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A Study of Clinical, Laboratory, Radiological Findings and Complications of Cirrhosis of Liver in a Rural Tertiary Care Hospital

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Abstract

Background: Cirrhosis is a severe, chronic irreversible condition characterized histologically by regenerative nodules surrounded by fibrous bands in response to chronic liver injury. The objectives of this study were to analyze the clinical profile of the patients admitted with cirrhosis of the liver and to determine the factors affecting the outcome.

Methods:A hospital-based observational studywas conducted on 64 patients admitted to the medical wards, manifesting with symptoms and signs of cirrhosis liver and an abdominal sonology report was taken up for the study. A proforma which includes a detailed history and clinical examination lab investigations ultrasound abdomen and pelvis.

Results: Majority of the study participants belonged to the age group of 41 to 50 years (34.4%) and were males (93.4%).In present study majority of patients presented with abdominal distension (84.5%) followed by swelling of lower limbs (81.3%), abdominal pain (45.3%), fever (39.1%), melena(37.5%), hematemesis (25%)In Suthar et al[3] study majority of patients presented with ascites(60%), melena (60%), hematemesis (34%),swelling of lower limbs(16%).. 87.5% patients were discharged and 12.5% patients died.

Conclusions: There is a need for good health education in patients who are diagnosed as cirrhosis of liver about the complications, screening upper GI endoscopy and further follow up, Immediate control of infections, avoiding constipation by laxatives, cautious use of sedatives and diuretics and proper advice about diet must be part of counselling to cirrhotic patients.

Keywords: Cirrhosis, Clinical and radiological profile, Complications, Prognosis

1. INTRODUCTION:

Cirrhosis is a severe, chronic irreversible condition characterized histologically by regenerative nodules surrounded by fibrous bands in response to chronic liver injury. Variety of clinical manifestations and life-threatening complications found in cirrhosis[1]. Patients may present with jaundice, abdominal distension, breathlessness, and complications like ascites, spontaneous bacterial peritonitis, hepatorenal syndrome, variceal bleeding, hepatic encephalopathy, hepatopulmonary syndrome, and hepatocellular carcinoma, etc

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It is divided into two types, namely compensated cirrhosis and decompensated cirrhosis1 A significant complicating feature of decompensated cirrhosis is portal hypertension and is responsible for the development of ascites and bleeding from oesophagogastric varices. The general laboratory reports aspartatetransaminase, alanine transaminase, alkaline phosphatase is elevated.[1]

The cirrhosis profile may vary with different age and ethnic groups, geographical, social, and etiological factors. Therefore, this epidemiological study in a tertiary care hospital can determine with demography clinical profile complications and patients' outcome with cirrhosis of the liver.[2]

AIMS AND OBJECTIVES

- To analyze the clinical profile of the patients admitted with cirrhosis of the liver.
- To determine the factors affecting the outcome.

2. METHODOLOGY:

SOURCE OF DATA:

The study was conducted on patients admitted to PES hospital, Kuppam; attached to PES Institute Of Medical Science and Research, kuppam from June 2019 to June 2020. A total of 64 patients were included in the study.

STUDY DESIGN:

A hospital-based observational study.

METHOD OF COLLECTION OF DATA:

Patients admitted to the medical wards, manifesting with symptoms and signs of cirrhosis liver and an abdominal sonology report was taken up for the study.

INCLUSION CRITERIA:

Adults aged more than 18 years, admitted to pes medical college hospital and who have consented for the study.

EXCLUSION CRITERIA:

Patients aged less than 18 years.

STATISTICAL ANALYSIS:

Data were analyzed using descriptive statistics.

TOOLS TO BE USED IN THE STUDY:

A proforma which includes a detailed history and clinical examination lab investigations ultrasound abdomen and pelvis. A detailed clinical history of patients about fever, upper gastrointestinal bleeding (hematemesis and/or melena),swelling of lower lmbs, abdomnal distension and paracentesis were taken.. Past history of previous hospital admissions was also taken. All patients were carefully examined for fever, jaundice, dehydration, anemia, pedal edema, asterixis, fetor hepaticus, and ascitis. Any evidence for the presence of other co-existent complications of cirrhosis liver was also recorded. All patients were followed throughout their stay in the hospital, and whether they survived or not at the end of their stay were also recorded. Investigations:

The following relevant investigations were done

• Complete hemogram, Random blood sugar , Blood urea and serum creatinine, Liver function tests and ascitic fluid analysis, Serum electrolytes, PTT, INR, Urine routine and microscopy, Chest radiograph and Ultrasound abdomen.

