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General Medicine

STUDY OF CLINICAL PROFILE IN ALCOHOLIC LIVER DISEASE

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ABSTRACT **Background:** Alcohol ,the most common substance abused, leading to Alcoholic liver disease is a major health care problem in India. Alcohol consumption is directly associated with liver disease mortality and accounts for increased social and economic costs. **Aims & Objective:** To study alcoholic liver disease, clinical features, to access the severity of alcoholic liver disease and its complications. **Material and Methods:** A total of 50 cases were studied and their clinical profile, laboratory and radiological investigations were accessed. **Results:** Among 50 patients 32% belonged to age group 40-49 years. All were male.74 % of patients had the chief complaint of anorexia. Jaundice (68%) and ascites (46%) were commonest finding. 84% patients had raised SGOT, and 66% had raised S. bilirubin suggesting liver damage.Reduced S. Albumin and prolonged PT suggested reduced protein synthesis due to liver disease. Hepatomegaly was seen in56% cases, while 54 % had alcoholic cirrhosis. **Conclusion:** Clinical and laboratory parameters are important for predicting the prognosis of ALD in more advanced and severe cases and for determining the therapeutic approach. Because of the potential reversible nature of ALD regular screening of the general population and early diagnosis are essential.

KEYWORDS : Alcohol; Alcoholic Liver Disease; Clinical Profile

INTRODUCTION

Alcohol is commonly consumed worldwide and due to its hepatotoxicity, is associated with a spectrum of liver injury including simple steatosis or fatty liver, alcoholic hepatitis, fibrosis, and cirrhosis. Alcoholic liver disease (ALD) is a general term used to refer to this spectrum of alcohol-related liver injuries[1,2]

Although alcohol is a well established hepatotoxin with higher consumption levels related with increased risk of development of ALD, no absolute threshold of alcohol consumption is necessary for the development of liver injury, and no direct linear correlation has been established between level of alcohol consumption and severity of ALD .

The clinical spectrum of alcoholic liver disease (ALD) comprises of alcoholic fatty liver disease, alcoholic hepatitis, and cirrhosis[3] Alcoholic fatty liver disease develops in about 90% of individuals who ingest more than 60 gm/day alcohol but this is completely reversible with abstinence.[4] However, less than half of individuals with alcoholic steatosis, who continue to drink alcohol, will progress to fibrosis and only 10%-20% will eventually progress to cirrhosis[5,6]. Nonetheless, once steatohepatitis has developed, the risk of development of cirrhosis is increased compared with simple steatosis[7].Liver function tests may show increased aspartate tansaminase (AST) to alanine transaminase (ALT) ratio in alcoholic hepatitis to altered albumin globulin ratio and increased prothrombin time (PT) in cirrhosis. [8] As many as 50% of the patients among them eventually develop a state of irreversible liver damage or cirrhosis which may complicate into portal hypertension leading to upper gastrointestinal hemorrhage, ascites, splenomegaly and other stigma of chronic liver disease.[8,9]

The underlying mechanisms which make some individuals more susceptible to severe forms of ALD are not entirely clear and are likely multifactorial. Several risk factors have been identified that appear to be correlated with development and progression of ALD including amount and pattern of alcohol consumption, gender, ethnicity, age, obesity, co-existing chronic viral hepatitis, iron overload, smoking, and host genetic factors[10].

The objectives of the study were to study the clinical profile, laboratory parameters, complications and their prognostic implications among patients of ALD.

MATERIALS AND METHOD

The prospective hospital-based case control study was done at COM& JNM Hospital , Kalyani for duration of one year from April 2019 to March 2020. A total of 50 cases which were diagnosed clinically and biochemically as Acute alcoholic liver disease in the department of General medicine were included in the study.

The criterion for the selection of the cases for the study was those cases which had the history of consumption of alcohol of ≥ 60gm per day. The exclusive criteria were, patients with liver diseases due to non alcoholic causes and patients with alcoholic liver diseases who are found to have other causative factors such as Hepatitis B, C, HIV, Diabetes, Willson's diseases etc.

Patients attending General Medicine 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, drug allergies, were recorded. Personal history included detailed history of alcohol intake, smoking, dietary history, family history of alcoholic liver disease, and socio-economic status. All laboratory investigations including a liver chemistry profile (S. albumin, Bilirubin and transaminases, AST/ALT. complete blood count and prothrombin time) were done. Abdominal ultra-sonographic findings were recorded . Acute Alcoholic Liver (ALD) disease was diagnosed with the help of clinical and biochemical findings.

STASTICAL ANALYSIS

T test of significance was applied to determine whether the differences observed in the two groups of cases and controls were significant or not. A $P < 0.05$ was considered statistically significant.

RESULT

A total of 50 patients of alcoholic liver diseases were studied. Majority of the patients were in the age group of 40-49years (32%). 24% of the patients belonged to the age group of 30-39 years. 24% of the patients belonged to the group of 50-59 years. Only 14% each were in the age group of 20-30yrs and >60yrs [Table 1]. All the cases studied were males.

