

ORIGINAL RESEARCH

Analysis of patients admitted with alcohol dependence syndrome in a tertiary care hospital in a calendar year

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Abstract

Background: Alcohol use and related illnesses have become a major public health problem in the south Indian state of Kerala with rising sale reported every successive year. Ours is a teaching hospital catering to patients in the northern districts of Kerala and has a de-addiction ward and OPD services running for more than 10 years. In this context we thought of doing an analysis of the patients getting inpatient care at this center for alcohol dependence syndrome (ADS). *Objective:* To collect data on all cases admitted in the calendar year 2012 with ADS to the de-addiction ward of our hospital and look for various patterns based on information available by doing a chart review.

Methods: Case records of all patients admitted with ADS in 2012 were recalled from the records library and information gathered based on the data sheet prepared which covered the relevant demographic and clinical variables and the details of treatments(s) offered during the stay. *Results:*

All were males. 96.7% of the sample had >10 years of alcohol use. 76.6% had less than 10th standard education. 75.6% were married. 96.7% were from the 'BPL' category. 54.4% had delirium; 37.8% had seizures and. Lorazepam was the commonly used detoxification agent. 72.2% had positive family history.

Conclusion: This study helped in finding out the profile of patients seeking care for ADS at a tertiary care center and to identify lacunae in existing services.

Introduction

Alcohol has been used in India from ancient times.¹ Predominantly, beverages obtained from plants (like toddy from palm trees) were used in earlier times. Later on with advent of modernity, distilled spirits entered. Increasing consumption of alcohol has been reported from India only recently. Reasons cited include the fact that that this is a source of revenue for state governments, and as part of social changes occurring in the context of globalization.² Adverse health

consequences of alcohol and smoking are too well known to be discussed in detail here.³ It is also shown that alcohol increases sexual risk taking thereby increasing chances of spread of HIV infection, especially among the urban poor.²

Alcohol use and related illnesses is becoming a public health problem in the south Indian state of Kerala with rising sale of alcohol reported for every successive year.⁴ Smoking is also highly prevalent among younger males, especially from the lower Socio Economic Status.⁴ Smoking, heavy alcohol use, lack of exercise etc are risk factors for the life style diseases like hypertension, diabetes and coronary artery disease and cancer. Morbidity and mortality parameters of Kerala are comparable to developed countries with a high prevalence of the above disorders.⁵ Compared to the rest of India (11.2 per 100,000 people), the suicide rate in Kerala (24.3 per 100,000 people) is more than two fold high⁶. Use of alcohol and other substances is a known risk factor for suicide.⁶

Very little data exist on the profile of patients seeking care at psychiatric facilities for alcohol use related problems from India. Our Government Medical College hospital caters to patients in the northern districts of the state and has de-addiction services (inpatient ward and OPD) running for more than 10 years. In this context we thought of doing an analysis of the patients getting inpatient care at this centre for alcohol dependence syndrome.

Objective

To collect data on all cases admitted in the calendar year 2012 with alcohol dependence syndrome to the de-addiction ward of Government Medical College and look for various patterns based on information available by doing a chart review.

Method

Case records of all patients admitted to one clinical unit of the psychiatry department with a diagnosis of alcohol dependence syndrome in 2012 were recalled from the records library and data gathered based on the data sheet prepared. This included information regarding psychiatric diagnosis, physical and psychiatric co morbidities, results of liver function tests and other relevant demographic and clinical variables. Details of treatment offered including pharmacological and psychosocial interventions were also collected.

Results

Results are presented in tables 1, 2, 3 and 4. There were a total number of 264 admissions during the calendar year 2012. Among them 129 case sheets (48.9%) had a diagnosis of alcohol dependence syndrome according to the ICD 10 criteria.⁷ All these case sheets were recalled. Out of this, 28 case sheets were excluded as they were readmissions of patients already included in their first admission. 22 patients had more than one admission in 2012 itself. Only the details from the case-sheet of the first admission of these cases were taken for analysis. Eleven charts had to be excluded for the following reasons. 5 case sheets were incomplete and one was untraceable and 5 patients left against medical advice before

proper assessment was over (within 24 hours of admission). Thus there were 90 charts (pertaining to 90 patients) after the above exclusions. The results of analysis of these patients are presented below

Socio demographics: All were males. The mean age of the patients was 44.34 years (20-78 years). 76.6% had studied up to 10th standard, 17.7% up to plus two and 5.5% were degree educated. 34.4% were involved in unskilled labour, 40% in skilled and 17.8 in semiskilled labour. 75.6% were married. 84.4% were from Hindu community. 96.7% belongs to low socioeconomic status (Below Poverty Line).