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3. RESULTS:

Majority of the study participants belonged to the age group of 41 to 50 years (34.4%), followed by 51 to 60 years (26.6%), >61 years (23.4%), 31 to 40 years (12.5%) and <30 years (3.1%).

Table 1: Bar diagram showing distribution of study participants according to age group.

Age group	Frequency	Percentage
<30 years	2	3.1%
31-40 years	8	12.5%
41-50 years	22	34.4%
51-60 years	17	26.6%
>61years	15	23.4%
Total	64	100%

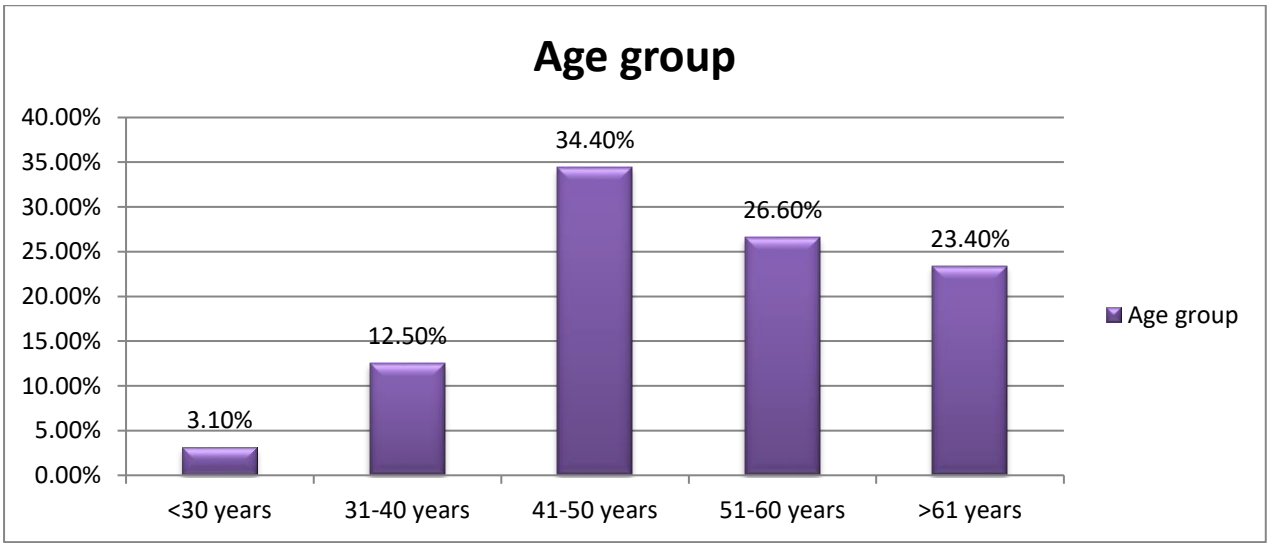

Figure 1: Bar diagram showing distribution of study participants according to age group.

Gender

Majority of the study participants were male(93.7%) followed by female(6.3%)

Table 2: Pie diagram showing distribution of study participants according to gender.

