



## A STUDY OF CLINICAL PROFILE CIRRHOSIS OF LIVER AND ANALYSIS OF ITS COMPLICATIONS

### General Medicine

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### ABSTRACT

**INTRODUCTION:** Liver Cirrhosis and its complications like Ascites, portal hypertension, hepatic encephalopathy, SBP, HRS, HPS are major health problem and pose a big challenge to health economy in developing country like India where cost of health care has always been an issue. Cirrhosis results from progressive fibrosis and is the final outcome of all chronic liver disease. Present study was performed to provide comprehensive review regarding etiology of cirrhosis of liver, clinical presentation, complications and its management.

**METHODOLOGY:** A one year cross sectional study was conducted in the Guru Gobind Singh Hospital, Jamnagar. 60 patients of cirrhosis of liver fulfilling the inclusion criteria were included in the study.

**RESULTS:** In present study 85% of total patients were male with mean age group were 46.25+/-20 years. 70% of total study patients were alcoholic. Most of patients presented with chief complaints of abdominal distention and yellowish discoloration of urine and sclera. Most of the patient had anemia. Ascites was the most common complication followed by variceal bleed followed by Hepatic encephalopathy

### KEYWORDS

Chronic Liver Disease, Child Pugh Score

### 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.

In developing countries viral hepatitis is the leading cause of cirrhosis and in developed countries ALD, HCV and NASH are the most significant causes of cirrhosis.

Chronic liver disease (CLD) due to alcohol showed a significant rising trend with early age (mean 48.4 years) and high percentage of decompensated disease (75%) at presentation and high early mortality (63%).

Cirrhosis can arise in consequence of an exogenous/ toxic, infectious, toxic/allergic, immunopathological/ autoimmune, or vascular process or an inborn error of metabolism. In study conducted in Western India, etiology of cirrhosis were as follows- Alcohol (34%), NAFLD (22.5%), HBV (15.3%), HCV (9.9%), Cryptogenic cirrhosis (7.9%) and mean age was 52.2+/-9.3 years.

### Clinical findings in cirrhosis of liver:

GENERAL FINDINGS	ETIOLOGY
Jaundice	Compromised hepatocyte excretory function, occurs when serum bilirubin >2mg/dl
Spider angiomas	Elevated estradiol, decreased estradiol degradation in liver
Nodular liver	Fibrosis, irregular regeneration
Splenomegaly	Portal hypertension, splenic congestion
Ascites	Portal hypertension
Caput medusa	Portal hypertension, reopening of the umbilical vein that shunts blood from the portal vein
Cruveilhier Baumgarten syndrome	Shunts from portal vein to umbilical vein branches, can be present without Caput medusa
Palmar erythema	Elevated estradiol, decreased estradiol degradation in liver
White nails	Hypoalbuminemia
Hypertrophic osteoarthropathy /Finger clubbing	Hypoxemia due to right-to-left shunting, Porto-pulmonary hypertension

### DIAGNOSIS :

Laboratory tests like liver function test eg. AST and ALT normal or moderately elevated, GGT (more specific for liver than ALP, high in active alcoholics) elevated bilirubin (important predictor of mortality), decreased albumin, anaemia, thrombocytopenia (hyper splenism) dysfibrinogenemia.

Ultrasonography for ascitic and extent of fibrosis. Specific diagnostic test as per etiology like viral markers, FBS/TG/uric acid for NASH, autoantibodies for autoimmune ceruloplasmin and urinary Cu. for Willson's, Ferritin for hemochromatosis etc.

Liver biopsy is indicated if etiology is unclear or for choice of treatment.

### AIMS AND OBJECTIVES

- To study the epidemiology and risk factors of cirrhosis of liver
- To study the presentation and clinical feature of cirrhosis of liver
- To study the complications of cirrhosis of liver

### MATERIALS AND METHODS

This is a one year observational cross sectional study conducted in the Guru Gobind Singh Hospital, Jamnagar.

Data was collected from the patients presenting to department of internal medicine at M.P.SHAH Medical college, Guru Gobind Singh Hospital, Jamnagar, fulfilling inclusion criteria. Duration of study was one year in the Period of September 2016 to September 2017 with sample size of 60.

After history and clinical examination, patients underwent routine blood tests like CBC, Sr. Creatinine, LFT, viral markers, ascetic fluid examination. Other tests needed for the study like, Imaging according to the requirement.

Data was analyzed by descriptive statistics and calculated as percentages and presented by using table, bag graph etc.

