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Spectrum of Liver Diseases
in Liver Clinic at Bir Hospital



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Submitted by

Dr. Anil K. Mishra

Principal Investigator

RESEARCH TEAM

1. Dr. Anil K. Mishra, Principal Investigator¹
2. Dr. J. K. Shrestha, Co-Investigator
3. Dr. B. R. Pradhan, Co-Investigator



1. Liver Unit, Bir Hospital, Katmandu, Nepal, and Nepal Health Research Council, Ramshah Fath, Kathmandu, Nepal, Tel: +977-1-254220, 227460, Fax No. +977-1-262469, 268284, Post Box No. 7626, e-mail: nhrc@healthnet.org.np, nhrc@mos.com.np

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1. INTRODUCTION

In Nepal, as in many developing countries, diseases related to the liver and biliary tract are very common.

About 10% of the patients admitted to the medical wards of Bir Hospital have chronic liver disease (CLD). Hepatic coma, either due to cirrhosis of liver or fulminant hepatitis and UGI bleeding - from esophageal varices due to CLD is the common emergency admissions in this hospital.

Besides CLD associated with alcohol and HBV, the etiology is not yet clear in a large group of patients. Other common liver diseases in Nepal include pyogenic and amoebic liver abscesses and hydatid cysts.

Regarding the acute liver diseases acute viral hepatitis is the most common and the infection with HBV is the major public health problem, which is practically preventable.

2. AIMS & OBJECTIVE

To seek the pattern of liver disease prevalent in our community

3. LITERATURE REVIEW

Alcoholic Liver Disease -

1. Hepatic Steatosis
2. Alcoholic Hepatitis
3. Cholestasis
4. Alcoholic Cirrhosis

1. *Hepatic Steatosis* - This is fatty infiltration of liver, which may be reversible upon withdrawal of causative agent. Sometimes, it is non alcoholic hepatic steatosis which is not that much harmful as alcoholic one.
2. *Alcoholic Hepatitis* - It is characterized by acute or chronic inflammation and parenchymal necrosis of the liver induced by alcohol. The frequency of alcoholic cirrhosis is estimated to be about 8-15% among persons who consume an average of 120 g of alcohol daily for about 10 years. Genetic factors may also account in part for differences in susceptibility. Women appear to be more susceptible than men in part because of lower gastric mucosal alcohol dehydrogenase levels. In individuals who drink alcohol excessively, the rate of ethanol metabolism can be sufficiently high to permit the consumption of large quantities of spirit without raising the blood alcohol level over 80 mg/dl.

Clinical features: Symptoms and signs - It may vary from an asymptomatic patient with an enlarged liver to a critically ill individual who dies quickly. Complaints of anorexia and nausea, and the demonstration of hepatomegaly and jaundice strongly suggest the diagnosis. Abdominal pain and tenderness splenomegaly, ascitis, fever and encephalopathy may be present.

3. *Cholestasis* - It is impairment of bile flow which is mainly intrahepatic in alcoholic liver disease. The presentation is deep jaundice, pruritus, clay stool and general debility. This is also serious stage of alcoholic liver disease.
4. *Alcoholic Cirrhosis* - Cirrhosis is the end result of hepatocellular injury that leads to both fibrosis and nodular regeneration throughout the liver. Cirrhosis is a serious and irreversible disease and is the eleventh leading cause of death in USA, with an age-adjusted death rate of 9.2 per 100,000 per year, over 45 % cases alcohol related.

Clinical features: Symptoms and signs - Cirrhosis may cause no symptoms for long periods. The onset of symptoms may be insidious or less often, abrupt. Weakness, fatiguability, muscle cramps and weight loss are common. In advanced cirrhosis, anorxia is usually present and may be extreme, with associated nausea & vomiting. Abdominal pain, menstrual abnormalities, impotence, loss of libido, sterility, enlarged breasts, haematemesis may be present. In 70% of cases, the liver is enlarged, palpable and fever. Spidernaevi, palmer erythema & evidence of vitamin

deficiencies, weight loss, wasting, are present. Jaundice is mild at first, increasing in severity during the later stages of the disease. Ascites, pleural effusions are late findings.

Hepatitis B virus - It is a 42 nm hepadnavirus with a partially double stranded DNA genome, inner core protein and outer surface coat (HBsAg). HBV is usually transmitted by inoculation of infected blood or blood products or by sexual contact and is present in saliva, semen and vaginal secretions. HBV is highly prevalent in homosexuals and IDU. Other groups at high risk include patients and staff at hemodialysis centers, physicians, dentists, nurses etc. The incubation period of HBV is 6 weeks to 6 months.