Gender	Frequency	Percentage
Male	60	93.7%
Female	4	6.3%
Total	64	100%

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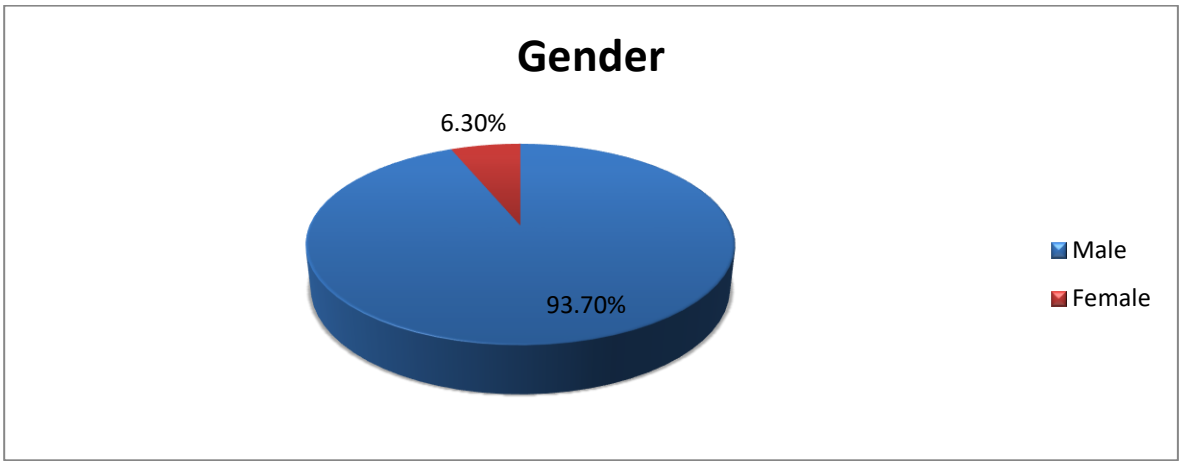

Figure 2: Pie diagram showing distribution of study participants according to gender.

Table 3: Clinical Profile

Clinical Variable	Frequency	Percentage
Swelling	52	81.3%
Abdominal distension	56	84.5%
Alcoholic	49	76.6%
Malena	24	37.5%
Hematemasis	16	25%
Fever	25	39.1%
Abdominal pain	29	45.3%

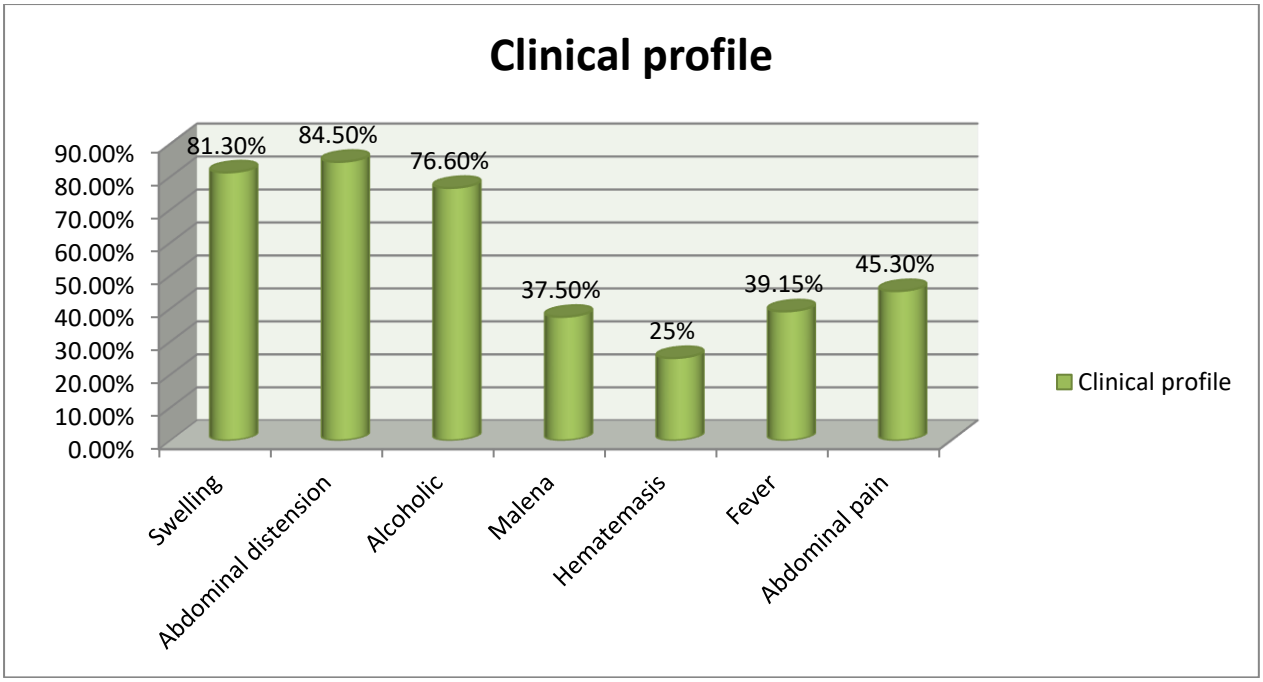

Figure 3: Bar diagram showing distribution of study participants according to clinical profile.

