BACKGROUND
‘Alcoholism is a disease and alcohol is a disease agent’ is the current concept about alcoholism. Alcoholism has its own good old historical background. Alcohol use disorder is one of the important global issues nowadays. Prevalence of alcohol use disorder is alarmingly increasing recently. As per statistical reports from standard journals, there is a competitive increase in number of female alcoholics in developing countries because of urbanisation and western acculturation.

This clinical study on neuropsychiatric complications of chronic alcoholism is purely based on history and clinical manifestations. To select chronic alcoholics as subjects in a government medical college was very easy, but excluding the ones with other complications made this a little bit challenging and interesting experience.

The ultimate aim of this study is not only to observe the complications but also to create awareness regarding alcohol use disorders. Also it is an eye opener for the people who open the bottle impulsively, at least to some extent.

MATERIALS AND METHODS
This study was done at Coimbatore Medical College Hospital, Coimbatore, from March 2010 to November 2011. Study Design is a cross-sectional study. A thorough general and systemic clinical examination and appropriate investigations were done after applying inclusion and exclusion criteria.

RESULTS
Middle aged (30-40 years) alcohol users are more prone to neuropsychiatric complications of alcoholism. Prevalence of female alcohol users is increasing and they are more affected by psychiatric complications. Both neurological and psychiatric complications occur in the same patient more commonly. The most common neurological complication is peripheral neuropathy. The most common psychiatric complication is mood disorder.

CONCLUSION
Even shorter duration of alcoholism causes neuropsychiatric complications. Consumption of spirits (distilled beverages) is more common in our country. AUDIT is more efficient than CAGE scoring in identifying problem drinkers. Willingness for de-addiction is more among chronic alcohol users.

KEYWORDS
Alcohol Addiction, Alcohol Dependence, Peripheral Neuropathy, Cerebellar Degeneration, Mood Disorders.


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Consumers of moderate amounts of alcohol with proper self-control are proven to be medically beneficial. Hence, they are called 'social drinkers'. Prevalence of Alcohol Use Disorders is alarmingly increasing recently. As per statistical reports from standard journals, there is a competitive increase in number of female alcoholics in developing countries because of urbanisation and western acculturation.

This clinical study on neuropsychiatric complications of chronic alcoholism is purely based on history and clinical manifestations. To select chronic alcoholics as subjects in a government medical college was very easy, but excluding the ones with other complications made this a little bit challenging and interesting experience.

"The very first human personality which dissolves in the alcohol is dignity". Most of the drinkers start this magical liquid for the solution of their life time problems, but unfortunately end with multispectrum of problems. Alcohol dependent individuals are so addicted they feel like drinking all the time.

The ultimate aim of this study is not only to observe the complications but also to create awareness regarding
alcohol use disorders. Also, it is an eye opener for the people who open the bottle impulsively, at least to some extent.

**MATERIALS AND METHODS**

This study was done at Coimbatore Medical College Hospital, Coimbatore from March 2010 to November 2011 after getting approval from the ethical committee.

Study Design is a cross-sectional study.

Inclusion criteria- 100 patients from Medical, Neurological and Psychiatry Department, age 20-50 years, both male and female and at least 5 years of alcohol abuse. Exclusion criteria - Age Less than 20 and more than 50 years, other systemic illnesses due to alcoholism, other substance abuse, other aetiologies for neuropsychiatric illnesses like HIV, DM, HT, CVA, TB, etc.

A detailed history was taken from all enrolled patients with informed consent which included neurological complaints, psychiatric complaints, history of previous illness including DM/HT/TB/liver disorders/HIV/STD, etc. History of old CVA and seizures, personal history including diet, smoking, drug abuse, marital status, extramarital relations were taken.

A thorough general and systemic clinical examination was done with the assessment of following factors: General examination, vital signs, systemic examination with assessment of higher mental functions, cranial nerves, spino-motor system, autonomic nervous system, peripheral nerves and cerebellar functions were done. Laboratory tests include routine blood tests (CBC, Hb, Sugar), Urine routine (Albumin, Sugar, Deposits), liver function tests, renal function tests, CT scan brain, STD panel were done to rule out other illnesses. Alcohol related evaluation was done using the following scoring systems: MMSE, CAGE questionnaire and AUDIT administered in interview version. All patients were advised to undergo counselling for de-addiction after explaining health hazards of alcoholism. All the data were tabulated and statistically analysed. Statistical analysis was done with relevant data.

**RESULTS**

**Age Distribution**

In this study of 100 cases of chronic alcoholism, the age distribution is as follows: Less than 30 years is 16%, 30-40 years is 62% and above 40 years is 22%.

**Gender Distribution**

In this study of 100 cases of chronic alcoholism, the gender distribution is observed as given below.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>88</td>
<td>88</td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

**Table 1. Males were Predominantly affected by Chronic Alcoholism accounting to 88%**

**Marital Status Distribution**

In this study of 100 cases of chronic alcoholism, the marital status distribution observed is 78% married and 22% single.

**Type of Alcohol Distribution**

In this study of 100 cases of chronic alcoholism, the type of alcohol distribution is observed as given below.

<table>
<thead>
<tr>
<th>Alcohol</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spirit</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td>Beer</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>Wine</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

**Table 2. Predominant Type of Alcohol consumed is Spirits accounting to 69%**

**Duration of Consumption Distribution**

In this study, the duration of consumption distribution is as follows: Less than 10 years is 38%, 10-15 years is 31%, 15-20 years is 23%, 20-25 years is 6% and above 25 years is 2%.
Frequency of Consumption Distribution
In this study of 100 cases of chronic alcoholism, the frequency of consumption distribution is observed as given below.

