



CODEN [USA]: IAJ PBB

ISSN: 2349-7750

INDO AMERICAN JOURNAL OF PHARMACEUTICAL SCIENCES

<http://doi.org/10.5281/zenodo.1745513>

Available online at: <http://www.iajps.com>

Research Article

ALCOHOL INTOXICATION: A FORENSIC SURVEY OF A CHRONIC PROBLEM WITH TRENDS IN HYDERABAD, SINDH, PAKISTAN

¹Dr. Abdul Samad, ²Dr. Muhammad Qasim, ³Dr. Mushtaq Ahmed, ⁴Prof. Dr. Muhammad Akbar Kazi, ⁵Dr. Aisha Rasheed Shaikh, ⁶Dr. Ishrat Bibi

¹MBBS, Dip in Diabetes, DMJ, Assistant Professor, Department of Forensic Medicine & Toxicology, Jinnah Medical College Peshawar KPK

² MBBS, DMJ, Senior Lecturer, Department of Forensic Medicine & Toxicology, Liaquat University of Medical and Health Sciences, Jamshoro

³MBBS, DMJ, Additional Medical Superintendent, Liaquat University Hospital Hyderabad Sindh.

⁴MBBS, DMJ, Professor and Chairperson, Department of Forensic Medicine & Toxicology, Liaquat University of Medical and Health Sciences, Jamshoro.

⁵MBBS, DGO, MD (Forensic Medicine), Lecturer, Department of Forensic Medicine & Toxicology, Liaquat University of Medical and Health Sciences, Jamshoro.

⁶MBBS, MD (Forensic Medicine), Lecturer, Department of Forensic Medicine & Toxicology, Liaquat University of Medical and Health Sciences, Jamshoro.

Abstract:

We conducted this forensic survey study on alcohol intoxication cases reported by police stations in Hyderabad region of Sindh province from 01/01/2015 to 31/12/2015. The information required was acquired on a proforma specially designed for this work following consent from close relatives. Total 92 cases were reported in one year all were of the male gender most of them 42 (45.65%) were from age range of 19-25 years, 38(41.30%) cases were from 26-35 years and 12(12.05%) cases belonged to 36-45 years age group. Majority of the cases 62(67.39%) cases were reported from 4 police stations qasim abad (23), Nasim nagar(16), Bittai nagar (13) and City market 10 while other 30(32.61%) were reported by other 9 police stations. There was seasonal variation in case presentation there was variation in month wise presentation most of the figures 54(58.70%) were seen in 4 months April (19) followed by December(13), May(12) and June(10) while rest 38(41.30%) were seen in 8 months.

***Conclusion:** Alcohol intoxication is among the common forensic presentations in Hyderabad region with no specific seasonal variation but it is more common in youngsters and certain areas of Hyderabad are more affected by this problem.*

Key Words: Alcohol, intoxication, morbidity.

Corresponding Author:

Dr. Abdul Samad

MBBS, Dip in Diabetes, DMJ,

Assistant Professor,

Department of Forensic Medicine & Toxicology,

Jinnah Medical College Peshawar, KPK,

Address: H.No. 73, 4th Street Gulshan Masjid

Near Habib General Store Mohala Thomasabad

Mirpurkhas 69000 Sindh. Email.drmemonmpk1970@hotmail.com, Cell No. 03142613782

QR code



Please cite this article in press Abdul Samad et al., *Alcohol Intoxication: A Forensic Survey of a Chronic Problem with Trends in Hyderabad, Sindh, Pakistan., Indo Am. J. P. Sci.*, 2018; 05(12).

INTRODUCTION:

The history of drinking alcohol is very old as more than 1400 years ago people of pro-Islamic period used to drink alcohol. Alcohol is prohibited almost in all religions on the earth including the most practiced religion in the sub-continent (Islam) which has strong punishment for the drinkers. The directions from the Almighty Allah (God) declare alcohol as haram (Strictly prohibited) owing to its effects on human body stating as few benefits while many harms. This revelation also sets a standard for using anything if it possesses more benefits and less harmful effects while avoiding any thing that has more harmful properties as compared to beneficial ones. Unfortunately mankind deviated from these sacred teachings and drinking alcohol becomes a common practice around the world. Alcoholism prone the bodies to multiple disorders of various natures like endocrine, brain, liver, heart and vessels leading to high morbidity. The 10th edition of the International Classification of Diseases(ICD-10) by the WHO includes more than 30 diseases associated with use of alcohol termed as AUDs(alcohol use disorders) globally representing the 2nd common most disabling condition in male gender[1]. The risk to health increases as the intake increases in a dose dependent way heavy consumption potentially leads to severe memory impairments as well as executive functions [2]. The hippocampus is particularly vulnerable to alcohol that predisposes the young generation to mental and neuro-cognitive problems [3]. An estimated 2.5 million deaths/year caused by alcoholism 9% of which are observed in an age range of 15- to 29-year [4].The Global Burden of Diseases in 195 countries from 1990–2016 (GBD 2016) clearly demonstrates the contribution of alcohol to death, disability, and ill health putting alcohol as the 7th leading risk factor for both deaths accounting for 2.2% of female deaths and 6.8% of male deaths among 15–49 years age group[5].Alcohol(ethanol) is produced from fermented food stuffs (barley, grapes and hops) It is highly water soluble about 20% of