Liver Abscess: Liver abscesses are either pyogenic or amoebic, the two have similar clinical features.

Pyogenic abscess:

Aetiology:

- a. Biliary obstruction
- b. Haematogenous - Portal vein
- Hepatic artery
- c. Direct extension
- d. Trauma

C/F -

1. Fever with rigour
2. Right upper quadrant pain, sometimes radiating to right shoulder
3. Tendered hepatomegaly
4. Mild jaundice, sever only when large abscesses cause biliary obstruction

Treatment:

1. Antibiotic threapy
2. Aspiration or drainage of pus under USG guidance

Investigations:

1. Liver imaging
2. Blood for TC, DC, ESR & Hb%
3. Needle aspiration of pus & C/S
4. X-ray abdomen including chest
5. L.F.T.

Amoebic Liver Abscess: It is most common in tropical & subtropical regions

-C/F

1. Early symptoms: Local discomfort, malaise
2. Swinging temperature
3. Enlarged tender liver with marked "punch" tenderness
4. A large abscess may penetrate the diaphragm and rupture into the lung from where it's contents may be coughed up.

Investigations:

1. Same as pyogenic
2. Special for amoebiasis:

Stool for R/M/E to see trophozoite

Sigmoidoscopy to see typical flask shaped ulcer

Treatment:

1. Tab. Methonidazole 800mg X TDS X 5 days
2. Aspiration of pus under ultrasound guidance

Hepatocellular Carcinoma (HCC): It is the principal malignant liver tumor that arises from parenchymal liver cells. H.C.C. are associated with cirrhosis in general and hepatitis B or C in particular. Other associations include haemochromatosis, aflatoxin exposure, α -antiprotease deficiency & tyrosinemia.

The presence of HCC may be unsuspected until there is deterioration in the condition of a cirrhotic patient who was formally stable, cachexia, weakness, and weight loss are associated symptoms. The sudden appearance of ascitis, which may

Physical examination may show tender enlargement of the liver, with an occasionally palpable mass. Young patients typically present with a rapidly expanding abdominal mass. Auscultation may reveal a bruit over the tumor when the process has extended to the surface of the liver.

Drug induced hepatitis: The continuing synthesis, testing & introduction of new drugs into clinical practice has resulted in an increase in toxic reactions of many types.

It is of two types -

I. Direct hepatotoxic group

Acetaminophen	Heavy metals
Alcohol	Tetracyclines
Carbon Tetrachloride	Mercaptopurine
Chloroform	Vitamin A

II. Idiosyncratic reactions

Isoniazid	Quinidine
Pyrazinamide	Methyl dopa
Streptomycine	Amiodarone
Phenytoin	Halothane

4. MATERIALS & METHODS

This is a retrospective study done between the year August 2001-July 2002 at Bir Hospital, which is a tertiary referral center of the country.

All the patients attending, the liver OPD and all the patients who were admitted in the indoor were taken as the study population.

5. RESULTS

In the year August 2002 - July 2002, a total of 1347 patients attended the liver OPD

The distribution of diseases is as follows:

SN	Diseases	Number	Percentage
1.	Alcoholic Liver Disease	429	31.8%
2.	HBsAg Positive Cases	194	14.4%
3.	IVC Obstruction	165	12.2%
4.	SBP	165	12.2%
5.	Liver Abscess	68	5%
6.	Gilbert Syndrome	68	5%
7.	HCV Positive	48	3.5%
8.	Bacterial Hepatitis	48	3.5%
9.	Hepatocellular Carcinoma and Secondaries	38	2.8%
10.	Chronic Hepatitis	19	1.4%
11.	Drug Induced Hepatitis	16	1.18%
12.	HBsAg + Anti HCV Positive	9	0.66%
13.	Simple Hepatic Cyst	7	0.66%
14.	HHIV Positive	7	0.5%
15.	Miscellaneous	64	4.7%
	Total	1347	100%

Similarly in the same year, a total of 352 patients were admitted in the differer

The indoor disease pattern is as follows:

SN	Diseases	No.
(A)	Acute Hepatitis	33
	(i) HBsAg Positive	12
	(ii) HBsAg and Anti HCV Positive	10
	(iii) Anti HEV IgM Positive	6
	(iv) HIV Positive	2
	(v) Bacterial Hepatitis	2
	(vi) Anti HAV Positive	1
(B)	Chronic Liver Disease	42
	(i) HBV Related	36
	(ii) HCV Related	6
(C)	Alcohol Related Liver Disease	118
	(i) CLD	65
	(ii) SBP	16
	(iii) Encephalopathy	14
	(iv) GI-bleeding	18
	(v) Withdrawal	5
(D)	Hepatocellular Ca	27
	(i) HBV Related	5
	(ii) Non HBV Related	22
(E)	Liver Abscess	23
	(i) Amoebic	18
	(ii) Pyogenic	5
(F)	Cholestatic Jaundice	5
(G)	Koch's Abdomen	12
(H)	IVC Obstruction	13
(I)	Mixed	11
	Total	284

6. DISCUSSION

Liver disease remains a major health problem in Nepal. There are not much published reports on the spectrum of liver diseases in Nepal, because of limitation in research facility.

