



**SOCIODEMOGRAPHIC PROFILE AND MANAGEMENT OF  
ALCOHOL DEPENDENCE IN PATIENTS ATTENDING A DE-  
ADDICTION CENTRE IN SOUTHERN INDIA.**

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Article Received on 19/09/2014

Article Revised on 10/10/2014

Article Accepted on 03/11/2014

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**ABSTRACT**

Alcoholism is one of the leading cause of mortality all over the world, more so in the developing countries. The use of drugs to treat alcoholism are not free of adverse effects, which further worsens the compliance to therapy. This study was done to study the sociodemographic profile of alcoholics, drugs used to treat alcohol withdrawal and management of alcohol dependence in a private

hospital in south India. Forty patients who were willing to abstain from alcohol were included in the study. The demographic data, drugs used for management of withdrawal symptoms, treatment of alcohol dependence and adverse effects of disulfiram were also recorded. Disulfiram being the widely used anticraving agent for treatment of alcoholism, awareness of the adverse effects of disulfiram among physicians would help in follow up of patients and early detection of side effects hence prevent treatment dropouts due to poor compliance.

**KEY WORDS:** alcoholism, disulfiram, sociodemographic profile, deaddiction.

## INTRODUCTION

Alcohol dependence is now a major public health problem in India. It is one of the leading causes of death and morbidity worldwide. It was estimated that there are around 62.5million alcoholic users in India. <sup>[1]</sup> There is definitely a upward trend in the prevalence of alcohol abuse over the last two decades.

Disulfiram is used in the treatment of alcoholism and has been found to be effective and useful in well-motivated patients. Compliance to therapy due to adverse effects to disulfiram is its major drawback. Naltrexone, acamprosate have also been approved for the management of alcohol dependence but cost was a major limitation. <sup>[2]</sup>

The prevalence of alcoholism varies in different socio-economic group but very few studies have documented sociodemographic profiles of alcoholics and management of alcoholism in south India. Hence this study was planned to study the sociodemographic profile of patients attending a de-addiction centre and management of alcohol dependence.

## MATERIAL AND METHODS

This was a prospective study carried out at the outpatient psychiatry department of Dr.A.V Baliga Memorial Hospital, Udupi. Forty patients who had attended the clinic for detoxification and were willing to abstain from alcohol were included in the study. They were started on disulfiram only if liver function tests {Alanine Amino transferase (ALAT) and Aspartate aminotransferase (ASAT)} in the serum were within three times the normal. The patients were given tablet disulfiram 250mgper day every day in a week to be taken in the morning. The drug intake was supervised by the family members. Patients were reviewed once every month. Any adverse effect which the patient and/ or the family reported as having developed after starting on disulfiram was noted. Liver function tests were done at periodic intervals.

The demographic data, drugs used for management of withdrawal symptoms, treatment of alcohol dependence and adverse effects of disulfiram were also recorded.

## RESULTS

A total of forty patients were included in the study. The sociodemographic profile of the patients is mentioned in table 1. The median age of the patients attending detoxification was 41 years. Majority of the patients (45%) were educated up to secondary school, were on

parttime jobs (50%) and were married (57.5%). 60% of the patients used to drink more than 3quarters per day. Most of the patients began drinking alcohol between the age 20 to 30years. 40 % of the alcoholics were also abusers of ghutka and 25% were also dependent on nicotine. The mean age of first use of alcohol was  $21\pm 5.44$ . Liver function test variables were elevated twice in 17.6%, thrice in 14.7%, four times in 5.9%, five times in 2.9% and six times 2.9% of the patients.

The percentage of patients who attended the deaddiction centre for the first time was 11.8%. 79.4% were taking treatment for alcoholism for the second time, 5.9% for the third time and 2.9% for the fourthtime. The withdrawal symptoms experienced by the patients have been summarized in table 2. Lorazepam, diazepam, chlordiazepoxide, thiamine, proton pump inhibitors were used for the management of withdrawal symptoms (Figure 1). Some of the patients were also having co-morbid diseases like hypertension, diabetes, etc (Figure 2).