Clinical variables: It was routine admission through OPD in 67.7% of them while 32.2% were admitted from emergency department. 50% had a previous attempt at de-addiction. 72.2% of them had a family history of alcohol use and 22.2 % had a family history of mental illness with affective disorders being more common. Mean age of onset of alcohol use was 17.34 years (Range - 12 -25 years). Mean amount of alcohol use was 19.96 units (Range for this - 10 -35 units). One unit of alcohol was defined as 30 ml of locally available Indian made foreign liquor like brandy, whiskey etc. 100% of the sample reported high frequency of drinking more than 5 days per week or all 7 days in many of the patients. Majority were using cheaper brands of Indian made foreign liquor which is mostly sold by the government run Beverages Corporation. Few used toddy which is sold through licensed toddy shops. People using other forms of locally brewed country liquor were extremely rare and usually hailed from remote hilly areas

Co-morbidity: 58.9% had a complicated withdrawal with delirium in 54.4 % and seizures in 37.8 % of them. 17.8 % had an additional diagnosis of alcohol induced psychotic disorder and 7.8% Alcohol induced amnesic disorder. Additional diagnosis other than substance related were noticed which include organic disorder(1.1%), psychotic disorder in 2.2%, affective disorders in 2.2%, anxiety disorders in 1.1% and personality disorders 4.4%. Nine patients (10%) were admitted following suicide attempt under intoxication. 81 (90%) patients had nicotine dependence and 3 (3.3%) had nicotine use according to ICD-10 criteria. All of them were smokers few additionally had pan chewing.

Psychosocial problems: 68 (75.6%) of the sample were married. Out of this 44 (64.7%) had psychosocial issues with his spouse. They needed interventions from the professionals. 28(31.1%) had issues with his parents or siblings and 12.2% with people at workplace. 28.8% had a legal issue related to alcohol use. 80% of them were either not working or irregular at their work

Investigations: Lab tests revealed elevated mean liver function test (LFT) values: AST (135.05 IU) ALT (101.7 IU) Mean Blood MCV was (89.73).

Treatment: Most of them (94.4%) received lorazepam as the detoxifying agent with a mean cumulative dose of 50.71mg during the whole hospital stay.

On an average 2 sessions addressing the psychosocial issues (range 1 to 5 sessions) were given for each patient by psychiatric

social worker, apart from the routine sessions given by the resident in charge during the stay as inpatient.

Mean duration of inpatient stay was 11.35 days (2 -30days). 61.1% were discharged after full treatment 28.8% were discharged at request before completion of treatment.

Age (years)	Frequency	%
<20	1	1.1
20-40	37	41.1
41-50	29	32.2
>50	23	25.6
BPL	87	96.7
APL	3	3.3

Table 1. Demographic features of study subjects

Age (years)	Frequency	%
<20	1	1.1
20-40	37	41.1
41-50	29	32.2
>50	23	25.6
Educational status		
10 th and below	69	76.6
Plus two	16	17.7
Degree and above	5	5.7
Occupation		
Unskilled	31	34.4
Semiskilled	36	40
Skilled	16	17.8
Unemployed	7	7.8
Marital status		
Unmarried	12	13.3
Married	68	75.6
Widowed/separated	10	11.1
Socio economic status		

Table 2. Alcohol use and substance abuse in study subjects

Duration of use (years)	Frequency	%
<10	3	3.3
10-30	49	54.4
>30	38	42.2
Age of onset of use (years)		
<15	21	23.3
16-20	56	62.2
21-25	13	14.4
Family history		
Yes	65	72.2
No	25	27.8
Use of other substances		
Nicotine	84	93.3%

Duration of use (years)	Frequency	%
<10	3	3.3
10-30	49	54.4
>30	38	42.2
Cannabis	8	8.8%
Opioids	4	4.4
Benzodiazepine	3	3.3

Table 3. Alcohol related disorders among study subjects

Alcohol related disorders	Frequency	%
Delirium	49	54.4
Seizures	34	37.8
Alcohol Induced psychotic disorder	16	17.8

Table 4. Frequency of psychosocial issues among study subjects

Psychosocial issue	Frequency	%
With spouse	44	64.7
With parents	28	31.1
At work place	11	12.1

Discussion

Mean age of patients with alcohol dependence in our hospital was around 43 years. A similar study had reported it be

around 38.4 years.⁸ All patients were males and this was similar to other studies in this regard⁸. Women using alcohol are more stigmatized and have more difficulty in accessing treatment and often don't seek treatment.^{9,10,11} Most of the patients were married with very low number either separated or divorced; a scenario replicated in other Indian studies.⁸ One reason for seeking treatment could be pressure from spouse and family. This explains the high proportion of married in the sample.

