

**Research Article****Study of various modes of presentation in the patients of hepatic cirrhosis****Ayesha Naeem, Saba Rasheed  
and Uzma Iqbal**<sup>1</sup>Medical Officer, Bahawal Victoria Hospital, Bahawalpur<sup>2</sup>Woman Medical Officer, RHC LessarKalan, Tehsil Zafarwal, Distt: Narowal<sup>3</sup>Woman Medical Officer, BhuHaveli Majoka**ABSTRACT**

**Objective:** The objective of study was to determine various modes of presentation in the patients of hepatic cirrhosis reporting at Bahawal Victoria Hospital, Bahawalpur.

**Materials and methods:** The study was performed on all cases of established diagnosis of liver cirrhosis presenting at Bahawal Victoria Hospital, Bahawalpur from January 2017 to June 2017 in all four medical units.

**Results:** As mentioned earlier, 50 cases were included according to set inclusion criteria (29 males and 21 females). The ages of majority of these patients were between 40-70 years with mean age of 51.18 years. The various modes of clinical presentations were ascites in 17 cases (34%), gastro-intestinal bleed in 11 cases (22%), jaundice in 9 cases (18%), hepatic encephalopathy in 6 cases (12%), spontaneous bacterial peritonitis in 4 cases (8%), hepatocellular carcinoma in 2 cases (4%) and renal failure in 1 case (2%).

**Conclusion :**The most common presentation of hepatic cirrhosis was ascites according to this study. Bleeding esophageal varices, jaundice and hepatic encephalopathy followed it.

**Key Words:** Liver cirrhosis, portal hypertension, esophageal varices, spontaneous bacterial peritonitis, hepatic encephalopathy, hepatorenal syndrome.

**INTRODUCTION**

Hepatic cirrhosis is a major cause of mortality in this part of Pakistan at a tertiary care hospital.<sup>1</sup> Cirrhosis is defined anatomically as a diffuse process with fibrosis and nodule formation.<sup>2</sup> Although some people with HCV infection become severely ill, many remain healthy and have no symptoms.<sup>3</sup> Whereas chronic hepatitis B virus infection is a major global public health problem with an estimated 1 million deaths per year worldwide from HBV-related hepatocellular carcinoma and liver failure.<sup>4</sup>

Ascites is the most common complication of cirrhosis and is associated with a poor quality of life, increased risks of infections and renal failure, and a poor long-term outcome.<sup>5</sup> Risk of developing esophageal varices is high in cirrhosis

and almost directly proportional to severity of cirrhosis (Child's class). Bleeding is more frequent in males with large size of the varices, presence of red wale markings and Modified Child's Class C.<sup>6</sup> Ascitic fluid should be examined to rule out spontaneous bacterial peritonitis in patients with new-onset ascites and especially in those who have signs of infection, abdominal pain, encephalopathy, or gastrointestinal bleeding.<sup>7</sup> AST/ ALT ratio is a non-invasive and supportive tool and has high specificity in compensated cirrhosis as compared to de-compensated cirrhosis and chronic hepatitis.<sup>8</sup> Ultrasonography can confirm diagnosis by revealing coarse echotexture of liver and portal

vein dilatation though liver biopsy is the standard diagnostic tool.

Use of interferon in compensated cirrhosis has its own limitations, while its role in decompensated cirrhosis remains experimental only.<sup>9</sup>

## **OPERATIONAL DEFINITIONS**

### **Cirrhosis**

Patient will be considered cirrhotic when clinical features like jaundice, abdominal distention etc. are present and ultrasound shows coarse echotexture of liver and portal vein dilatation.

### **Ascites**

It is said to be present if there is history of increasing abdominal girth and examination reveals puddle sign, fluid wave and shifting dullness on percussion with confirmation on ultrasonography.

### **Spontaneous Bacterial Peritonitis**

Patient presents with fever, abdominal pain and ascitic fluid shows total leukocyte count more than 500cells/cu mm with more than 50% polymorphonuclear leukocytes on examination.

## **MATERIAL AND METHODS**

**Setting:** All cases of established diagnosis of liver disease presenting at Bahawal Victoria Hospital Bahawalpur in all four medical units, fulfilling the selected criteria were included in the study from January 2017 to June 2017.

