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Research Article

**AN ASSESSMENT OF HEPATIC CIRRHOSIS WITH RESPECT
TO AGE, POSITIVE VIRAL MARKERS & DIFFERENT
PRESENTATION MODES AMONG CIRRHOTIC PATIENTS****Sara Ijaz, Sohaira Shahid, Hina Tahir**
UHS, Lahore**Abstract**

Objective: We aimed to determine various presentation modes of hepatic cirrhosis among patients visiting Sir Ganga Ram Hospital, Lahore.

Materials and Methods: Our research profoundly established the liver cirrhosis diagnosis among all the patients visiting the hospital in the timeframe of February to August 2017 at various medical departments of the hospital.

Results: We included a total of fifty patients who fulfilled the research enrollment criteria. Among these fifty patients, males were dominant in population over females as we included 29 male patients and 21 female patients. Majority of the population was in the age bracket of (40 – 70) years. The mean age of the patients was 51.18 years. Various clinical presentation modes included 17 cases of ascites (34%), 11 cases of gastrointestinal bleeding (22%), 9 cases of jaundice (18%), 6 cases of hepatic encephalopathy (12%), 4 cases of spontaneous bacterial peritonitis (8%), 2 cases of hepatocellular carcinoma (4%) and only one case of renal failure (2%).

Conclusion: Among various presentation modes of hepatic cirrhosis, the most repeated onset was of “Ascites”. The other presentation modes included bleeding of oesophageal varices, hepatic encephalopathy and jaundice.

Keywords: Portal Hypertension, Liver Cirrhosis, Esophageal Varices, Hepatic Encephalopathy, Spontaneous Bacterial Peritonitis and Hepatorenal Syndrome.

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INTRODUCTION:

Hepatic cirrhosis is one of the primary causes of the mortality among the Pakistani population [1]. Cirrhosis refers to a diffused process along with nodule formation and fibrosis [2]. Few HCV affected patients also become seriously ill, numerous still remain healthy without any significant sign and symptoms [3]. Whereas, chronic HBV infection also participates among global mortality along with associated liver failure and hepatocellular carcinoma causing about one million deaths [4].

Poor life quality has an association with the onset of "Ascites". It also poses infection risks, poor long-term results and renal failure [5]. The development of oesophageal varices is also among high-risk factors in cirrhotic cases depending upon the cirrhosis degree of severity. Males also present an onset of frequent bleeding with an enlarged varices size, red wale marking presence and modified classification of Child-Pugh [6]. We need to examine "Ascitic Fluid" in order to avoid the chances of spontaneous bacterial peritonitis along with ascites; especially among patients presenting the symptoms of infection, pain in the abdomen, gastrointestinal bleeding and encephalopathy [7]. The ratio of ALT/AST is a supportive and non-invasive tool. It also possesses higher specificity rates for the compensated cirrhosis than chronic hepatitis and decompensated cirrhosis [8]. Confirm diagnosis is possible through ultrasonography which reveals the liver's coarse echotexture and dilation of the portal vein by liver biopsy. Liver biopsy is one of the trustable tools for disease diagnosis. There are various associated limitations in the use of interferon for the incidence of compensated cirrhosis. It has an only experimental role for the diagnosis of decompensated cirrhosis [9]. Cirrhosis refers to a state that presents the features of abdominal distention, jaundice etc. presenting dilation of the portal vein and liver's coarse echo textures in the ultrasonographic assessment. Ascites refers to increasing abdominal pain history with a fluid wave, puddle sign and shifting dullness on percussion along with ultrasonographic confirmation. Spontaneous Bacterial Peritonitis refers to a state of the patients with features of abdominal pain, fever and ascitic fluid showing TLC (Total Leukocyte Count) above "500 cells/cu mm" having above fifty percent polymorphonuclear leukocytes as observed through evaluation.