absorption of ethanol occurs in stomach while 80% is absorbed from small intestine and 90% of alcohol gets metabolized in the Liver so many drugs may compete with alcohol for the microsomal enzymes so hepatic function assessment should be checked on priority in cases of ethanol intoxication[6,7]. The present study was conducted to estimate the number, frequency and percentage of alcohol intoxication in the hyderabad region and its various sub-regions to help assess the law and force enforcement to control this chronic problem of our society.

METHODOLOGY:

Cases were selected from the medicolegal section of the liaquat university hospital Hyderabad. Data collected was analyzed for frequency and percentage regarding monthly and regional distribution of the cases. Inclusion criteria was set as alcohol intoxication cases of medicolegal origin while other non-alcohol type cases and non-medicolegal cases were excluded from study.

RESULTS:

There were 92 cases reported by different police stations of the hyderabad region in one majority of them 45.65% (42) were from 19-25 years age range ,while 41.30%(38) cases belonged to 26-35 years age group and 12.05%(12) cases were found in 36-45 years age range. Most of cases 67.39%(62) cases were reported from 4 police stations 23cases from PS Qasim abad , 16 cases from PS Nasim nagar, 13 cases were reported from PS Bittai nagar while 10 cases were reported by the police station of City market and other 32.61%(30) were sent from the other 9 police stations of the city. There was no seasonal differences in case presentation although there exist variation in monthly cases presentation with majority of the cases 58.70%(54) presented in 4 months only 19 cases in April , 13 cases in December, 12 cases in May and 10 cases were reported in the month of June while rest of the 41.30%(38) were seen in 8 months.

Table 1: Age range of the study subjects with frequency and percentage

S.No	Age Range	Frequency	Percentage
1.	19-25 Years	42	45.65%
2.	26-35 Years	38	41.30
3.	36-45 Years	12	13.04%

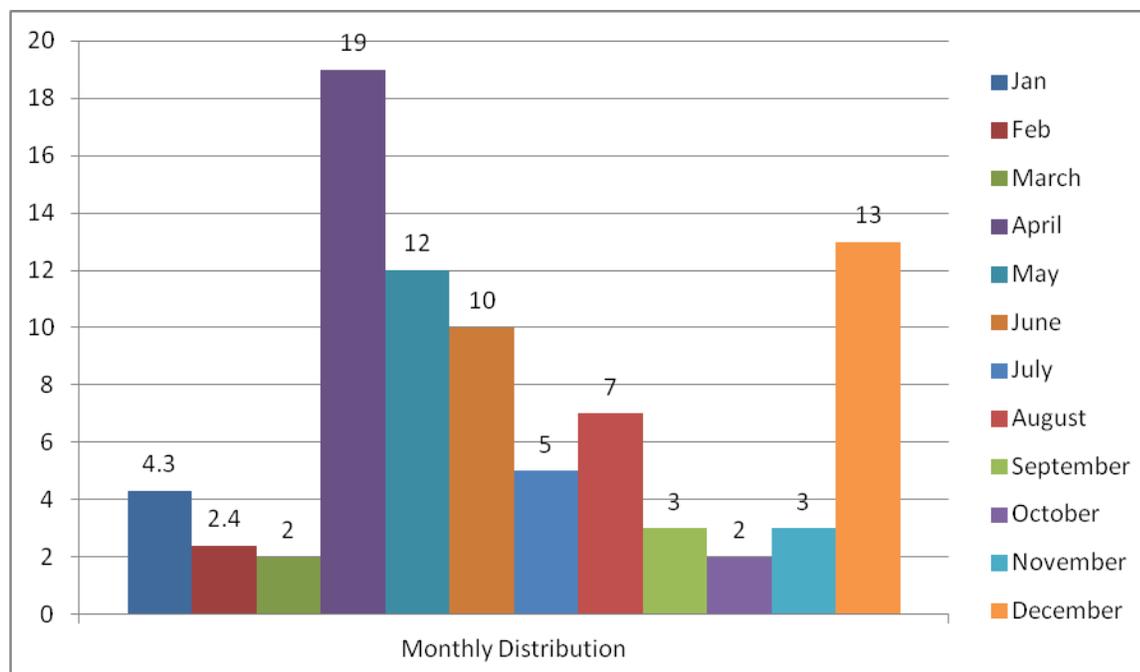


Fig. 1. Monthly distribution of the cases

DISCUSSION:

