Research Article

Clinical profile of patients with alcoholic liver disease in Rural Maharashtra

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ABSTRACT

Background: The spectrum of alcohol-related liver injury varies from simple steatosis to cirrhosis. These are often grouped into three histological stages of alcoholic liver disease (ALD): fatty liver or simple steatosis, alcoholic hepatitis, and cirrhosis of liver. **Aim:** The study was conducted to assess the clinical profile of ALD in rural population. **Patients and Methods:** In this prospective hospital-based cross sectional study, patients admitted with alcohol-related liver injury included. Assessment of clinical presentations with hematological, biochemical parameters, and evaluation of imaging patterns by ultrasonography of Abdo-pelvis was done in all patients. Upper gastro-duodenal (UGD) endoscopy performed in 40 % of patients. Ascitic fluid analysis was in done 68% patients with ascites. **Results:** Study revealed that males are more affected than females and majority were in the age group of 31–40 years. Majority of the patients (46%) were consuming 40 to 60 grams of alcohol/day and majority of the patients were consuming alcohol for duration of 16–20 years (26%). Transudative ascites secondary to portal hypertension was the most common finding seen in 54%, followed by jaundice and pallor. UGD endoscopy revealed esophageal varices in 65.5% patients. **Conclusion:** We could conclude that progressive alcoholic liver injury was mainly seen in middle aged males. Correlation of clinical, biochemical, and ultrasonographic findings helps in staging of Liver damage. The severity of liver damage was directly related to the quantity and duration of alcohol consumption.

Keywords: Alcohol, ascites, liver disease, malena and esophageal varices

Introduction

Worldwide, alcohol consumption is increasing, particularly notable in the UK where average alcohol consumption has more than doubled in the past 50 years.[1] Alcoholic liver disease (ALD) remains a challenging enigma for basic scientists and clinicians. Although two-thirds of American adults drink alcohol, only a minority are problem drinkers. Nevertheless, the number of alcoholics in the United States is estimated to be 14 million.[2]

ALD also is a major health care problem, accounting for 40% of deaths from cirrhosis and more than 30% of cases of hepatocellular carcinoma in the United States.

In both Europe and the United States, ALD and its complications account for 50,000 deaths annually.[1] In India the nation-wide prevalence of drug use, recorded alcohol use in the past year in only 21% of adult males. The prevalence of current use of alcohol ranged from a low of 7% in the western state of Gujarat to 75% in the North-eastern state of Arunachal Pradesh. There is also an extreme gender difference. Prevalence among women has consistently been estimated at <5%.[3]

ALD is a term that encompasses the hepatic manifestations of alcohol overconsumption, including fatty liver, alcoholic hepatitis, and chronic hepatitis with hepatic fibrosis or cirrhosis.[4]

The spectrum of alcohol-related liver injury varies from simple steatosis to cirrhosis. These are often grouped into three histological stages of ALD: Fatty liver or simple steatosis, alcoholic hepatitis, and chronic hepatitis with hepatic fibrosis or cirrhosis.[5] Other causes of cirrhosis of liver include chronic viral hepatitis, autoimmune hepatitis, bilary cirrhosis, non-alcoholic steatohepatitis, Inherent metabolic disorders such as Wilson's disease, α1 anti-trypsin deficiency and cystic fibrosis.[6]

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The possible factors that can affect the development of liver injury include the dose, duration and type of alcohol consumption, drinking patterns, gender, ethnicity, and associated risk factors, including obesity, iron overload, nutritional deficiency esp. protein, pregnancy, concomitant infection with viral hepatitis and genetic factors.[7]

Alcohol is the major underlying cause for ALD. And hence, it is greater public health problem.[8] In this study, we report various clinical features, to find out whether alcoholic liver damage occurs in every alcoholic. And also to study the relationship of the quantity and duration of alcohol consumption to the various findings, so as to detect the liver damage at the earliest and to prevent the progress of alcoholic liver damage.

Materials and Methods

The prospective hospital-based case-control study was done at Pravara Rural Hospital and Medical College, Loni from September 2013 to September 2015. A total of 100 cases of ALD were included.

Inclusion criteria

- Patient diagnosed of ALD
- Patients aged above 16 years
- Patients of both sexes will be taken for study.

Exclusion criteria

- Patients with hepatitis secondary to other than significant alcohol consumption
- Patients aged below 16 years.

Patients attending outpatient department and satisfying the above criteria were selected. Complete demographic details such as age, gender, occupation, present illness, past history of liver disease, any treatment history, and drug allergies were recorded. Personal history included detailed history of alcohol intake, smoking, dietary history, family history of ALD, and socioeconomic status.

Signs of liver cell failure were noted such as fetor hepaticus, jaundice, pigmentation, purpura, finger clubbing, white nails, vascular spiders, palmar erythema, gynecomastia, testicular atrophy, distribution of body hair, parotid enlargement, and Dupuytren's contracture.[9]The quantity (in grams) and duration (in years) of alcohol consumption was also noted.

Results

In the present study, majority were in the age group of 31–40 years (34%). 28% of the patients belonged to the age group of 41–50 years. 13% of the patients belonged to the group of 21–30 years and 51–60 years. Only 1% each were in the age group of <20 years and >70 years [Table 1].

In the present study, there was a male predominance with 95% patients being males and 5% being female patients. The male to female ratio was 19.0 [Table 2].

Majority of the patients were consuming alcohol for duration of 16–20 years (26%). There were 24% of patients consumed for duration of 5–10 years and 11–15 years. The mean duration of consumption of alcohol was 17.5 ± 7.79 years, with the minimum duration of consuming alcohol was 4 years and maximum was 35 years [Table 3].

