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Original Article

Clinical Characteristics and Endoscopic Findings of the Patients with Cirrhosis of the Liver in a Tertiary Care Centre in Eastern Nepal

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Abstract

Background

Studies on clinical characteristics and upper gastrointestinal endoscopic findings of the cirrhotic patients in a tertiary care centre are sparse from eastern region of Nepal. The aim was to profile these patients clinically and analyse the endoscopic findings.

Material and Methods

This was a cross-sectional analytical study carried out in the Department of Medicine of Nobel Medical College, Biratnagar from 30st September 2012 to 30th August 2013(one year). After admission, detail medical history and meticulous clinical examination was carried out in every patient with clinical diagnosis of cirrhosis of liver. Routine, biochemical, hematological, imaging and special investigations were sent as per clinical scenario. Upper gastrointestinal endoscopy was carried out in all patients. Basic descriptive statistics were used to present the data.

Results

A total of 104 patients were enrolled in our study. The mean age was 50.09 years ± 11.79 (Range 26-79), of which 60% were males. Almost 70% of the patients were from productive age group (31-70 years). All the patients were symptomatic. Chronic excessive alcohol consumption was the commonest cause of cirrhosis (80.76%). The major clinical presentations were ascites (83.65%) and jaundice (79.92%). Pedal edema was the commonest (85.6%) presenting sign. Diabetes mellitus and pneumonia were common comorbidities. Gastroesophageal varices were commonest (70.19%) endoscopic finding.

Conclusion

Cirrhotic patients presented late with complete decompensation in the form of ascites, jaundice and upper gastrointestinal bleeding from esophageal varices. Mostly people with productive age group were affected.

Key Words: *Clinical characteristics, cirrhosis, endoscopic findings*

Introduction

Cirrhosis of liver is a diffuse process characterized by fibrosis and the conversion of normal liver architecture into structurally abnormal nodules [1]. This has emerged as a major cause of global health burden. It was the cause of 31 million Disability Adjusted Life Years (DALYs) or 1.2% of global DALYs, in 2010 [2]. Cirrhosis is among the top causes of death and kills nearly 150,000 people worldwide each year. Alcoholic cirrhosis accounts for

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nearly (38-50%) of all cirrhosis related deaths. It is the third leading cause of death in people aged between 25-65 years exceeded only by cardiovascular diseases and cancer [3]. In Nepal, chronic alcohol abuse is a major public health problem and is the commonest cause of the cirrhosis of the liver [4]. Portal hypertension is the major complication and is responsible for the upper gastrointestinal (UGI) bleeding, ascites, hepatorenal syndrome and hepatic encephalopathy. Clinically significant portal hypertension is defined above threshold of 12 mm Hg. Bleeding from the esophageal varices is the most serious complication of portal hypertension with high morbidity and mortality [5,6]. Prospective studies have shown that more than 90% of the patients with cirrhosis will develop oesophageal varices sometime in their life and 30% of them will bleed [7,8]. Variceal haemorrhage accounts for (10-30%) of all cases of UGI bleeding and accounts for 80-90 % of bleeding episodes in cirrhotic patients [9,10]. Apart from variceal bleeding, cirrhotic patients bleed 7% episodes from gastric varices, and (5-20%) form congestive gastropathy. peptic ulcer, Mallory-Weiss tear and other sources account for the remainder [11].

Gastroesophageal varices are the commonest cause of upper gastrointestinal bleeding in cirrhotic patients [12]. UGI endoscopy is the primary modality for determining the cause of bleeding in case of cirrhosis.

To the best of my knowledge, the studies regarding the clinical profile and endoscopic findings of the patients with cirrhosis of liver are sparse in eastern region of Nepal. The aim of the study was to analyze clinical and endoscopic profile of these patients in our setting.

Material and Methods

This was a cross-sectional analytical study carried out in Department of Medicine of Nobel Medical College, Biratnagar from 1st October 2012 to 30th September 2013 (one year). After admission, detail medical history and meticulous clinical examination were carried out in every patient with clinical diagnosis of cirrhosis of liver. Routine biochemical, haematological, imaging and special investigations were sent as per clinical scenario. Upper gastrointestinal endoscopy was carried out in all patients. The collected data was entered in Microsoft Excel 2013 and converted into Statistical Software Package for Social Sciences (SPSS 11.5 version) for statistical analysis for descriptive statistics.Percentage, Mean, Median, Standard deviation (SD) and Interquartile range (IQR) were calculated and tabular and graphical presentation made accordingly.

