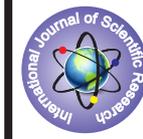


Clinical Profile of cirrhosis of liver - study carried out in a Tertiary Care Centre



Medical Science

KEYWORDS: Cirrhosis, aetiology, complications, prognosis, mortality

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ABSTRACT

Background: Cirrhosis is an increasing cause of morbidity and mortality in the developed countries. The main causes in developed countries are infection with hepatitis C virus, hepatitis B virus, chronic alcoholism, non-alcoholic liver disease(3). The prevalence of cirrhosis is difficult to assess and probably higher than reported because the initial stages are asymptomatic so the disorder is undiagnosed. Alcohol related cirrhosis is increasing therefore, we aimed to study cirrhosis of liver with reference to its, aetiology, clinical presentation, complications, prognostic features and mortality(4).

Materials and methods: 50 adult patients of both sexes, diagnosed as cirrhosis of liver disease and willing to give written informed consent were included in this study. Statistics: The data was presented as mean \pm standard deviation (mean \pm SD). The results obtained from the scales were compared using appropriate parametric (Student 't' test, ANOVA) and non parametric tests (Chi-Square, Mann Whitney U, Wilcoxon Sign Rank test) wherever applicable. $p < 0.05$ was considered statistically significant.

Results: In our study, out of 50 patients, 48 (96%) were males & 2 (4%) were females. Therefore maximum number of patients were in the age group of 31-50 yrs. Aetiology were alcohol related (72.2%), HBV (8.9%), HCV (3.2%), Autoimmune Hepatitis (0.9%), and NASH (1%). Complications were ascites (78.6%), variceal bleeding (43.4%), hepatic encephalopathy (21.6%), Spontaneous bacterial peritonitis 4.2%, Hepatorenal syndrome (2.7%).50% had Child C disease, 83% had MELD between 10-29. Mortality was 7.8% and highest among alcoholic cirrhosis (6.8%). So, incidence of cirrhosis in Alcoholic liver disease=56.66% Incidence of fatty liver disease in Alcoholic liver disease =30%.

I. Introduction:

Cirrhosis is defined as the histological development of regenerative nodules surrounded by fibrous bands in response to chronic liver injury that leads to portal hypertension and end stage liver disease(1). At present, liver transplantation remains the only curative option for a selected group of patients, but pharmacological therapies that can halt progression to decompensated cirrhosis or even reverse cirrhosis. Alcoholic liver disease and hepatitis C are the most common causes in the Western world, while hepatitis B, hepatitis C virus prevails in most parts of Asia and sub-Saharan Africa followed by of non-alcoholic steatohepatitis (NASH) in obese and diabetic subjects(2). Patients with alcoholic cirrhosis have high prevalence of complications at the time of diagnosis. It is important to know the aetiology of cirrhosis, since it can predict complications and direct treatment decisions and hence this study was undertaken.

II. Material and Methods

- **Study design:** Retrospective Observational study conducted in 50 alcoholic patients admitted in the medicine ward of this institution at T. N. Medical College & B. Y. L. Nair Ch. Hospital, Mumbai. Ethics committee approval taken. **Study duration:** The study was carried out from February 2012 to November 2014. **Study Population:** Present study was undertaken on Patients satisfying the inclusion criteria was enrolled in the study. **Sample size:** 50.
- **Inclusion Criteria:** The alcoholic patients with any three of following characteristics were included in the study.
- Alcoholism for more than five years, average minimum daily alcohol intake of about 40 grams for minimum of five days per week.
- Diagnosed cases of liver cirrhosis/Newly diagnosed cases of liver cirrhosis with clinical signs and symptoms suggestive of cirrhosis along with biochemical and radiological reports.
- All adults both male and female with age greater than 18 years.
- **Exclusion criteria** All patients with Non Alcoholic Fatty Liver, chronic medical, surgical conditions, organic brain syndrome, and chronic mental illness were excluded from the study.

Diagnostic criteria – American Gastroenterology Association 2002:123::17-4. Signs n symptoms of liver failure (jaundice, anorexia, abdominal distension, pedal edema with liver function tests –liver enzymes (SGOT and SGPT),total Bilirubin,Serum albumin , PT/INR ,with radiological findings on ultrasonography –of coarse echotexture and irregular nodular liver surface. **Primary endpoint:** To study prevalence of cirrhosis of liver in alcoholic patients. **Secondary endpoint:** To study etiologies, their various clinical features, complications, prognosis, and mortality in alcoholic patient.

Statistics: The data was presented as mean \pm standard deviation (mean \pm SD). The results obtained from the scales were compared using appropriate parametric (Student't' test, ANOVA) and non parametric tests (Chi-Square, Mann Whitney U, Wilcoxon Sign Rank test) wherever applicable. A $p < 0.05$ was considered statistically significant.

