CLINICAL SPECTRUM OF CIRRHOSIS LIVER A STUDY OF 167 CASES

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ABSTRACT

Objective: The present study was designed to find out the aetiological pattern, presentation and to assess the severity of liver disease in patients of cirrhosis of at time of presentation.

Study Design: A descriptive study.

Place and Duration of Study: The study was conducted in the medical department of CMH Peshawar from January 2007 to June 2008.

Patients and Method: This study was conducted in the Medical Department of Combined military hospital Nowshera and Combined military hospital Peshawar. Cirrhotic patients were admitted to Medical ward and necessary investigations were done. Serum was tested for Hepatitis B surface antigen (HBsAg) and antibodies against Hepatitis C virus (anti HCV) by ELISA method. Where negative, serum was tested for HBcAb (IgM as well as Total), Anti Nuclear antibody, Anti Smooth muscle antibody, Liver Kidney microsomal antibodies, serum Ferritin level, Transferrin saturation and serum ceruloplasmin level. Liver biopsy was done in selective cases.

Results: Ninety-eight patients (58.6%) were male and sixty-nine (41.3%) were female.Out of 167 patients, 113 (67.6%) were found infected with HCV, 30 (17.9%) with HBV. In 18 patients (10.7%) all serological and metabolic profile was negative. Major presentations of Cirrhosis were coagulopathy (88%), Ascites (53.9%) , Anaemia (45.2%) and Jaundice (35.95%). 66 patients (39.5%) were in class A of Child-Pugh scoring system, 59 patients (35.3%) in class B and 42 patients (25%) in class C respectively.

Conclusion: Cirrhosis liver due to HCV is more common than HBV in this region. Males are affected more than females. Majority of patients are in Child-Pugh class A and B at presentation.

Category: Internal Medicine

Keywords: Cirrhosis. Child-Pugh class, Hepatitis B, Hepatitis C, Hepatitis

INTRODUCTION

Cirrhosis is common disease of liver characterized by diffuse destruction and regeneration of hepatic parenchymal cells and ultimately results in disorganization of lobular architecture. Cirrhosis of liver is common disease responsible for over 10% of all hospital admissions and over 30% of all chronic illnesses in our area [1]. It is generally considered irreversible and premalignant condition. Alcohol is the leading cause of cirrhosis in western world, but it develops only in 10 to 15 % of alcoholics. Hepatitis B and C virus infection account for high proportion of liver diseases in our part of world. The prevalence of hepatitis B is over 10% in the Asia- pacific region and two third of the 350 million people in the world who are chronically infected with hepatitis B infection live in this region [2-4]. Similarly 170 million of the world population is suffering from hepatitis C [5]. The prevalence of chronic hepatitis C in the Asia-pacific region is variable between 4% to 12% [6]. Other less common causes of Cirrhosis include Autoimmune Hepatitis, Wilson disease, Primary Haemochromatosis, Drugs, prolonged intra or extra hepatic cholestasis, hepatic venous outflow obstruction, Budd Chiary syndrome, Veno-occlusive disease, constrictive pericarditis and Primary Biliary Cirrhosis. The present study was designed to find out the aetiological pattern, presentation and assess the severity of liver disease in patients of cirrhosis at time of presentation in this area. Child-Pugh classification was used to assess the severity of disease in cirrhotic

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patients, since it reflects the overall prognosis for these patients.

PATIENTS AND METHODS

This descriptive study was conducted in medical deptt of CMH Peshawar and Nowshera from 1st Jan 2007 to 30th Jun 2008. A total of 167 patients above 12 years of age were included in this study. Detailed history was taken and information on past history of surgical procedures, the frequency of dental visits, blood transfusion, repeated injections, surgical manipulation, instrumentation and endoscopies was obtained.

Past clinical record, clinical signs of cirrhosis liver and an unequivocal ultrasonography report favoring the diagnosis of cirrhosis liver were relied for diagnosis of cirrhosis liver. Cirrhotic patients were admitted to medical ward and detailed clinical examination was done with particular emphasis on signs of cirrhosis liver. Degree of ascites (if present) was recorded and encephalopathy graded according to criteria given in (table-1). Patients were subjected to routine investigations like full blood counts, ESR, Urine microscopy, Liver enzymes including Alanine Aminotransferase and Alkanine Phosphatase, Blood Urea and electrolytes, Blood Glucose, Coagulation profile, ECG and X-ray chest. For assessing severity of liver disease Serum bilirubin, Serum Albumin and Prothrombin time were also done and all patients classified according to Child-Pugh score as per criteria shown in (table-2). Child-Pugh classification of the severity of liver disease is according to the degree of ascites, the plasma concentrations of bilirubin and albumin, the Prothrombin time, and the degree of encephalopathy. A total score of 5-6 is considered grade A (well-compensated disease); 7-9 is grade B (significant functional compromise); and 10-15 is grade C (decompensated disease). These grades correlate with one- and two-year patient survival: grade A–85 to 100 percent; grade B-60 to 80 percent; and grade C–35 to 45 percent. An abdominal ultrasound was done in all the cases for liver size, parenchymal echogenicity, portal vein diameter, spleen size and for detection of ascites. Serum was also tested for Hepatitis B surface antigen (HBsAg) and antibodies against Hepatitis C virus (anti HCV) by ELISA method. Where negative, serum was tested for HBcAb (IgM as well as Total), Anti Nuclear antibody, Anti Smooth muscle antibody, Liver Kidney microsomal antibodies, serum Ferritin level, Transferrin saturation and serum ceruloplasmin level. In some cases 24 hours urine for copper levels was tested as well.