Majority of the patients, that is, 46% patients had history of consuming 40–60 g of alcohol/day. 30% patients had history of consuming between 61 and 80 g and only 18% consumed more than 100 g [Table 4]. The mean quantity of alcohol consumption was 74.85 ± 36.55 g in this study.

Ascites was important finding seen in 54% of the alcoholics followed by other signs of liver failure as spider nevi, gynecomastia, parotid enlargement, etc. in 54% of the patients. Jaundice seen in 50% of the

Table 1: Age-wise distribution of patients

Age (in years)	No. of cases	Percentage
<20	1	1
21–30	13	13
31–40	34	34
41–50	28	28
51–60	13	13
61–70	10	10
71 and above	1	1

Table 2: Gender-wise distribution of patients

Gender	No. of cases	Percentage
Male	95	95
Female	5	5
Total	100	100

Table 3: Distribution of patients based on duration of alcohol consumption

Duration of alcohol consumption in years	No. of cases	Percentage
<5	2	2
5–10	24	24
11–15	24	24
16–20	26	26
21–25	11	11
26–30	7	7
More than 30	6	6

Table 4: Distribution of alcoholics according to quantity of consumption of alcohol in grams

Quantity in grams	No. of cases	Percentage
40–60	46	46
61–80	30	30
81–100	6	6
More than 100	18	18

alcoholics, followed by pedal edema, pallor and hepatomegaly 34%, 39%, 22%, respectively [Table 5].

Discussion

In the present study, total of 100 cases were studied.

Age

Majority were in the age group of 31–40 years (34%), with mean age of presentation was 43.71 ± 12.07 years and the youngest patient was 20 years and oldest was 76 years. This correlated with the study by Biswas *et al*., had 50 patients included in the study and the major age group in that study was 40 years and above (76%).[10]

Pathak *et al*., included 181 patients in the study and the mean age was 52.08 ± 13.11 years.[11]

Sex

In present study, the 95% patients were male and 5% patients were female. Pathak *et al*., had 80.7% male and 19.3% female included in their study.[11] Biswas *et al*., included 94% males and 6 % females in the study.[10]

Quantity of alcohol consumption

In the present study, the mean quantity of alcohol consumption in grams was 74.85 ± 36.55 and majority of the patients (46%) were consuming 40–60 g of alcohol/day. 30% consumed between 61 and 80 g and 18% consumed more than 100 g/day.

Walter and Ashraf had had 40% of the patients consuming alcohol 60 g/day. This followed by the 28% of the subjects consuming 81–90 g/day, 16% of the subjects consuming 61–70 g of alcohol per day.[12]

Duration of consumption of alcohol

In the present study, majority of the patients were consuming alcohol for duration of 16–20 years (26%). There were 24% of patients consumed for duration of 5–10 years and 11–15 years. The mean duration of consumption of alcohol was 17.5 ± 7.79 years, with the minimum duration of consuming alcohol was 4 years and maximum was 35 years.

In Suthar *et al*., study the mean duration of alcohol consumption was 16.25 years, with a minimum of 6 years and a maximum of 33 years.[13] In Walter and Ashraf study group 60% of the patients were consuming for a period of 10–14 years and 40% of the subjects were consuming for a period more than 14 years.[12]

Clinical features

In present study, distention of abdomen was an important symptom seen in 58% of the alcoholics, followed by pain in abdomen in 55% and yellowish discoloration of skin, sclera and urine in 50%, then ankle swelling, that is, pedal edema in 34%, malena in 32% of alcoholics and hematemesis in 21%, nausea and vomiting in 29%. Fever is seen in 20% of the patients. Pallor and hepatomegaly 39%, 22%, respectively. Other signs of liver failure such as spider nevi, gynecomastia, and parotid enlargement seen in 54% of the alcoholics.

Table 5: Clinical features

Clinical features	No. of cases	Percentage
Hepatomegaly	22	22
Icterus	50	50
Pallor	39	39
Ascites	54	54
Pedal edema	34	34
Other signs of liver cell failure	54	54

It is compared with the study by Suthar *et al*., which showed 60% patients having distention of abdomen and yellowish discoloration of sclera and urine and malena. 34% of the patients showed hematemesis. Moreover, fever is present in 30% of the patients. Pedal edema was present in 16% of the patients. Hepatomegaly seen in 50% of the patients.[13]

Biswas *et al*., study nausea, vomiting in 20%, the common signs were jaundice present in 24%, pallor was in 20%, hepatosplenomegaly 20%, edema 10%, ascites in 10%.[10] In Pathak *et al*., study Jaundice was the most common presentation, which was present in 57.5% of the patients, followed by hepatomegaly (48.6%), ascites (45.3%), edema (36.5%), and pallor (10.5%). Malena is seen in 26% and hematemesis in 17.1%. Fever is seen in 16% of the patients.[11]

In Nand *et al*., study abdominal pain in 55%, distension of abdomen in 78% and jaundice seen in 60% were the most common symptoms while ascites 72%, pedal edema 60%, and icterus 62%. Signs of hepatic failure in 20% of the patients. Hepatomegaly in 42% of the patients.[14]

Conclusion

From the present study, it was concluded that progression of alcoholic related liver injury was mainly seen in middle aged males. Most common symptom among patients was pain in abdomen with followed by high colored urine and malena. Most common sign was ascites followed by jaundice. Correlation of clinical, biochemical and ultrasonographic findings helps in staging of liver injury. The severity of liver damage was directly related to the quantity and duration of alcohol consumption.

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