Age of onset of alcohol use: A definite trend towards a decline in the age of onset of alcohol use is reported during the past few decades. It may be linked to the availability of substance, peer pressure and the growing influence of media. It has been reported that there is a shift of mean age of onset from 28 years to 20 years by 1980 -1990^{12,13} Our findings were similar with the findings of Anil B from Chennai.¹⁴

Patterns of drinking: The amount of alcohol consumption among people in India is found to be very high in previous studies.^{15, 16} The signature pattern of solitary heavy drinking of predominately 'India made foreign liquor' has been well documented.^{17, 18, 19} Patients in our sample also had a similar pattern of drinking. Per capita consumption is highest in Kerala among Indian states at around 8.3 liters per person per year which is almost thrice the national average¹, though it has not reached up to the level of countries like Russia and USA⁴. Community surveys in coastal areas of the state done in 2003-04 have shown that 41% of males aged 30 to 74 were current users of alcohol. 10% of respondents in this survey reported past alcohol use. Among the drinkers, 13% drank almost daily and 27% once in 1 to 4 days.²⁰ This shows that heavy drinking is

common among alcohol users in the state. A survey done in 1987²¹ had showed that only 15% of the adult male population was using alcohol.²¹ This means that from 1987 to 2003 there is a steep rise of alcohol use by more than 2.5 times.^{20, 21}

Socioeconomic status: The increase in use of alcohol among people from low socio economic and educational background is found to be true in our patients too. People who belong to the 'below poverty line' category are almost twice more represented among alcohol users. Those with less than primary education and those among the skilled and unskilled workers are more likely to become dependent on alcohol.^{12, 23}

Family history: It has been noted that there is a high risk of developing alcoholism for individuals with a significant family history of alcoholism.^{24, 25} 72.2% of our patients in the study had a history of alcohol use in a first degree relative which was higher than other similar studies.⁸

Nicotine use: Several studies^{2, 20} have reported the high rates of smoking among young males in Kerala ranging from 28 to 40%. Current smoking was reported by 40% and past history of smoking by 20% in this same survey among the 30 to 74 age group. Three fourths of them were heavy smokers smoking for more than 20 years or smoking more than 20 cigarettes per day. Smoking was higher among the less educated and unskilled workers compared with better educated and professionally employed.²⁰ An earlier survey conducted in 1987²¹ showed 43% of the sample was smokers. It can be concluded that there is a marginal fall in smoking from 43% to 40%.

Smoking and alcoholism are known risk factors for many of the so-called life style disorders along with stress, unhealthy diet and sedentary life style. The same survey reported that 54% of respondents had stress from at least one area and 23% had stress in two or more areas²⁰. The six areas studied were job, family life, interactions with friends, finances, health and marital life. Most common reasons were finances (38%) and health (22%).²⁰ Fortunately, many of these risk factors are thought to be 'modifiable'.

Marital issues: The high rate of marital discord (64.7%) seen in this sample is worth consideration. 28 (31.1%) reported conflicts with parents or siblings. A significant number of patients reported death wishes with 10% having suicidal attempt at admission. Kerala has a high suicide rate which is twice the national average.²⁶ 87 (96.7%) of the families were from the poor "Below Poverty line" category. A combination of marital discord, conflicts with close family members, poverty and alcohol dependence may be the underlying reason for the high suicide rates in the state. Earlier surveys²¹ had also shown that there is high level of stress (54%) among this population. Anecdotal evidence suggests that alcohol use in the male is a regular finding in many cases of suicides and family suicide / homicide cases reported in the media. Further studies may clarify this highly possible relationship.

Treatment: Lorazepam was the most commonly used drug for detoxification (94.4%) in our study. Lorazepam is considered by many as the drug of choice for

alcohol withdrawal state.^{30,31} Comparison studies have noticed that there is no significant differences between the longer acting benzodiazepines and lorazepam in treatment of acute withdrawal states due to alcohol dependence.^{30,31} Lorazepam is preferred over longer acting benzodiazepines with patients having liver disease and the elderly.³² Mean age of the inpatients in the study were higher and also most of them had elevated liver enzymes which justify our use of lorazepam as the agent of choice.

Addressing the psychosocial issues is a major part of intervention for alcohol dependence. In our setting junior residents and psychiatric social worker were involved in routine time limited brief interventions. Brief intervention is found to be an effective strategy for alcohol dependence in trials.^{33,34,35}

Limitations: The major limitations of our study are:

- ⌚ Being a tertiary centre the patients might not truly represent the population
- ⌚ The personality characteristics which might influence the drinking pattern were not evaluated in detail in our case sheets
- ⌚ Follow up details of these patients were not available to evaluate the effectiveness of our intervention

Conclusions

Kerala is a state with high literacy rate as well as better health statistics. But there is high prevalence of heavy alcohol consumption with a young age of onset of use. Smoking is also seen to be high among the young from the lower strata of society. The high incidence of suicide in the state should be read along with this which necessitates further research in this area. The

higher prevalence of life style diseases is a cause for concern. Appropriate health education strategies have to be planned in these areas.

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