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Table 4: Clinical variable

Variable	Frequency	Percentage
INR(>2.5)	1	1.6%
Albumin(<3)	38	59.4%
Total Bilirubin(<3)	15	23.4%
Sodium(<130)	34	53.1%
Creatinine(>1.5)	23	35.9%
Urea(>45)	29	45.3%
Cell count(>250)	26	40.6%
WBC Count(<13)	34	53.1%
HBSAg (reactive)	6	9.4%
HCV(reactive)	4	6.3%

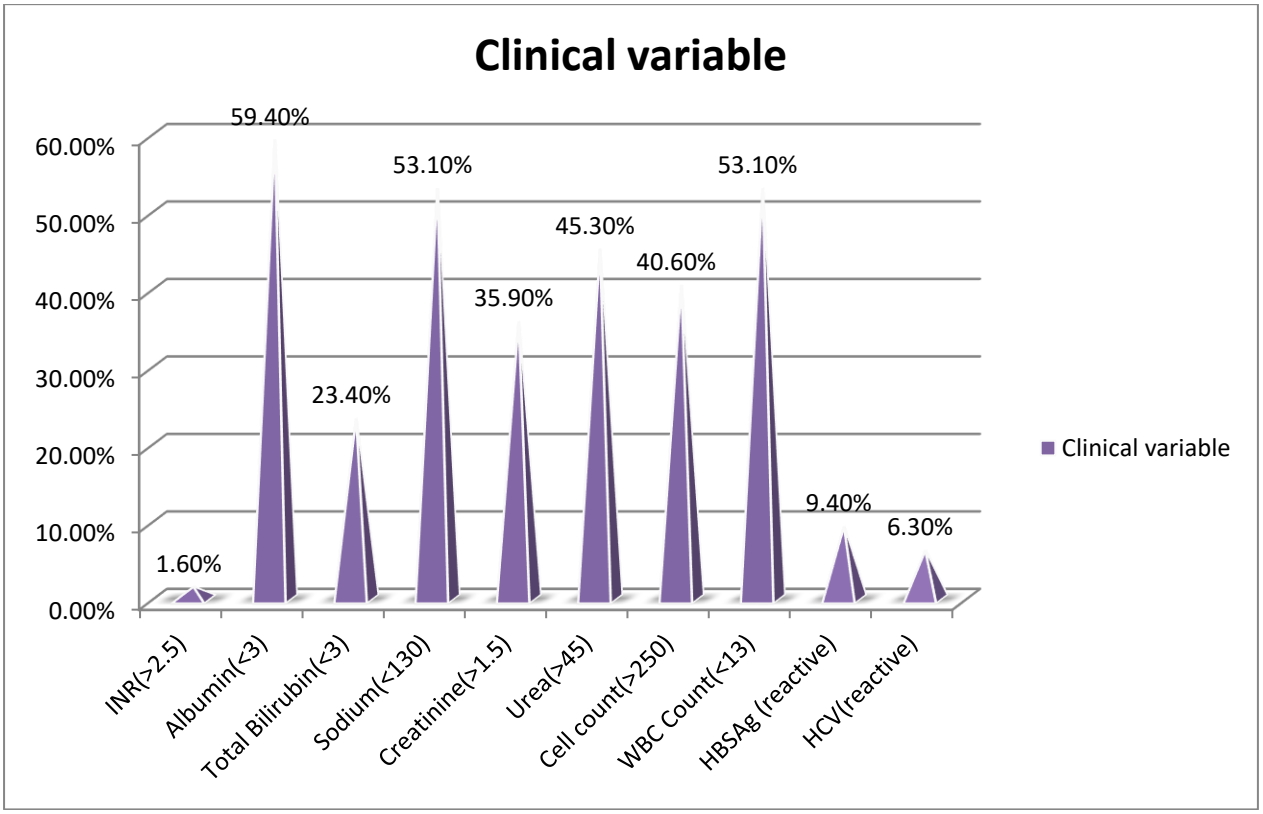

Figure 4:Bar diagram showing distribution of study participants according to clinical variables.