This retrospective study was carried out at Bir Hospital liver clinic for one year period to reflect the pattern of liver diseases commonly encountered.

It appears that the alcohol related liver diseases accounts for the maximum number of attendance. In the outdoor, 31.8% of the cases were the alcohol related liver diseases, where as 41.5% at the total admitted cases were due to it.

Among total of 547 cases of alcohol liver diseases, about 15% of patients had alcoholic fatty liver, 25% alcoholic hepatitis and nearly about 60% were cirrhosis of liver. Prevalence of drinking problem in Nepal has been found to be 17% as reported by Sharma A. Shah in a study on outpatients and in patients in a large hospital in eastern Nepal.

The high prevalence of alcoholic liver diseases in Nepal may be due to various factors including cultural, socio-economical and climatic factors.

The lower number of alcoholic fatty liver among the alcoholic liver diseases in our setting may be due to the fact that alcoholic fatty liver is usually asymptomatic.

Severe alcoholic hepatitis is a common cause of death among young people with liver disease in Nepal. On an average one patient in the age group of 30-40 years dies of severe alcoholic hepatitis every week in Bir Hospital. [5]

Viral liver diseases were found to be the next common liver disease. HBV infection is the serious concern among these presentations. Among the outdoor patients, 14.4% had HBsAg positivity. Most of them were found positive during screening for overseas manpower employment.

However, the overall prevalence of hepatitis B in general population is low (HBsAg 1%, anti HBsAb 8%). The high prevalence of hepatitis B in Bir Hospital liver OPD could be attributed to the fact that Bir Hospital is a tertiary referral centre. In the neighbouring country India, which has a cultural similarity and has open border with Nepal, the HBsAg carrier rate in general population is 4.7%. [3]

Acute viral hepatitis accounted for only 11.6%. This lower incidence of acute viral hepatitis in our context may be due to the traditional belief of getting treatment of acute hepatitis from the practitioners of alternative medicine.

Interestingly, IVC obstruction accounts for 12% of total liver OPD attendance and 21% of total indoor admission. This signifies the prevalence of this disease in this subcontinent, which is not seen in the west.

IVC obstruction usually presents either as hepatic venous out flow obstruction, IVC thrombus, IVC thrombophlebitis, or IVC narrowing. It is usually found in the people of low socio-economic group who are more exposed to infections and are also malnourished. Among the female patients with IVC obstruction, there is also a co-factor, that is, ingestion of oral contraceptive pills other than puerperal infection. It has also been found that even sub-clinical infections like gastroenteritis can cause IVC obstruction.

Primary cancer of the liver is common in Nepal and often occurs in younger age groups. Its incidence is estimated to be about one in 20,000 of the population. Chronic Hepatitis B & C accounts for only less than 50% of the primary liver cancer in Nepal. [5]

In the lower order liver abscesses, hepatic cyst and HCV related chronic liver diseases, occupy their respective positions. Among the HCV positive cases about 94% were intravenous drug users of which 74% are carrier of the virus.

Though it appears that liver disease remains an major public health problem in Nepal, our report may not reflect the actual scenario of the country, as it was studied at the tertiary centre.

Hence, these types of studies need to be carried out at different parts of the country so that the cumulative data could be collected and exact report can be published.

7. ACKNOWLEDGEMENT

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3. REFERENCES

1. Santosh M. Shretha et al
Hepatitis 'B' News and Views
Volume No. 1, Nov. 2002
2. Philip Abraham
Spectrum of Liver Diseases in India , BHJ 2002
3. Serin SK, Singh A. K.
Hepatitis 'B' in India Problem and Presence
4. Sarin SK, Malhotra V, Mayyoor , et al
Alcoholic liver disease in general population in Delhi.
Liv June 1988:8 (3): 132
5. Santosh M. Shrestha, Dr. Anil K. Mishra et al
Liver Unit, Bir Hospital
Annual Report of Bir Hospital - 2055.
6. Annual Report of Bir Hospital - 2056.