Results

During the period of one year, a total of 104 patients with cirrhosis of liver were enrolled in our study.

Socio-demoghraphic characteristics

The mean age was 50.09 years ± 11.79 (Range 26-79), of which 60% were males. Almost 70% of the patients are from productive age group (31-70 years). Most of them (60%) were agricultural workers and more than 80% patients did not have formal education.

Table 1: Age distribution of the study subjects

Age (years)	Number	Percentage
Less than 30	6	5.77
31-40	21	20.19
41-50	28	26.92
51-60	24	23.08
61-70	20	19.23
More than 70	5	4.81

Table 2: Symptomatdogy of the study subjects

Presentations	Number	Percentage
Ascites	87	83.65
Jaundice	80	79.92
UGI Bleeding	48	46.15
Hepatic encephalopathy	31	29.8
Fever	31	29.8

Spontaneous bacterial peritonitis(SBP)	27	25.96
Hepatorenal syndrome	10	9.6

Nearly 80% of the patients have ascites and jaundice during presentation.

Table 3: Clinical signs

Clinical signs	Number	Percentage
Pedal edema	89	85.6
Splenomegaly	61	58.6
Pallor	50	44.2
Hepatomegaly	40	38.4
Asterixis	36	35.0
Spider angioma	36	35.0
Pubic/axillary hair loss	34	32.7
Palmar erythema	18	16.9
Clubbing	13	12.5
Gynecomastia	12	11.5
Parotidomegaly	11	10.5
Testicular atrophy	11	10.5
Breast atrophy	5	4.8
Caput medusa	3	2.9

Most of them (85.6%) have pedal edema.

Table 4: Etiology of cirrhosis

Etiology	Number	Percentage
Chronic alcohol consumption	84	80.76
Hepatitis B virus infection(HBV	6	5.76
Hepatitis C virus infection(HCV)	3	2.88
Alcohol and HCV	2	1.92
Alcohol and HBV	1	0.96
Unknown	8	7.69

Almost (81%) have ethanol induced cirrhosis

Table 5: Co-morbidities

Co-morbidity	Number	Percentage
Diabetes mellitus	7	6.7
Pneumonia	6	5.8
COPD	4	3.8
Pulmonary tuberculosis	3	2.9
Hypertension	2	1.9
CVA	2	1.9
HIV	1	0.96
IHD	1	0.96

Diabetes mellitus and pneumonia are common comorbidities in cirrhotic patients.

Table 6. Endoscopic findings

Endoscopic findings	Number	Percentage
Gastroesophageal varices	73	70.19
Gastric ulcer	6	5.76
Duodenal ulcer	6	5.76
Portal hypertensive gastropathy	4	3.84
Fundal varices	2	1.92
Erosive gastritis	2	1.92
Normal endoscopy	11	10.57

Most of the patients (70.19%) have gastroesophageal varices followed by normal UGI endoscopy in (10.57%) patients. When patients were classified according to modified Turcott Child Pugh classification, it was found that Class A (25%), class B (45%) and class C (30%).

Discussion

During one-year period, 104 patients were enrolled in the study. Mean age of our patient was 50.09 ±11.79 years (26-79) which corroborates with previoustwo differentstudies [13,14] who found mean age of 51.7 ±11.3 years. Other two studies [15,16] found mean age of 57±9 years (30-76) and more or less similar finding were also reported by Dinis-Riberio M et al [17] and Mihas AA et al [18]. This shows that people with productive age group are affected most. In our study, 60% patients were males. This male predominance as such may be due to social and cultural background of our society where alcohol consumption by males is accepted to some extent. In the study done by Fillik L et al [19], (69.6%) were males and Coral GP et al, [20] reported (76.59%) males in their study. Arsad KB et al [13] found (65%) males and Okeke EN et al [21] found (80%) males in their studies. Singh V et al [22] in India found (70%) to be males and Muhammad AN et al [23] found that (68%) were male in their study. This was a surprising finding in our study that the number of males is less as compared to above studies because in