Table 5:Outcome

Outcome	Frequency	Percentage
Death	8	12.5%
Discharged	56	87.5%
Total	64	100%

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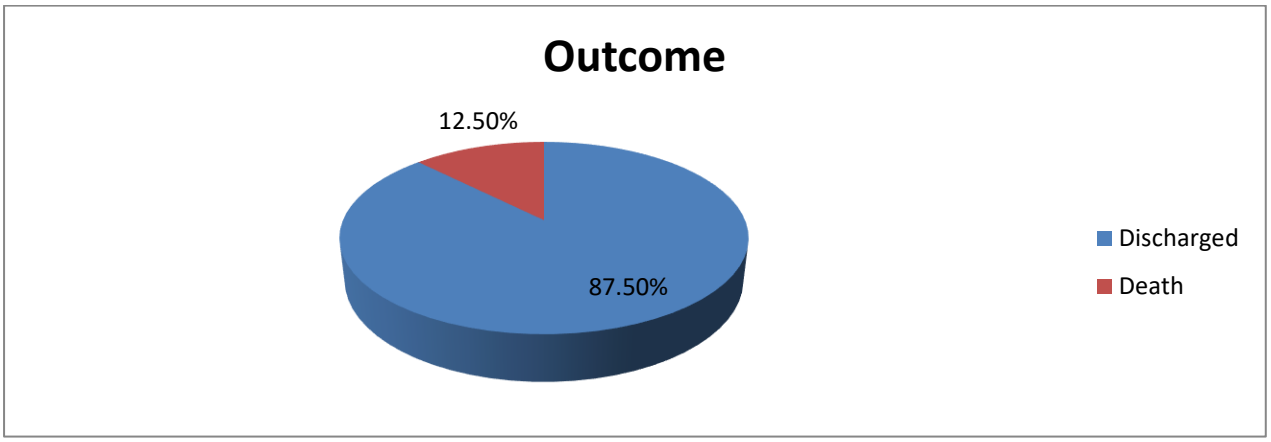

Figure 5: Bar diagram showing distribution of study participants according to outcome

4. DISCUSSION:

In this study majority of patients presented in the age group of 41-50(34.4%)followed by 51-60 years (26.6%), least number of patients were below 30 years of age (3.1%) .In Suthar et al[3] study majority of patients were in 51-60 years of age (58%). Hegde et al[4] study majority of patients were between 31-40 years of age (63%). Thun et al. study have shown 17:8 male to female ratio[5] Pathak O.K. et al. 2009, were 80.7% among 181 patients were males[6] Higher incidence was also reported by Paul SB et al. 2007 with an M: F ratio of 6.1:1 among cirrhotics.[7] In Chacko et al. study and sarin, et al.'s study average age of patients was 48+/- 11 years and 43+/- 11 years, respectively.[8,9]

In present study majority of patients were males (93.7%) and females were (6.7%). In Suthar et al[3] study all the patients were males. In Hegde et al[4] study all the patients were males except one female

In present study majority of patients presented with abdominal distension (84.5%) followed by swelling of lower limbs (81.3%), abdominal pain (45.3%), fever (39.1%), melena(37.5%), hematemesis (25%)In Suthar et al[3] study majority of patients presented with ascites(60%), melena (60%), hematemesis(34%),swelling of lower limbs(16%).In Bhattarai et al[10] study the most common presentation was abdominal distension and seen in (93.5%) of patients. In Hegde etal[4] study Abdominal distension (83.7%) and jaundice (80%) were most common presenting complaints. Six (10%) patients presented with hematemesis and eight (13%) presented with altered sensorium.

In our study 87.5% patients were discharged and 12.5% patients died. In hemang suthar study[3] 20% patients died and hepatic encephalopathy (40%) was most common cause of death.

5. CONCLUSIONS:

There is a need for good health education in patients who are diagnosed as cirrhosis of liver about the complications, screening upper GI endoscopy and further follow up, Immediate control of infections, avoiding constipation by laxatives, cautious use of sedatives and diuretics and proper advice about diet must be part of counselling to cirrhotic patients. Early detection and diagnosis of the cirrhosis and its complications helps in focused treatment of this highly fatal condition thereby reducing the mortality in such patient.

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