MATERIAL AND METHODS:

Our research profoundly established the liver cirrhosis diagnosis among all the patients visiting the hospital in the timeframe of February to August 2017 at various medical departments of the hospital. We included the patients of above fifteen years from both genders presenting an onset of cirrhotic symptoms, shrunken liver, dilated portal vein, coarse echotexture and abdominal pain. Whereas, we did not include any patient presenting the features of viral hepatitis, bleeding, liver metastasis and peptic ulcer.

Patient's gave their informed consent about the research protocols. We took a detailed history of various examinations which include viral enzymes, ascitic fluid examination, viral markers, ultrasonography etc. including different clinical assessments including blood complete assessment, urine test, liver function test, urea serum, albumin serum, creatinine serum, total protein serum, prothrombin time, ascitic fluid, viral markers, abdomen USG and gastroscopy. Statistical analysis was carried out for various variables on SPSS software. Patient's classification was made according to the criteria of Child-Pugh classification. We also analyzed qualitative and quantitative variables. Outcomes are shown in the form of Mean, SD, frequency and percentage.

RESULTS:

We included a total of fifty patients who fulfilled the research enrollment criteria. Among these fifty patients, males were dominant in population over females as we included 29 male patients (58%) and 21 female patients (42%). Majority of the population was in the age bracket of (40 – 70) years. The mean age of the patients was 51.18 years. Various clinical presentation modes included 17 cases of ascites (34%), 11 cases of gastrointestinal bleeding (22%), 9 cases of jaundice (18%), 6 cases of hepatic encephalopathy (12%), 4 cases of spontaneous bacterial peritonitis (8%), 2 cases of hepatocellular carcinoma (4%) and only one case of renal failure (2%). Majority of the males were in the age bracket of (25 – 75) years with a mean age of (52.24 ± 14.18) years; whereas, females were in the age bracket of (24 – 70) years having a mean age of (49.71 ± 12.78) years. The age distribution is given in Table – I. Detailed outcomes about positive viral markers and presentation modes is presented respectively in Table – II and III.

Table – I: Age Wise Distribution of Cases

| Age (Years) | Number (50) | Relative Frequency Percentage | Cumulative Frequency Percentage |
|-------------|-------------|-------------------------------|---------------------------------|
| 20 — 29.99 | 6 | 12 | 6 |
| 30 — 39.99 | 2 | 4 | 8 |
| 40 — 49.99 | 10 | 20 | 18 |
| 50 — 59.99 | 14 | 28 | 32 |
| 60 — 69.99 | 14 | 28 | 46 |
| 70 — 79.99 | 4 | 8 | 50 |