### **Inclusion Criteria**

**The following patients were included in the study**

- **Age more than 15 years regardless of sex**
- Patients having signs and symptoms of cirrhosis and investigations especially ultrasound of abdomen showing shrunken liver with coarse echotexture and dilated portal vein.

### **Exclusion Criteria**

Patients with following diseases were excluded from the study

Viral hepatitis

Bleeding peptic ulcer

Liver metastasis

## **Data Collection Procedure**

Out of the patients admitted through causality department those who showed signs and symptoms of hepatic cirrhosis according to the inclusion criteria were selected on convenient sampling basis. Consent was taken from the selected patients. A detailed history, physical examination and investigations including viral enzymes, viral markers, ascitic fluid examination, ultrasonography etc was carried out wherever required to establish the diagnosis of liver cirrhosis on the basis of the clinical grounds and laboratory investigations.

- Blood complete examination
- Urine complete examination
- Liver function tests
- Serum urea and creatinine
- Serum total protein and albumin
- Prothrombin time
- Viral markers
- Ascitic fluid complete examination
- Ultrasonography abdomen
- Gastroscopy

A specially designed proforma was attached to the patients' charts on admission for observation of the different modes of clinical presentation. The relevant information was recorded on the proformas that was detached at the time of discharge of patients. At the end, patients were classified into class A, B and C according to Child Pugh's criteria and scoring was done and cirrhotic patients having different modes of clinical presentation were statistically analyzed.

## **DATA ANALYSIS**

Data was analyzed by using SPSS version10. Descriptive statistics were used to calculate frequency of modes of presentation of hepatic cirrhosis in patients. It was further classified on the basis of age, gender of patients and the presence of viral markers.

- The quantitative variable of the study, age has been presented as mean  $\pm$  standard deviation (SD).

- The qualitative variables, modes of presentation, gender of the patients and presence of viral markers have been presented as percentages.

These results have been elaborated by the help of tables and figures.

No test of significance was applied as it was simply a descriptive study.

## RESULTS

The study was conducted in one year i.e. from December 2004 to December 2005. Total 50 patients who were diagnosed as a case of liver cirrhosis according to inclusion criteria were enrolled. Following results in various parameters were observed in the study conducted:

- Out of total fifty patients, 29 were male (58%) and 21 were female (42%). Female to male ratio was 1:1.38.

**Table 1:** Cases according to age

Age in years	Number of cases n=50	Relative frequency %age	Cumulative frequency Cf
20.0—29.99	6	12.0	6.0
30.0—39.99	2	4.0	8.0
40.0—49.99	10	20.0	18.0
50.0—59.99	14	28.0	32.0
60.0—69.99	14	28.0	46.0
70.0—79.99	4	8.0	50.0

\*\* Mean age ± Standard deviation (SD) 51.18years ± 13.53

**Table 2:** Cases positive for viral markers (n=46)

Viral markers	Frequency n=46	Percentage %age
Hepatitis C virus	19	38.0
Both (Hepatitis B and C)	16	32.0
Hepatitis B virus	11	22.0

**Table 3:** Various modes of presentation of hepatic cirrhosis

Clinical Presentation	Number of cases n=50	Percentage %age
Ascites	17	34.0
Esophageal Varices	11	22.0
Jaundice	9	18.0
Hepatic Encephalopathy	6	12.0
Spontaneous Bacterial Peritonitis	4	8.0
Hepatocellular Carcinoma	2	4.0
Hepatorenal Syndrome	1	2.0

## DISCUSSION

Cirrhosis is a diffuse process characterized by fibrosis and the conversion of normal liver

- The mean age in these patients was 51.18 years. Most of the cases in males were between 25-75 years (the mean age was 52.24 years, SD ±14.18 years) while in females were 24-70 years (the mean age was 49.71 years, SD ±12.78 years). Table no.1 shows age distribution of the patients.

- Regarding etiological agents for hepatic cirrhosis, 46 cases were positive for viral markers. Distribution according to hepatitis B and hepatitis C in the positive cases is given in table no.2

- It was seen that patients most commonly presents with ascites. Hepatorenal syndrome was least common. The frequency of the different modes of clinical presentations in the study are detailed in table no. 3

architecture into structurally abnormal nodules. Cirrhosis was the 12th leading cause of death in the United States in 2000, accounting for more

than 25,000 deaths.<sup>10</sup> It is important to recognize the signs and symptoms and complications of cirrhosis as early as possible so that preventive measures can be undertaken with the aim of reducing morbidity and improving survival.