Our study was consistent with results of Waseem H et al (2008) who also observed the most common age range involved was 16-45 years [8]. Likewise consistent results were previously published study by Mirza FH et al(1996) who described that majority of the subjects were between 18-45 age range[9]. Study results from Alex-Hart et al(2015) shows the prevalence of the alcohol consumption among Nigerian students as 30.6% [10]. Alcohol consumption is also reported to be associated with cancer, pancreatitis, diabetes mellitus, liver cirrhosis, pneumonia, tuberculosis, alcohol, psychiatric morbidity, and accidental injuries [11,12]. Ngozi M. Eze et al (2017) reported male and female genders involved in alcoholism that was inconsistent to our observation probably this was due to the difference in the nature of two studies [13]. Alcoholism is widespread globally and Pakistan being an Islamic state with strict prohibition on use and sale of alcohol by law alcohol abuse is increasing along with the alcohol use disorders in recent years[14,15]. Alcohol mediates its effects through a variety of neurotransmitters including dopamine, GABA (gamma amino butyric acid) as it does not have specific receptors so pharmacological agents are focused to interfere with these neurotransmitters. Currently available drugs to treat alcoholism are Naltrexone, (a μ -opioid antagonist) which blocks the ventral tegmental opioid receptors so inhibits the dopamine release, Acamprosate (a taurine analog) used as an anti-relapse drug to treat alcohol

dependence, disulfiram (an inhibitor of the alcohol-dehydrogenase) which prevents the metabolism of acetaldehyde which gets accumulated in the body resulting into flushing, headache and chest pain on alcohol intake which prevents the patient from alcoholism and Nalmefene, (another opioid antagonist) a relatively new drug for alcohol dependence[15]. Psychological interventions under the supervision of a therapist along with Self-help based interventions like DVDs and books may be beneficial in countries like Pakistan. Our study missed multiple important parameters due to medicolegal issues that remained our weakness.

CONCLUSION:

Alcohol intoxication is a common medico-legal presentation in Hyderabad region with more common in youngsters and certain areas need to focus more to control this chronic problem.

REFERENCES:

1. Jurgen Rehm(2011). The Risks Associated With Alcohol Use and Alcoholism. *Alcohol Research & Health* 34(2):134-143.
2. Killian A(2017). Welch .Alcohol consumption and brain health. Even moderate drinking is linked to pathological changes in the brain .*BMJ* 357:j2645 doi: 10.1136/bmj.j2645
3. Welch KA, Carson A, Lawrie SM. (2013) Brain structure in adolescents and young adults with alcohol problems: systematic review of imaging studies. *Alcohol Alcohol* 48:433-44.

4. E. Jane Marshall(2014). Adolescent Alcohol Use: Risks and Consequences. *Alcohol and Alcoholism* 49 (2):160–164.
5. GBD (2016) Alcohol Collaborators. Alcohol use and burden for 195 countries and territories, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet* 2018; published online Aug 23. [http://dx.doi.org/10.1016/S0140-6736\(18\)31310-2](http://dx.doi.org/10.1016/S0140-6736(18)31310-2).
6. Marco C.A., Kelen G.D.(1990)Acute Intoxication. *Emer. Med. Clin. North. Amer.* (4): 731-48.
7. Sands B.F., Knapp C.M., Ciarulo D.A.(1995). Interaction of Alcohol with therapeutic drugs and drugs of abuse.In: Kranzler H.R. edi. *The pharmacology of alcohol abuse*. New York: Springer Verlag,475-505.
8. Waseem haider, M. Aslam Chaudhry(2008). Prevalence of alcoholism in the punjab, Pakistan. *Biomedica* 24:80-84.
9. Farhat Hussain Mirza,Kausar Arif (1999).Acute Alcohol Intoxication: Prevalence, Recognition and Medicolegal JPMA 49:220.
10. Alex-Hart BA, Opara PI, Okagua J(2015). Prevalence of alcohol consumption among high school students in Port Harcourt, Southern Nigeria. *Niger J Paediatr* 42:39–45.
11. Schütze M, Boeing H, Pischon T, et al(2011). Alcohol attributable burden of incidence of cancer in eight European countries based on results from prospective cohort study. *BMJ* 342:d1584.
12. Rehm J, Mathers C, Popova S, et al.(2009) Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders.*Lancet*373:2223–33.
13. Ngozi M. Eze, Helen Amaka Njoku, Chiedu Eseadi, Benedette Nwanneamaka Akubue, Amaka Bibian Ezeanwu (2017).Alcohol consumption and awareness of its effects on health among secondary school students in Nigeria. *Medicine*. 96:48 <http://dx.doi.org/10.1097/MD.0000000000000896> 0
14. Batki S, Pennington D (2014). Toward Personalized Medicine in the Pharmacotherapy of Alcohol Use Disorder: Targeting Patient Genes and Patient Goals [Internet].;Available from: <http://journals.psychiatryonline.org/article.aspx?volume=171&page=391>
15. Pasha Ghazal(2015)The growing problem of Alcoholism in Pakistan: An overview of current situation and treatment options. *International journal of endorsing health science*.3(3):15-21.