### RESULTS

**Table - 1 : Age at the onset of disease**

Age group	No. of pts.	%
Up to 30 years	5	8.33
31 – 40 years	17	28.33
41 – 50 years	19	31.66
51 – 60 years	12	20
Above 60 years	7	11.66

**Table - 2 : Sex Distribution**

Sex	No. of pts.	%
Male	51	85
Female	9	15
Total	60	100%

**Table - 3 : Etiology in Study Group in**

Etiology	Frequency	Percentage(%)
Alcohol	42	70
HBV	2	3.33
HCV	1	1.66
Wilson's Disease	1	1.66
Cryptogenic	14	23.33
Total	60	100

In present study group, 70% patients had alcohol as etiology for cirrhosis followed by Cryptogenic 23.33% followed by HBV 3.33% followed by HCV & Wilson's disease 1.66 %.

**Table - 4 : Prevalence of various clinical signs among study group**

Clinical Features	Frequency	Percentage (%)
Ascites	51	85
Icterus	50	83.33
Pedal Edema	30	50
Pallor	30	50
Asterexis	14	23.33
Foetar Hepaticus	6	10

In present study, most common clinical feature was Ascites 85% followed by Icterus 83.33%, followed by Pedal Edema 50% and Pallor 50% followed by Asterexis 23.33% followed by Foetar Hepaticus 10%.

**Table - 5 : Child Pugh Score (CPS) in study group**

CPS	Frequency	Percentage(%)
A	3	5
B	32	53.33
C	25	41.66
Total	60	100

**Table - 6 : Prevalence of Various Complications among Alcoholics Versus Non-Alcoholics in study group**

Compli-cations	Alcoholics		Non Alcoholics		Total No.
	No.	%	No.	%	
Variceal Bleed	15	88.23	2	11.76	17
Hepatic Encephalo-pathy	12	85.71	2	14.28	14
Ascites	34	66.66	17	33.33	5
HRS	7	87.5	1	12.5	8
HPS	1	50	1	50	2
SBP	6	85.71	1	14.28	7

## DISCUSSION

Over the time many studies have been carried out to detect prevalence and clinical profile of Cirrhosis of liver. We compared data from our study with other two similar studies. One conducted in Western India Patel et al and other one in Ahmed et al.

In our study 31.66% cases were seen in most productive age group 41-50 years (mean age - 46.25+/-). Similar study conducted at western India in 2009 Patel et al, a total 949 patients were included, observed mean age of cirrhosis 52.2+/-9.3 years. A study Ahmed et al 2015 where 160 patients included, mean age group was 40-59 years, our study correlates well with this.

Etiology in study of Western India by Patel et al were alcoholic (34%), HBV (15%), HCV (9.9%), and Cryptogenic (30.4%). In a study conducted by Ahmed S. et al 2015, etiologies were Alcohol (68.7%), HBV(7.2%), HCV (4.0%), Cryptogenic (7.5%). Our study correlates well with above study with higher incidence of Alcoholism as Etiology in 70% mainly due to increase trend of habit of Alcohol Consumption among young male.

Child Pugh Score and Class, a marker of extent of live damage was evaluated. In study of 91 patients Pal et al found 51% of patients belonged to CPS B followed by Class C 35% and only 14% in Class A.

In our study most patients were under CPS class B 53.33% followed by class C 41.66% followed by class A 5%. class B and class C comprises 95% of total cases, this means that most of the patients of liver cirrhosis are asymptomatic in their early stage and develop symptoms only when cirrhosis had progressed a lot and come to seek care in fairly advanced stage.

Our study has some limitations as it is a single centre study with small sample size so it is difficult to generalize result on all Indian Population.

To summarize in our study predominant sex was male which comprises 85% of study group, among them most common age group were between 41-50 years (31.66%).

In present study most common presenting symptom was abdominal distension followed by Jaundice followed by Hematemesis/malena followed by altered sensorium.

With most common etiology being alcohol (70%) followed by Cryptogenic 23.33% followed by HBV 3.33% followed by HCV & Wilson's disease 1.66 %.

Most common clinical feature was Ascites 85% followed by Icterus 83.33%, followed by Pedal Edema 50% and Pallor 50% followed by Asterexis 23.33% followed by Foetar Hepaticus 10%.

While reviewing complications, 50% patients had thrombocytopenia, 75% had splenomegaly, 28.33% had variceal bleed, 23% had hepatic encephalopathy, 13.33% developed hepatorenal syndrome, 2% developed hepatopulmonary syndrome, 7% had SBP, 10% patients expired during study period.

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