur with the allegation of being in drunken state during the period from January 2009 to December 2009. The examination involved the recording of following parameters, age sex occupational religion referring authority, being hand cuffed or not, symptoms and sign of alcohol intake including congestion of eyes smell of breath, slurred speech and staggering gait, presence of evidence of trauma and clinical opinion whether positive or negative. The samples of urine and blood were collected and dispatched to chemical examiner Government of Sindh at Rohri for detection of alcohol. The religion wise distribution shows 95% Muslims and 5% non Muslims. All the cases in the study were brought by police it is because of the fact that they are caught by police and 10% were hand cuffed. In the clinical examination the alcoholic smell was present in 86%, congestion of eyes was present in 93%, speech was slurred in 79%, gait was staggering in 71%, 82% cases were poorly oriented. In time and space while 18% were well oriented in 4% cases. Some evidence of trauma was also found during the examination. The clinical diagnoses were declared positive in 85% cases, negative in 5% cases, while it was inconclusive in the rest of the cases. The samples of urine and blood of all these cases were sent to chemical examiner Government of Rohri for the detection of alcohol which was positive in 70% cases and negative in 5% cases. The clinical examination did not turn up in rest of the cases.

RESULTS

In this study 100 cases were examined 100% were males. Thirty percent cases were between 16 – 25 years of age 35% were between 26 – 35 years, 20% cases were between 36 – 45 years of age, 10% were between 56 – 65 years as shown in table 1. Religion wise distribution showed 95% Muslims and 5% were non Muslims. All the cases belonged to Sukhur city. The occupation wise distribution included 40% from labour class and 35% from business class and 25% were from other groups (table 2). All the cases brought by police however (10%) were hand cuffed (table 4).

DISCUSSION

Alcoholism is a disease and its incidence is rising, the alcohol

Table 1: Age distribution (n = 100) cases.

Age	No.	% age
0 – 15	00	00
26 – 25	30	30%
26 – 35	35	35%
3 – 45	20	20%
46 – 55	10	10%
56 – 65	05	05%
66 – 75	---	---
Total	100	100%

Table 2: Occupation wise distribution.

Occupational	No.	% age
House Hold	95	95%
Laborer	40	40%
Business	35	35%
Service	05	05%
Un-employed	05	05%
Not know	05	05%
Student	05	05%
		100%

Table 3: Religion wise distribution.

Religion	No.	% age
Muslims	95	95%
Non-Muslims	05	05%

Table 4: Distribution on the basis of being hand – cuffed.

Hand cuffed	No.	% age
Hand cuffed	10	10%
No hand cuffed	90	90%

Table 5: Gender distribution.

Sex	No.	% age
Male	100	100%
Female	00	00

Table 6: Distribution on clinical sign and symptoms.

Sr. No.	Sign and Symptoms	Positive		Negative	
		No.	%	No.	%
1.	Congestion of eyes	93	93%	07	07%
2.	Alcoholic smell of breath	86	86%	14	14%
3.	Slurring of speech	79	79%	21	21%
4.	Staggering in time and space	71	71%	29	29%
5.	Orientation in time and space	18	18%	82	82%

Table 7: Distribution on the basis of the presence of associated injuries.

Sr. No.	Associated Injuries	No.	% age
1.	Trauma present	04	04%
2.	Not present	96	96%

Table 8: Distribution on the basis of clinical diagnose.

Sr. No.	Clinical Diagnose	No.	% age
1.	Positive	85	85%
2.	Negative	05	05%
3.	Un-determined	25	25%

Table 9: Distribution on the basis of clinical examiner report.

Sr. No.	Clinical examiner report	No.	% age
1.	Positive	70	70%
2.	Negative	05	05%
3.	Pending for clinical examiner report	25	25%
4.	Total	100	100%

abusers are “problem drinkers” but their dependents have more serious problems. It is the most severe alcoholic disorder that develops over a period of years, following a consistent pattern. At first a tolerance develops, and then people may lose control over drinking followed by severe drinking behaviour and then prolonged drinking with associated physical and mental complications. Alcohol although

completely prohibited in our country is still in use in various social groups. The people who take alcohol but refrain for coming at public places remain out of reach of law enforcement agencies. They loose control and depict anti social behaviour or commit some criminal act or drive in drunken state are caught by police. In the study conducted at Karachi there were 338 cases examined in the 12th month in the year 2002 in 03 hospital conducting medico-legal examination. The number of cases are higher in Karachi than in our study. Hundred percent cases were males. The age group maximally involved in alcohol drinking is between 16 – 35 years (65% cases). This is the age when it is at the height of ones activities. The professionwise distribution reveals that labour class is maximally involved (40% cases) and next is business class. The labour class although have meager resources, they take alcohol as a mean of recreation. The religion wise distribution shows 95% are Muslims this is the reflection of the higher population ratio of Muslims in the country. All the cases in the study were brought by police it is because of fact that they were caught by police only when they were involved in some form of anti-social unlawful activity, about 10% were brought in a hand cuffed state. Traffic fatalities are leading cause of death among young and middle aged population in Estonia where alcohol related death were 70% among men and 44% in young women. According to pmes – Telegan driving under influence of alcohol increases the risk of traffic accidents. Alcohol dependent patients are responsible for 2/3 motor vehicle crashes. The clinical assessment revealed 85% positive where as 5% are negative and the clinical examination were inconclusive in rest of the cases. In a study by Mirza 338 cases were examined and clinical diagnosis was positive in 260 cases (78%) and 78 cases (23%) were suspects and were referred to chemical examiner for urine and blood analysis. Among these 78 cases alcohol was positive in 40 and negative in 38 cases. In our study. All cases sent to chemical examiner Rohri, alcohol was reported positive in 70% and negative in 5% and in 25% cases the reports from chemical examiner was not received even after a length of time. This is due to a number of reasons. The office of the chemical examiner is burdened with work load and other possibility is that the samples received by the police are not deposited at time. The reason may be either over work, neglect or connivance with the examiner. This is a significant number which is being lost without undergoing judicial proceedings. A better strategy is that the samples should be directly dispatched to chemical examiner through messenger so that chain of custody may not break.

It is *concluded* and *recommended* that the clinical assessment although positive in 85% in our stu-

dy, the result of chemical examiner were not in accordance with the clinical assessment however such a large number of samples were misplaced hence it is hard to draw conclusion. It would be prudent to confirm by laboratory investigation before declaring any one positive. In addition authorities need to develop a foolproof mechanism for reporting from the chemical examiner.

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