The patients received disulfiram as an aversion agent for management of alcoholism. The adverse effects of disulfiram have been summarized in table 3.

**Table 1: Sociodemographic data of patients**

	Illiterate	Literate	Primary school	graduation	postgraduation
Educational status	10	25	45	7.5	12.5
	Unemployed	Part time	Self employed	Full time	
Occupation	20	50	22.5	7.5	
	<15 y	15-20	20-30	>30	
Age of first use	5.0	42.5	50	2.5	
	Nothing	Ghutka	Smoking	Both	
Other abuse	22.5	40	25	12.5	

**Table 2: Withdrawal symptoms**

Withdrawal symptoms	Percentage of patients
tremors	79.4
insomnia	76.5
seizures	14.7
vomiting	26.5
bodyaches	32.4
delirium tremens	11.8
hallucinations	47.1

fearfulness	41.2
loss of appetite	58.8
palpitations	8.8
aggressiveness	52.9
restlessness	64.7

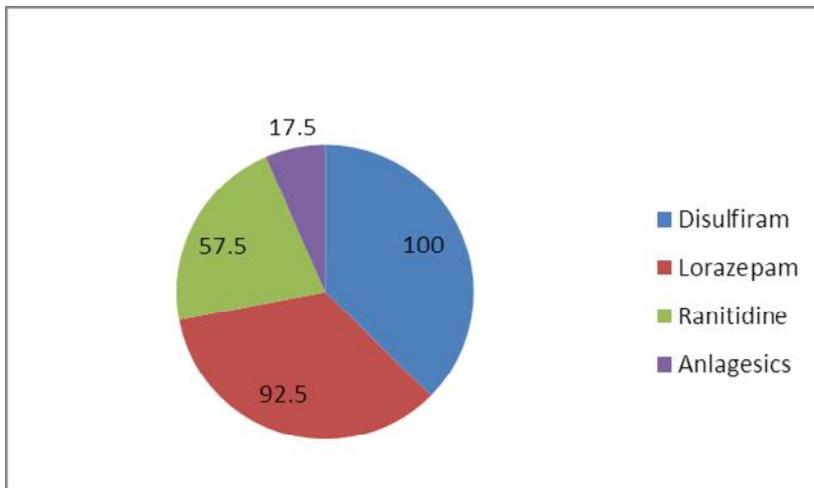


Figure 1: Drugs used for management of withdrawal symptoms

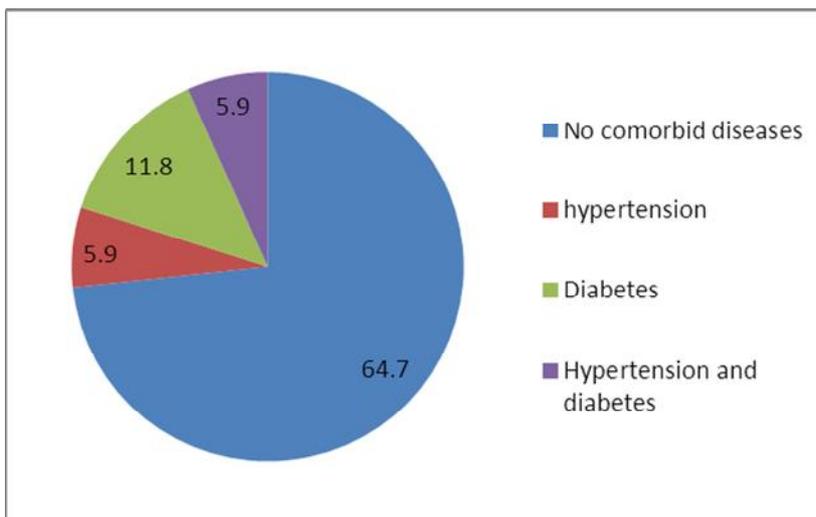


Figure2: Percentage of patients with co-morbid diseases.