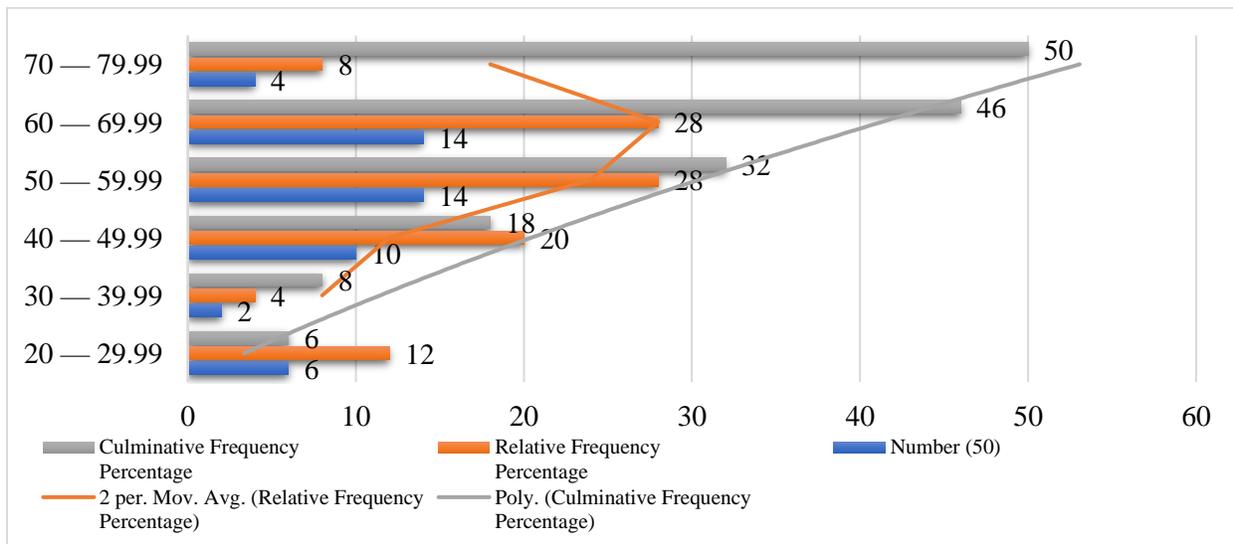


Table – II: Positive Viral Markers Cases (46)

| Viral Markers | Number (46) | Percentage |
|-------------------------|-------------|------------|
| Hepatitis C Virus (HCV) | 19 | 38 |
| Both (Hepatitis B & C) | 16 | 32 |
| Hepatitis B Virus (HBV) | 11 | 22 |

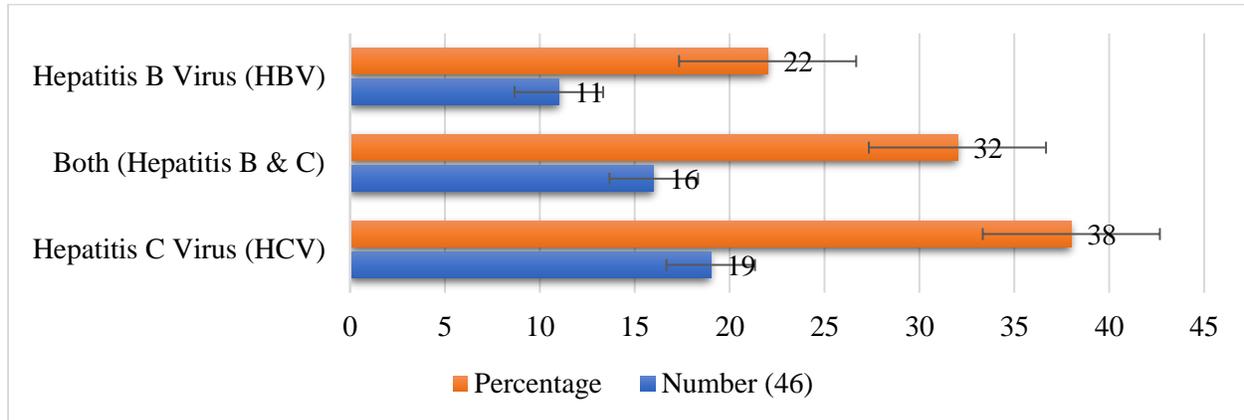
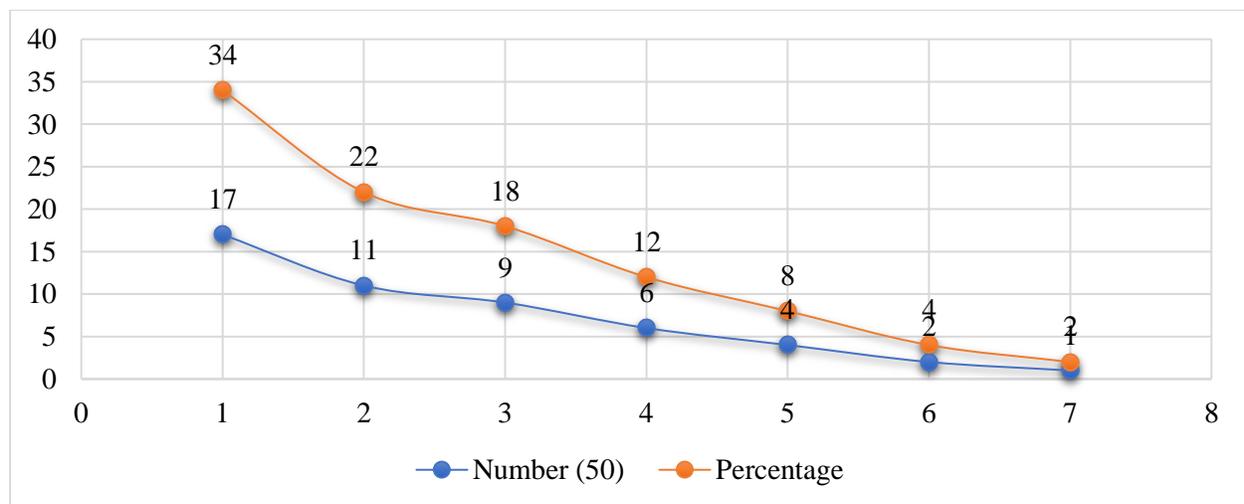