This study describes the common and uncommon presentations of this disease as seen at a tertiary care center. Clinical picture ranged from common complications like ascites (34%), jaundice (18%) and hepatic encephalopathy (12%) to rare manifestations like hepatocellular carcinoma (4%) and hepatorenal syndrome (2%). In a study conducted at PNS Shifa, Karachi, ascites was seen in 89% patients while jaundice was present in 64% and hepatic encephalopathy in 19% patients.<sup>85</sup> Another major complication, spontaneous bacterial peritonitis showed prevalence of only 8%. This result is same as the studies abroad where some of the studies show SBP prevalence to be as low as 8%. But studies conducted at other centers at different places in Pakistan showed much higher percentage. It was 32.2% in the study by Muhammad Ramzan Rajput et al at Chandka Medical College Larkana, 33% from Agha Khan University Hospital Karachi,<sup>11</sup> 31 % by Khalid Amin et al at Allied Hospital Faisalabad<sup>12</sup> and 32.9% at Rawalpindi General Hospital.<sup>13</sup> In a study conducted at Jinnah Postgraduate Medical Complex the result was 17%.<sup>14</sup> Another study from Nawabshah has shown the prevalence of 64% for SBP.<sup>15</sup>

The percentage of esophageal varices in cirrhotic patients presenting at Bahawal Victoria Hospital was 22% which is similar to a study conducted by Wasty WH, Yousaf M, Mirza MR in which it's prevalence varied from 20-30%.<sup>16</sup> This is considerably less than a study of Sheikh Zayed Hospital, Lahore in which out of 101 cirrhotic patients, 64.3% showed varices on upper GI endoscopy.<sup>17</sup> These values are comparable to studies in west like the study of D'Amico G, et al in which 30% patients have esophageal varices with compensated cirrhosis, as compared with 60% of those with decompensated cirrhosis.<sup>18</sup> Contradiction of this study with studies conducted at tertiary care centers in other cities indicates that

majority of patients reached hospital only after decompensation of cirrhosis with serious and life threatening complications. Lack of awareness and poor socioeconomic conditions in the area where this study was conducted leads to late diagnosis and high percentage of morbidity and mortality. Complications that can be effectively prevented by early detection and management includes gastrointestinal bleeding due to gastro esophageal varices, spontaneous bacterial peritonitis, and the hepatorenal syndrome

The overall decrease in the prevalence and the mortality abroad as compared to our studies in Pakistan is due to increasing clinical suspicion, early recognition of life threatening complications and proper management.

Viral hepatitis was seen as the major etiological factor as shown by 92% positive cases with percentage of 22% and 38% for HBsAg and anti-HCV, respectively while co-infection was in 32% of the cases. This was almost similar to Nadeem M, et al's study.<sup>19</sup> Farooqi and Farooqi also observed prevalence of viral markers in same range.<sup>20</sup> In a study conducted in Italy, viral infections were detected in 82.6% of patients of which 71.2%, were positive for hepatitis C virus<sup>21</sup>. The increasing cases of cirrhosis due to hepatitis B and C viruses by these studies is very alarming and needs immediate search for modes of transmission.

The female to male ratio in our study was 1:1.38 with 58% males and 42% females. A study by Nadeem and colleagues<sup>19</sup> showed sex distribution of 62% males and 38% females. However, this being not a population based data it may reflect the culture of the country where males have a better access to health facilities. The mean age in our study was 51.18 years in both sexes whereas it was 53.2 in the study by Nadeem. De Bac, et al also observed that majority of cirrhotic patients, about 55% were under 60 years of age.<sup>21</sup>

## CONCLUSION

The most common presentation of liver cirrhosis at Bahawal Victoria hospital, Bahawalpur is ascites. It is followed by bleeding esophageal

varices, jaundice and encephalopathy. Hepatorenal syndrome is rarely seen.

Most of the patients are above fifty years of age with slight preponderance of male sex.

Viral hepatitis is the main factor in causation of cirrhosis. Hepatitis C is positive in majority of cases, either alone or with Hepatitis B as co-infection.

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