Table 3: Adverse effects of disulfiram

Adverse effects	Percentage of patients
skin lesions	17.5%
acne	17.5%
peripheral neuropathy	25%
incontinence	7.5%
cognitive deficit	12%
confusion /delirium	7.5%
decreased appetite	2%

depression	25%
headache	2.5%
gastritis	45%
seizures	2.5%
insomnia	12.5%
tremors	75%

## DISCUSSION

The consumption of alcohol intake has increased in last two decades by 106% in India. [3] in the present study the median age of alcoholics was 41 years which is similar to a community based study in Bangalore where 2/3<sup>rd</sup> of patients were in the age group of 26-45 years. [4] 57.5% patients in our study were married which is in accordance to a Polish study done to assess the alcohol patients from 1994 to 2004 wherein 53.6% of the patients were married. [5] Regarding employment, 20% of patients in our study were unemployed and 50% were doing part time jobs. In a study in Polish population 29% were unemployed and 25.8% working. [5] In present study most of the patients started drinking at 20-30 years. This is similar to study done in West Bengal where 77% of patients started drinking at age of 20-29 years. [6] Ghutka, a preparation of crushed arecanut, tobacco, catechu, slaked lime was being consumed by 40% of alcoholics. In a case control study, comparing alcoholics and non-alcoholics, it was found that 83% of alcoholics were smokers and only 34% of non-alcoholics were smokers. [7] However, in our study 25% patients were smoking.

As per American Psychiatric association 2000, signs and symptoms of alcohol withdrawal can be categorised as: 1) uncomplicated withdrawal features like sweating, tachycardia, hypertension, tremor, anorexia, nausea, anxiety agitation, disturbed sleep and vivid dreams. 2) severe withdrawal complications like dehydration, electrolyte disturbance, seizure, hallucination and delirium. Most of the patients in our study had uncomplicated withdrawal features.

As per WHO, management of alcohol withdrawal includes benzodiazepine, antipsychotics when required and thiamine for patients at high risk of Wernicke's encephalopathy like malnourished or those with severe withdrawal symptoms. In present study 92.5% of patients were prescribed benzodiazepine lorazepam. Thiamine was prescribed in combination with other vitamins. Disulfiram was administered to 100% patients as an aversion therapy. Disulfiram inhibits aldehyde dehydrogenase by reacting with sulfhydryl group. Limitations of disulfiram include side effects like hepatitis, paraesthesias and motor neuropathies. [8] In

present study majority of patients had gastritis (45%), followed by peripheral neuropathy (25%) and depression (25%). The adverse effects of disulfiram could be one of the reasons for discontinuation of the drug.

Disulfiram being the widely used anticraving agent for treatment of alcoholism, awareness of the adverse effects of disulfiram among physicians would help in follow up of patients and early detection of side effects hence prevent treatment dropouts due to poor compliance.

## REFERENCES

1. N Girish, R Kavita, G Gururaj, Vivek Benegal. Alcohol use and implications for public health: Patterns of use in four communities. *Indian J Community Med*, 2010; 35: 238-44
2. Katzung.
3. Lal R. Substance Use Disorder: Manual for Physicians. New Delhi: AIIMS, 2005; p. 8.
4. Gururaj G, Girish N, Benegal V. Alcohol Control Series. No. 1. New Delhi: World Health Organization, Regional Office for South-East Asia; 2006.
5. Chrostek Maj, Kamenczak A, Bock R, Polewka A, Krawczyk E. Assessment of socio-demographic factors in alcohol-addicted patients recurrently treated in a detoxification unit. *Przegl Lek*, 2005; 62(6):361-4.
6. Sarkar AP, Sen S, Mondal S, Singh OP, Chakraborty A, Swaika B. A study on socio-demographic characteristics of alcoholics attending the de-addiction center at Burdwan medical college and hospital in West Bengal. *Indian J Public Health*, 2013; 57: 33-5.
7. DiFranza JR, Guerrera MP. Alcoholism and smoking. *J Stud Alcohol*. 1990 Mar; 51(2):130-5.
8. Dupuy O, Flocard F, Vial C, Rode G, Charles N, Boisson D, Flechaire A. Disulfiram (Esperal) toxicity. Apropos of 3 original cases. *Rev Med Interne*, 1995; 16(1):67-72.