RESULTS

A total of 167 patients were included in the study. Ninety-eight patients (58.7%) were male and sixty-nine (41.3%) were female. Majority of patients (70%) were in age groupe of 40-60 years. Majority of patients (85%) belonged to Peshawar, Nowshera and surrounding areas like Mardan, Sawabi, Akora khattak, Jahanghira and Risalpur. One hundred and thirteen patients (67.7%) were positive for antibodies against Hepatitis C virus (HCV), HBsAg was positive in 30 (18%) patients. Two (1.2%) patients each were detected having Wilson disease and AutoImmune Hepatitis. One (0.6%) each was detected having Primary Haemochromatosis and Primary Biliary Cirrhosis. In 18 (10.7%) patients all serological and metabolic profile was negative (Table-3). Clotting abnormalities were quite common in 147 (88%) patients having a Prothrombin time of more than 3 second differences. Ascites (53.8%), Anaemia (45.2 %), Jaundice (35.9%), splenomegaly (30.4%) and Pedal oedema (28.4%) were major presentations. Haemetemesis was reported in 42 (25.1%) cases, Encephalopathy in 17 (10.2%) and Hepatocellular Carcinoma in 6 (3.6%). Fever, abdominal pain and weight loss were other important presenting symptoms (Table-4). Ninety patients (53.9%) had serum albumin of less than 3.5 g/dl. Using these parameters the whole group of 167 patient were scored on Child-Pugh scoring system. 66 (39.5%) patients were in class A of Child-Pugh scoring system, 59 (35.3%) patients in class B and 42 (25.1%) patients in class C respectively (Table-5).

study done in this area [7]. Durrani had a

Table-1: Grades of Hepatic Encephalopathy

Grade	Mental Status	Asterexis
1	Euphoric or depressed, mild Confusion, slurred speech, inversion of Sleep rhythm	+/-
2	Lethargy, moderate confusion	+
3	Marked confusion, incoherent speech, Sleeping but arousable	+
4	Coma, initially responsive to noxious Stimuli, later unresponsive	-

Table-2: Child-Pugh classification of severity of liver disease

Parameter	Points assigned		
	1	2	3
Ascites	Absent	Slight	Moderate
Bilirubin, (mg/dL)	<2	2-3	>3
Albumin, (g/dL)	>3.5	2.8-3.5	<2.8
Prothrombin time (Seconds over control)	<4	4-6	>6
Encephalopathy	None	Grade 1-2	Grade 3-4

A total score of 5-6 is considered grade A (well-compensated disease); 7-9 is grade B (significant functional compromise); and 10-15 is grade C (decompensated disease).

Table-3: Aetiological factors of cirrhosis patients (n=167)

Aetiological factors	Number	%
Anti HCV antibodies	113	67.7
HBsAg	30	18
Idiopathic	18	10.8
Wilson's disease	2	1.2
Autoimmune Hepatitis	2	1.2
Primary biliary cirrhosis	1	0.6
Primary haemochromatosis	1	0.6

Table-4: Clinical Features of Cirrhosis (n=167)

Coagulopathy	88 %
Ascites	53.8 %
Anaemia	45.2%
Jaundice	35.9 %
Splenomegaly	30.4 %
Oedema feet	28.4 %
Upper GI bleed	25.1 %
Fever	20 %
Hepatic coma	10.1 %
Palmar erythema	8.6 %
Spider naevi	6.4%
Gynaecomastia	5.1%

Table-5: Child- Pugh Classification of Patients of Cirrhosis Liver (n=167)

Child Pugh class	No. of Patients	%
A	66	39.5
B	59	35.3
C	42	25.1

DISCUSSION

In this study cirrhosis was mostly affecting middle aged people. This observation is quite comparable with another similar finding in the province of balochistan [8]. Male prepondenance as in this study has been reported by another study in recent past in North West Frontier of Pakistan (NWFP) [9]. Majority of patients presented with non specific symptoms such as anorexia, generalized weakness, weight loss and body aches and coagulopathy. Another study conducted in NWFP has shown splenomegaly, anaemia, Ascites, pedal oedema and jaundice in more than half of the patient with cirrhosis liver [10]. These results are slightly higher than our study. Other studies [11-13] done in different parts of Pakistan have shown results more or less similar to our study. However some of these studies have shown upper GI bleed and hepatic encephalopathy occurring at a higher rate in patients of cirrhosis. HCV had highest frequency in our study and this observation is comparable to other studies done in NWFP [7, 10, 14]. Majority of these studies have shown incidence of HCV between 30% to 50% in patients of cirrhosis. Our study shows that its incidence has further increased. HBV was the second most common cause. It confirms the impression that HCV and HBV are becoming the predominant factors responsible for chronic liver disease in our population, however frequency of HCV is much more than HBV. In some patients no aetiology was determined and this is comparable to other

studies done in Pakistan. Two patients were found to be suffering from Wilson disease. They were diagnosed on basis of increased 24 hour urinary copper levels and liver biopsy. Two patients were suffering from Autoimmune Hepatitis. Another patient was found to be suffering from Primary Haemochromatosis. He was a 40 year old male, his serum ferritin level was markedly raised and diagnosis confirmed on liver biopsy. All 167 patients were scored on Child-Pugh scoring system, In our study highest number of patients were in class A of Child-Pugh scoring system, followed by B and class C. In another study done in NWFP 30 % patients were in class B and 70% in class C of Child-Pugh scoring system [7]. None of the patient was in class A in that study. However other studies done in different parts of country [12, 15, 16] have shown results which are not much different from our study.

CONCLUSION

It was observed that HCV is more common than HBV in patients of cirrhosis liver in this region. Males are affected more than females. Coagulopathy, ascites, anaemia and jaundice are major presenting features. Majority of patients are in Child-Pugh class A and B at presentation.

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