eastern region consumption of alcohol by female is socio-culturally accepted in certain ethnic groups which might have contributed to bulk of our cirrhotic patients.Regarding symptoms during presentation, we found ascites in (83.65%) cases, UGI bleeding (46.15%), jaundice (79.92%), hepatic encephalopathy (29.8%), spontaneous bacterial peritonitis (SBP) in (25.96%), fever (29.8%) and hepato-renal syndrome (9.6%). In a study done by Arsad KB et al [13], involving 282 patients, it was found that (57%) presented with UGI bleeding, (47%) with hepatic encephalopathy, (9%) with hepatorenal syndrome. Muhammad AN et al [23] studied 100 patients and following symptoms were noted during presentation, ascites (76%), jaundice (41%), hepatic encephalopathy (38%), UGI bleeding (42%) and fever in (24%). Another study done by Bell H et al [24] in Norway including 100 patients found ascites in (67%)and UGI bleeding (34%). Tung T et al [25] found haematemesis as presenting symptom in (15-25%) and fever (35%). Bunay KD et al [26], studied 45 patients and ascites was noted in (73.3%), UGI bleeding (40%) and hepatic encephalopathy (24.4%). Mihas AA et al [18] reported fever in (54%), hepatic encephalopathy (67%). In other study Pelletier G et al [27] found UGI bleeding in (42%), hepatic encephalopathy (50%). In the study by Fillik L et al [19], jaundice was present in (54.5%), hepatic encephalopathy in (50.7%), and fever in (38.8%). In the study by Iqwal S et al [28] (65.6%) had jaundice, (54.9%) had encephalopathy and 19.6 had UGI bleeding. Nadeem MI et al [16] found jaundice in (64%) and hepatic encephalopathy in (19%). The above variation in patient's clinical characteristics reported by different studies is probably due to variation in study methodology, geographical location and social-cultural background of the study population. Regarding stigmatas of chronic liver disease, pedal edema (89%)was the commonest presentation followed by splenomegaly (61%) and pallor (50%) in our study. Nadeem MI et al [16] reported pedal edema in (92%),clubbing (25%), palmar erythema (25%),testicular atrophy (4%), gynecomastia (4%),pubic hair loss (2.4%), parotidomegaly (1.2%),spider naevi (1.2%).Tung T et al [25] found hepatomegaly in (70%), splenomegaly 35-(50%).In our study, chronic alcohol abuse was the commonest cause of cirrhosis (80.76%) followed by chronic hepatitis B virus infection (5.76%) and chronic hepatitis C virus infection (2.8%).In nearly (8%), no cause was found. During the investigation of etiology of the cirrhosis, not all the patient afforded all investigations and few tests were unavailable. Rare cause might have been missed and included in the cryptogenic group. Walsh K [29] found alcohol as a cause of cirrhosis in 80% cases. Morea Ret al [30] found alcohol as cause in (67%), chronic hepatitis C in (15%), combination of chronic hepatitis C and alcohol in (15%) and chronic hepatitis B in (3%). Riepe SP et al [31] reported alcohol as cause in (65%). Mendez-sanchez N et al [32] found alcohol in (39.5%), chronic hepatitis C in (36.6%), chronic hepatitis B in (5%) and cryptogenic in (10.4%). Some of the above findings corroborate with ours whereas some findings donot. Chronic viral infections are increasing in our society adding on or replacing alcohol as a major cause of cirrhosis. Diabetes mellitus, pneumonia and ischemic heart disease were common comorbidities in our study whereas Morea R et al [30] found hypertension, diabetes and ischemic heart disease as common comorbidities in their study. In our study of UGI endoscopic findings, gastro-oesophageal varices were noted in (70.19%) of the patients,

congestive gastropathy (3.84%), gastric ulcer (5.8%) and normal (10.57%). Bunay K D et al [26] found gastro-oesophageal varices in (93.3%). Khuram M et al [33] studied 299 patients who underwent UGI endoscopies and gastro esophageal varices were found in (84.6%) patients. They also noted congestive gastropathy in (11%), gastric ulcer in (0.2%), normal endoscopic findings in (14.7%) which is probably due to larger number of cases in their study. Eighteen percent patients died in hospital in our study, the death rate could have been higher because few serious patients left hospital without medical advice and few referred to other centers because of various reasons.

Conclusion

Most of the patients presented late in decompensated state and many were continuing to consume alcohol just before hospital visit which is preventable cause of cirrhosis. Properly planned health education regarding harmful effects of alcohol and hepatitis B and C infection should be implemented in the community.

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