Investigations done: After informed consent, detailed history and clinical examination was done. Relevant biochemistry including Complete blood count, liver function tests, renal function tests, serum electrolytes, fasting and post prandial blood sugar, serum ammonia etc were done. Abdominal ultrasound for liver and spleen size, parenchyma echogenicity, portal vein diameter, and ascites .CT/ MRI abdomen in suspected cases of liver cancer was done. Upper GI endoscopy was carried out in all eligible cases. Prognosis was measured by Child Turcot Pugh scores, MELD .Patients were followed up during their hospitalisation and up to 1 month to determine survival. Variables were recorded in a predesigned proforma, analysed and compared with other studies.

RESULT:

- The most common age group amongst study population was 41 to 50 years (42%) was followed by 51 to 60 years (38%) and more than 60 years (20%). There was higher number of male (96%) as compared to female (2%) amongst study population.
- Jaundice (52%) was the most common clinical feature amongst study population followed by Edema Feet (42%) and Abdominal Distension (23%). **Table no 2**
- Edema Feet and Icterus was present in 86% and 86%, respectively of study population on general examination findings.
- Most of the study population were drowsy with irrelevant speech (30%) followed by comatose (20%) and conscious, asterixis

- (12%), conscious, oriented to time place person (12%).
- Irregular and nodular liver surface was present in 26% and 74% respectively, of study population.
 - HbsAg and Anti HCV were positive in 70% and 12% respectively, of study population.
 - Most of the study population had Grade 2 Encephalopathy (34%) followed by grade 4 (26%) and grade 3 (20%).
 - The mean age and duration of hospital stay(days) amongst study population was 52.32 ± 6.7 years and 5.32 ± 2.08 days respectively
 - The mean Pulse, SBP and DBP amongst study population was 80.88 ± 5.4 , 110 ± 7.1 and 70.92 ± 7.5 respectively.
 - The mean hemoglobin , WBC , Platelets , BUN(mg/dl), Serum Creatinine(mg/dl), PT and INR amongst study population was 10.98 ± 1 , 6604 ± 1679 , 172460 ± 53159 , 16.96 ± 2.6 , 1.23 ± 0.2 , 14.28 ± 5.5 and 2.27 ± 0.79 respectively
 - The mean total bilirubin, SGOT, SGPT, serum albumin and total serum protein amongst study population was 5.99 ± 3.03 , 168 ± 75.53 , 202 ± 71.77 , 2.83 ± 0.71 , and 6.07 ± 0.39 respectively. (Table 1.)

DISCUSSION : Although in developing countries, viral hepatitis B and C are still common, but alcohol and autoimmune related cirrhosis may be increasing.[3] Other rare causes are Wilson s disease, Haemochromatosis, Alpha-1-antitrypsin deficiency, Primary and secondary biliary cirrhosis. The profile of cirrhosis may vary with different age and ethnic groups, geographical, social and etiological factor(7). The higher incidence of cirrhosis in South Asians than Caucasians, despite lesser amount of alcohol and in lesser duration of alcohol intake, has been thought to be due to genetic polymorphisms of genes responsible for alcohol metabolism like ADH, ALDH and CYP2E1 and genes responsible for inflammatory cytokine production like TNF- and IL-10(5). Indian population have predisposition to develop alcoholic liver disease with lesser amount and lesser duration of alcohol intake. Hepatic encephalopathy was significantly more common in heavy drinkers. A significant correlation was seen between alcohol amount intake and disease progression(6).

Conclusion: Cirrhosis is common in the most productive age and the commonest cause was alcohol cirrhosis which is preventable. Proper awareness will lead to prevention of long term morbidity. Our study concludes that there is a dose dependent relation of alcohol amount intake complications and disease progression.

Table no 1: LFT findings amongst study population

LFT	Mean	Std. Deviation
TOTAL BILIRUBIN(mg/dl)	5.99	3.03
SGOT	168.38	75.53
SGPT	202.64	71.77
SERUM ALBUMIN(gm/dl)	2.83	0.71
TOTAL SERUM PROTEINS(gm/dl)	6.07	0.39

As seen in the above table, the mean total bilirubin , SGOT, SGPT , serum albumin and total serum protein amongst study population was 5.99 ± 3.03 , 168 ± 75.53 , 202 ± 71.77 , 2.83 ± 0.71 , and 6.07 ± 0.39 respectively

Table no 2: Clinical features amongst study population

Clinical features	Frequency	Percent
Abdominal Distension	12	24.0
Edema Feet	21	42.0
Jaundice	26	52.0
Vomiting	2	4.0
Weakness	6	12.0
Hematemesis	4	8.0
Fever	2	4.0

As seen in the above table, Jaundice (52%) was the most common clinical feature amongst study population followed by Edema Feet (42%) and Abdominal Distension. (23%)

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