Table – III: Hepatic Cirrhosis Presentation Modes

| Clinical Presentation | Number (50) | Percentage |
|-----------------------------------|-------------|------------|
| Ascites | 17 | 34 |
| Esophageal Varices | 11 | 22 |
| Jaundice | 9 | 18 |
| Hepatic Encephalopathy | 6 | 12 |
| Spontaneous Bacterial Peritonitis | 4 | 8 |
| Hepatocellular Carcinoma | 2 | 4 |
| Hepatorenal Syndrome | 1 | 2 |



DISCUSSION:

Cirrhosis was among twelve leading causes of death in the USA back in 2000 (estimated deaths were 25,000) [10]. We need to know and assess the important symptoms and signs of cirrhosis-related complications in order to reduce the rate of morbidity and mortality among patients. This will also improve survival rate among affected masses. We reported,

various clinical presentation modes included 17 cases of ascites (34%), 11 cases of gastrointestinal bleeding (22%), 9 cases of jaundice (18%), 6 cases of hepatic encephalopathy (12%), 4 cases of spontaneous bacterial peritonitis (8%), 2 cases of hepatocellular carcinoma (4%) and only one case of renal failure (2%). Another local research reported ascites, jaundice, hepatic encephalopathy and spontaneous

bacterial peritonitis respectively among 89%, 64%, 19% and 8%. Some international research outcomes presented eight percent onset of spontaneous bacterial peritonitis. Higher percentages have been reported in various other local studies conducted across Pakistan with respective proportions of 32.2%, 33%, 31%, 32.9%, 17% and 64% [11 – 15].

Our outcomes about oesophageal varices (22%) are the same as reported by Mirza MR, Yousaf M and Wasty WH in the range of 20% to 30% [16]. Another local research presented a higher rate of oesophageal among 101 patients with a proportion of (64.3%) [17]. Western studies also presented similar outcomes with the values of oesophageal varices as (30%) in compensated cirrhosis than 60% among decompensated cirrhosis patients [18]. Higher morbidity and mortality rates are because of poor socioeconomic state and scarcity of general awareness of the disease. An early diagnosis can potentially avoid associated complications (gastrointestinal bleeding, hepatorenal syndrome and spontaneous bacterial peritonitis).

A decrease in the mortality and morbidity among the Pakistani population is because of enhanced clinical assessment and timely diagnosis with proper disease management. Viral hepatitis was reported as a primary etiological factor among positive cases (92%) with HBsAg (22%) and anti HCV (38%); whereas, co-infection was among 32% patients. Nadeem and Farooqi also reported similar outcomes in his series [19, 20]. An Italian research detected viral infections as (82.6%) and HCV positive cases as (71.2%) [21]. An immediate transmission mode detection is important for HBV and HCV contribution in the onset of cirrhosis. Outcomes about the age and gender distribution were also same as reported by Nadeem and De Bac in their series conducted on gender distribution and access to better facilities of healthcare [21].

CONCLUSION:

Among various presentation modes of hepatic cirrhosis, the most repeated onset was of “ascites”. The other presentation modes included bleeding of oesophageal varices, hepatic encephalopathy and jaundice. There is a very rare presentation of hepatorenal syndrome. Majority of the patients were more than fifty years. Males were slightly dominant over the female population. Cirrhosis is primarily attributed to the onset of viral hepatitis. Majority of patients were positive for HCV infection alone or along with HBV infection.

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