Spectrum of Chronic Liver Disease in a Tertiary Care Hospital

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Abstract

Objective: To ascertain the nature and etiology of the chronic liver disease occuring In the northern part of Pakistan.
Methods: Results of the liver biopsies performed at Shifa International Hospital from 1994-2000 were reviewed. The reason for the biopsy and results were noted and analyzed.
Results: A total of 518 liver biopsies were performed during this period. Most patients were between the ages of 31-50 years (range 10-70 years). Males and females were equal. Three hundred fifty four (68.3%) patIents had chronic hepatitis. Of these 86% had hepatitis C, 10.7% hepatitis B and 3.1% both B and C. Of 41(7.9%) hepatocellular carcinomas, 29.3% were due to hepatitis C and 14% due to hepatitis B virus infection. Etiology was not known in 53% cases of HCC. Other categories included chronic hepatitis with early cIrrhosis (4.8%), cirrhosis (3.1%), adenocarcinoma (4.6%) and other miscellaneous conditions.
Conclusion: Chronic hepatitis C makes the largest percentage in this series of cases followed by hepatocellular carcinoma, cirrhosis and metastatic adenocarcinoma as causes of chronic liver disease in this part of Pakistan (JPMA 52:56,2002).

Introduction

Chronic liver disease (CLD) is commonly encountered all over the world[1]. Chronic hepatitis has high prevalence[2] and hepatocellular carcinoma is on the rise on the world wide basis[3,4]. Chronic hepatitis C has a progressive course leading to cirrhosis and hepatocellular carcinoma[5]. In Pakistan, high frequency of hepatitis B surface antigen positivity was found many years ago in chronic liver disease and hepatocellular carcinoma (HCC)[6].
Several sporadic cases of chronic liver disease due to HBV and HCV infection have also been reported in Pakjstan[7-9]. Variations in the frequency and characteristics has also been observed in various parts of the country[10-14], This study was conducted to review the frequency of chronic liver disease at Shifa International Hospital.

Materials and Methods

The results of liver biopsies performed on inpatients or outpatients at Shifa International Hospital during 1994 2000 were reviewed. Most of the biopsies were done with standard technique and those in space occupying lesions were done under ultrasound or CT guidance.
All patients with chronic liver disease who had liver biopsies were HCV RNA or HBV DNA positive before the liver biopsies were performed. The specimens were processed in

standard histopathological procedures and interpretation was done by an experienced histopathologist. The necroinflammatory score of the biopsies were recorded according to the previously established criteria15. The portal and lobular inflammation was characterized in four grades and fibrosis stage was 0-4, 4 being cirrhosis and stage 0 being no fibrosis. Cases with the fibroses stage 2 were diagnosed as chronic hepatitis, those with fibrosis stage 111 as early cirrhosis and those with stage IV fibrosis were classifled as cirrhosis of the liver.

Results

A total of 518 liver biopsies were performed. Their ages ranged from 10 to over 70 years. Majority were between the ages of 3 1-40 years. There were 266 males and 252 females, with a slight predominance of females in cases of chronic hepatitis.
Out of total of 518 patients, 354 patients (68.3%) had chronic hepatitis, 41(7.9%) hepatocellular carcinoma, 25 (4.8%) chronic hepatitis with early cirrhosis and 16 (3.1%) cirrhosis. The remaining cases had other hepatic lesions (Table 1).

Table 1. Etiology of chronic liver disease (n=518).

Diagnosis	No.	%
Chronic Heaptitis	354	68.3
Chronic hepatitis with early cirrhosis	25	4.8
Cirrhosis	16	3.1
Hepatocellular carcinoma	41	7.9
Adenocarcinoma	24	4.6
Fatty changes	8	1.6
No tissue	12	2.3
Normal Histology	11	2.1
Granuloma	4	0.8
Miscellaneous	23	4.5
Total	518	100

“Chronic persistent hepatitis-4, Non specific inflammation-4, Resolving inflammation-3, Glycogen Storage disease-2,1-lepatoblastoma-2, Hemosiderosis-1, Dubin Johnson Syndrome-2, Cholestasis-2, Carcinoid-2, Lymphoma-1.
Three hundred and five (86.2%) cases of chronic hepatitis and 12 (29.3%) cases of HCC

were HCV positive. HBV infection was noted in 38 (10.7%) cases of chronic hepatitis and 6 (14.6%) patients with HCC (Table 2).

Table 2. Etiology of chronic hepatitis and hepatocellular carcinoma.

Diagnosis (Total No.)	HCV		HBV		HCV+HBV		Unknown	
	No.	%	No.	%	No.	%	No.	%
Chronic hepatitis (354)	305	86.2	38	10.7	11	3.1	0	0
Hepatocellular carcinoma (41)	12	29.3	6	14.6	1	2.4	22	53.7

Discussion

This study revealed that chronic hepatitis C' is the commonest chronic liver disease encountered in our institution. A total of 68.3% patients had chronic hepatitis and when chronic hepatitis with early cirrhosis and cirrhosis were included, the overall frequency of chronic liver disease was 76% which is similar to the would wide trend of rising HCV infection[13,14]. Flepatitis B and C are transmitted by blood products, sharing needles and by sexual contact[16]. and un-safe injectiOn practices[17,18]. In Pakistan, sharing tooth brushes and razors[19] and even electric razors[20] are also potential sources of spread of these viruses. Pakistani population has delayed cutaneous hypersensitivity response and possibly hyperactive cell mediated immune responses along with heavy exposure of hepatitis virus which may be responsible for increased incidence of chronic liver disease[21].

The frequency of chronic heaptitis C in this study (76%) is much more than similar studies reported from this area (18%)[13] and Balochistan (40%)[14]. This is, however, in conformity with another similar study from our area[22]. We found combined hepatitis B and C infection in 3.1% which is much lower than previous series (16%)[23]. Cirrhosis was noted only in 16 patients (3.1%) and early cirrhosis in 25 patients (4.8%) of the cases which is a much lower figure than 21% cases of cirrhosis found by others[14].

The incidence of hepatocellular carcinoma at a younger age is rising in United States and else where in the world[3,4]. Earlier studies from Pakistan have shown that hepatitis B and C have been the cause of many cases of 11CC with HCV infection in 33% and HBV in 67% of cases from Karachi[24]. In a large study from Karachi, hepatitis B surface antigen and other hepatitis B viral markers were present in 60% of cases of HCC[25]. However, after the discovery of hepatitis C virus, several studies have shown that upto half the cases of HCC had serological evidence of HCV[22,26,27], as is seen in this study.

A high frequency of CLD and HCC due to HCV infection indicates that measure should be taken to deal this problem. They include public education to avoid sharing of the needles, razors, tooth brushes, avoiding unnecessary injections and safe injection and transfusion practices[18]. At the government level, universal immunization for hepatitis B and strict blood screening for hepatitis B and C in all blood transfusion centers will yield positive results. This also would mean an early and appropriate treatment of chronic hepatitis C. with anti-viral agents and periodic screening of cirrhosis patients with alpha feto protein and liver sonography for early detection of HCC.

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