<table>
<thead>
<tr>
<th>Frequency of Consumption</th>
<th>Frequency</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly once or less</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2-4 times per month</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>2-3 times per week</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>More than 4 times per week</td>
<td>66</td>
<td>66</td>
</tr>
</tbody>
</table>

Table 3. Those who consume Alcohol for more than 4 times per week are More Prevalent accounting to 66%

Distribution of Complications
In this study of 100 cases of chronic alcoholism, the distribution of complications is observed as given below.

Neurological Complications Distribution
In this study of 100 cases of chronic alcoholism, the neurological complications distribution is observed as given below.

<table>
<thead>
<tr>
<th>Complication</th>
<th>Frequency</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encephalopathy</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Stroke</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Peripheral Neuropathy</td>
<td>52</td>
<td>52</td>
</tr>
<tr>
<td>Myopathy</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Cerebellar Degeneration</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Nil</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

Table 4. Peripheral Neuropathy is More Prevalent than other Complications accounting for 52%

Psychiatric Complications Distribution
In this study of 100 cases of chronic alcoholism, the psychiatric complications distribution is observed as given below.

Figure 4. Neuropsychiatric Complications are more Common than Isolated Complications accounting to 64%

CAGE Score Interpretation
In this study of 100 cases of chronic alcoholism, the interpretation of CAGE scoring is observed as given below.

Figure 6. CAGE identifies 53% as Problem Drinkers

AUDIT Zone Distribution
In this study of 100 cases of chronic alcoholism, the AUDIT Zone distribution is observed as given below.

Figure 7. AUDIT identifies 76% as Problem Drinkers

De-Addiction Willingness Distribution
In this study of 100 cases of chronic alcoholism, the de-addiction willingness distribution is observed as given below.

Figure 8. 65% were willing for De-addiction
DISCUSSION

This study about chronic alcoholism is notable for significant results. According to age as criteria, middle aged subjects (30-40 years) account for 62%, young age group (less than 30 years) for 26% and older age group (more than 40 years) for 12% of alcoholics with neuropsychiatric complications. This shows that middle aged group is more prone to developing neuropsychiatric complications. This data correlates well with global status report on alcoholism by WHO.\(^7\)^\(^8\)

Gender prevalence as observed by this study shows 88% were male and 12% were female. This shows increasing number of female alcoholics than in the past years. This data correlates well with the study by Cadoret et al\(^5\) published in International Journal of Epidemiology.

Marital status as a parameter which showed that more married people (78%) are alcoholics than unmarried people (22%). Thus, marital status is also an influencing factor for alcoholism. According to the type of alcohol consumed, spirits (distilled beverages) accounted for 69%, beer 26%, wines 3% and others for 2% of consumption. This shows that spirits are the most consumed type of alcohol in our country. This data correlates with the global status report on alcohol by WHO.\(^7\)^\(^8\)

As with the duration of consumption, the most prevalent group is less than 10 years accounting for 38% followed by 10-15 years (31%), 15-20 years (23%), 20-25 years (6%) and above 25 years (2%). This shows that neuropsychiatric complications occur earlier than other complications. When the duration of consumption increases other complications of alcoholism intervene, this is an exclusion criterion for this study.

As with frequency of drinking those who consume alcohol for more than 4 times a week are more affected (66%) followed by 2-3 times per week (22%), 2-4 times per month (9%) and monthly once or less (3%) by neuropsychiatric complications. This shows that occasional alcoholics have a lesser risk of complication than regular drinkers.

Distribution of complications among alcoholics: Those with only neurological complications- 16%, those with only psychiatric complications- 20%, and those with both complications are 64%. This infers that alcoholism can cause both neurological and psychiatric complications in the same patient, than presenting as an isolated problem. This shows multispectrum of disease pattern of alcoholism.

The most common neurological complication observed is peripheral neuropathy (52%) followed by encephalopathy (12%), cerebellar degeneration (9%), myopathy (6%) and stroke (2%). This data correlates well with the data of study by Koike et al\(^5\) on peripheral neuropathy in chronic alcoholism, published in the Journal of Current Opinions in Neurology.

The most common psychiatric complication observed is mood disorders (44%), followed by anxiety disorders (26%), schizophrenia (3%) and others (11%). This showed that mood disorders like depression, mania and bipolar disorders are more common in chronic alcoholics. This data correlates well with the study of Blankfield A et al. published in Journal of Substance Abuse Treatments.\(^10\)

As per the interpretation of CAGE scoring identified, 53% of the subjects were problem drinkers and 47% with scores less than 2.

Interpretation of AUDIT scoring identified 76% in zone IV that is harmful drinkers, 17% in zone III, 5% in zone II, and only 2% as in zone I.

Thus, AUDIT is more superior in identifying problematic harmful drinkers than CAGE scoring. This data correlates well with data of study of McCusker MT et al published in Oxford International Journal of Medicine, QJM.

On assessing the willingness of the subjects for de-addiction, 65% were willing for de-addiction and treatment for alcohol related disorders. 35% were not willing for de-addiction.

CONCLUSION

- Middle aged (30-40 years) alcohol users are more prone to neuropsychiatric complications of alcoholism.
- Prevalence of female alcohol users is increasing and they are more affected by psychiatric complications.
- Both neurological and psychiatric complications occur in the same patient more commonly.
- The most common neurological complication is peripheral neuropathy.
- The most common psychiatric complication is mood disorder.
- Even shorter duration of alcoholism causes neuropsychiatric complications.
- Consumption of spirits (distilled beverages) is more common in our country.
- AUDIT is more efficient than CAGE scoring in identifying problem drinkers.
- Willingness for de-addiction is more among chronic alcohol users.

REFERENCES