Table 1:Age Distribution of patients

Age	Number(%)
20-29	3(6%)
30-39	12(24%)
40-49	16(32%)
50-59	12(24%)
>60	7(14%)

Majority of the patients (30%) were consumed 81-90 gms of alcohol /day. 20% were consumed between 71-80 gms, another 20% were consumed between 61-70gms and 18% were consumed more than 80 gms,12% patients were consumed <60gms/day.

32% of the alcoholics had consumed alcohol for duration of 9-12 years. [Table 2]

Table 2: Distribution of alcoholics according to the quantity of alcohol consumption

Quantity(gram)	No. of cases (%)
<60	6(12%)
61-70	10(20%)
71-80	10(20%)
81-90	15(30%)
>90	9(18%)

28% of alcoholics had consumed for a period more than 13-16 years, 22% patients had consumed for 5-8 year .

Anorexia was an important symptom seen in 74% of the alcoholics, followed by features of fluid retention in 48%, pain abdomen in 42% alcoholics, nausea, vomiting, hematemesis in 30%,fever in 20% of alcoholics.

Jaundice was an important finding in alcoholics seen in 68%, Hepatomegaly was in 56%,Splenomegaly in52%, ascites in 46% and pedal edema were seen in 34%alcoholics. Other signs of liver cell failure like spider naevi and gynaecomastia were seen in 16% of the patients.Table 3

Table 3: Incidence of various clinical signs in alcoholic liver diseases

Clinical Signs	No. of cases(%)
Hepatomegaly	28(56%)
Ascitis	23(46%)
Pedal Edema	17(34%)
Jaundice	34(68%)
Splenomegaly	26(52%)
Other signs of liver cell failure	8(16%)

Incidence of Hepatomegaly in Ultrasonography was seen in 56%. Cirrhosis was seen in 54% of alcoholics studied.

Raised SGOT was seen in 84%, raised bilirubin 66%, hypoalbuminemia in 62%, raised PT 64% and hyperglobulinemia were seen in 62%. Raised alkaline phosphatase was seen in 34% of cases. Raised SGPT was seen in only 4% of cases.

The biochemical abnormality suggested that biochemical profile such as serum bilirubin, SGOT, SGPT, albumin, globulin, triglyceride level, P-time were related to amounts of alcohol consumed by the patients as P-value was<0.05 i,e correlation was significant. But correlation of serum alkaline phosphatise, total cholesterol, creatinine with were non significant as P-value was >0.05.

The biochemical profile also suggested that serum bilirubin, SGOT, SGPT, albumin, globulin, triglyceride level, P-time were related to duration of alcohol consumed by the patients as P-value wass <0.05 i,e correlation was significant. But correlation of serum alkaline phosphatase,total cholesterol, creatinine level with duration were non significant as P-value wss >0.05.

DISCUSSION

The study was done on 50 alcoholics who were admitted in COM&JNM Hospital,Kalyani .

Majority of the patients were in the age group of 40-49 years (32%) of age. Our study correlated with the study by D N Amarapurkar in which the mean age of presentation of alcoholics was 41-51years.[11]Gordon Bekett et al in their study showed that the common age group of presentation of alcoholics was 40-50 years.[12]

Majority of the patients (30%) consumed 81-90gms of alcohol per day. 20% of the patients consumed between 71-80 gms and 61-70gms per day respectively.Lena Van Waes, Charles S Leiber in their study of 100 alcoholic patients, the average alcohol intake was 90-180gms per day.[13]

Majority of the patients (32%) consumed alcohol for a period of 9-12yrs. 28% patients consumed alcohol for 13-16yrs & 0nly 2% of the patients consumed >20 yrs.Our study correlated with Taorkild et al, who showed that mean duration of alcohol consumption was 10-13yrs [14]

Jaundice was found in 68 % of patients which is comparable with Pathak et al in which it is 57.5%.[15] Ascites was observed in 46 % of patients in our study, while in Mendenhall et al study it is 50.9 %.[16] In our study 52 % of patients had splenomegaly which is comparable with Sarin et al study (55%).[17] Hepatomegaly was found in 56 % of cases which is comparable with Pathak et al (48.6%).[15]

Correlation of anorexia, hematemesis, malaena, pedal oedema, ascites, jaundice, hepatomegaly, splenomegaly with quantity were significant as P-value <0.05 but pain abdomen, nausea, fever, signs of liver failure were non significant as P-value >0.05.

Correlation of anorexia, hematemesis/malaena, pedal oedema, ascites, jaundice, hepatomegaly, splenomegaly with duration were significant as P-value <0.05 but pain abdomen, nausea, fever, signs of liver failure were non significant as P-value >0.05.

CONCLUSION

One thing is very clear from the present study that alcoholism is affecting most productive age group in our case 30-49 years, so it is of utmost importance to increase awareness about hazards of alcoholism at hospital level and at public places through media to curb this grave disease. Mostly affecting the productive age group of the male population, ALD has a high economic burden to the society as well. We recommend screening for alcohol abuse in all adult patients presenting to the hospital as early detection of ALD can decrease both morbidity and mortality due to ALD.

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