

Original Article

Epidemiology of Chronic Hepatitis B in Mansehra District, Hazara Division

1. Muhammad Jalal 2. Miss Nazima Rafique 3. Abdul Najeel Khan

1. Asstt. Prof. of Biochemistry 2. Lecturer of Biochemistry 3. Assoc. Prof. of Physiology,
Frontier Medical College, Abbottabad

ABSTRACT

Objective: The aim of this study was focused on the distribution, determinants and dynamics of chronic hepatitis B in a specified population of Mansehra district. The application of this study is to control the health problem.

Design of study: Original prospective observational study.

Methodology: The prospective study was carried out in Shahina Jamil teaching hospital Abbottabad.

Time period: 1st January 2005 to 1st June 2008. All chronic patient (disease lasting for more than three months) were screened for hepatitis B. Redox kit (made in china) was used. Total three hundred people were screened belonging to Mansehra only.

Results: It showed that chronic hepatitis B is fairly common (35%) in Mansehra with the age group of 15-70 year. More common in male and Male to female ratio is 3:1. It was also found that the disease is more common in low socioeconomic group and in labors mostly stayed away from family for a long time. **Conclusion:** Our study found that the hepatitis B is more common in Mansehra with incidence of 3.5% in NWFP. The rate is high in male. The knowledge of people about hepatitis B is inadequate. Hence a mandatory vaccination and health education is recommended.

Key words: Hepatitis B, Mansehra, NWFP.

INTRODUCTION

Hepatitis B is a common global health problem and is spreading rapidly in Developing countries due to lack of health education, poverty and illiteracy¹ Chronic hepatitis B is an infectious disease of liver and is caused by a hepadnavirus; nearly 400 million people are infected by this virus worldwide. 1.2 million are infected only in USA² Majority of these patients are asymptomatic and pose great danger of spreading these infections to the society and medical personnel particularly.³ Both Hepatitis B is transmitted through blood either by percutaneous or body fluids (semen, saliva or vaginal secretion).^{4,5} This infection present with malaise, anorexia, abdominal pain and jaundice but some time there are no symptoms till the development of cirrhosis.^{6,7} There is vaccine available for hepatitis B which is now incorporated in immunization schedule all over the world and it is expected that its incidence will decrease.⁸ Almost two billion people are infected with hepatitis B and more than 350 million have life long chronic liver infection.⁸ Hepatitis B virus circulates in high titres in blood and lower titers in other body fluids and is hundred times more infectious than HIV infections and ten times more

than HCV.⁸ Prevalence of hepatitis B is 4 times higher in black as compared to whites (11.9% compare to 2.6%)⁹. It is estimated that 50% of male carriers and 14% of female carriers will eventually die of the complications of cirrhosis and hepatocellular carcinoma.¹⁰ Pakistan is in the intermediate HBV prevalence area with a carrier rate of 3–4%¹¹. Chronic hepatitis B is a serious problem in Pakistan^{12, 13}. In Pakistan, HBV infection rate is increasing day by day.¹⁴ The incidence of hepatitis B is significantly high. A study conducted in Pakistan showed that 31% cases of acute viral hepatitis, 60% cases of chronic liver disease and 59% of hepatocellular carcinoma are due to HBV infection.¹⁵ The purpose of this study was to assess the epidemiology of chronic hepatitis B in Mansehra district, Hazara Division.

MATERIALS AND METHODS

The study period was three years extending from 1st January 2005 to 1st June 2008. Three hundred (300) patients with symptoms of chronic liver disease were screened. All these patients belonged to Mansehra district of Hazara Division. The age varied from 15 to 70 years. A total of 187 males and 113 females'

patients were tested. Redox kit (made in china) was used.

RESULTS

Out of 300 patients screened 227(75.5%) were male, and 73(24.5%) were females. So hepatitis ratio among male and female was 3:1. It was noticed that the hepatitis B was more prominent (79.6%) in middle age patients than (20.4%) Youngers. Socioeconomically the poor people (barbers, drivers and labors) were more effected (71.4%) than well off people (28.6%). The rate of hepatitis was higher (69.8%) in urban areas of Mansehra than rural area (30.2%). The complications of hepatitis B showed that 1% cases of cirrhosis and 0.3 % cases of carcinoma was appeared during study period. People were not immunized prior to disease.

	Number	%age
Total patients	300	100

Distribution of hepatitis B among peoples

Sex	male	227(75.5%)
	female	73(24.5%)
Age	15-25	24.5%
	25-70	79.6%
Occupation	Drivers	38.2%
	Labors	31.6%
	Barbers	18.1%
Area	Urban	69.8%
	Rural	30.2%
Complications	Cirrhosis	1%
	Carcinoma	0.3 %
Immunization	Not done	

DISCUSSION

Pakistan lies between middle to low income countries with over one-twelfth of labor force is unemployed, over one third of the population subsists in poverty and over half the population is illiterate, with parts of the country being worse than what the national average indicates¹⁶. As Mansehra is a district of NWFP with 1.7 million populations, its adjacent areas are Azad Kashmir, Kohistan, Swat and Abbottabad. The source of income of the most of the people is agriculture, but majority of the people serving in hotels and restaurants, as labour and driver in cities. The study was conducted only on patients with chronic illness of all age group and sexes.

The study was conducted with redox kit but not confirmed with ELISA test. Chronic hepatitis B effect 400million people worldwide. It is estimated that 50% of male carriers and 14% of female carriers will eventually die of the complications of cirrhosis and hepatocellular carcinoma.¹⁷

In Pakistan various studies were conducted. These studies were hospitals as well as clinical based. The mode of transmission of 5 lac people in NWFP is inoculation, sexual contact, improper screened blood transfusion, unsterilized syringes and unsafe dental procedure.¹⁸ In NWFP high HBV prevalence was seen in Upper Dir (5%), Lower Dir (3.2%) and Bannu (2.7%).¹⁸

It was found that the distribution of chronic hepatitis B in Mansehra district had got a highest prevalence and more common between age group 15-50. The male to female ratio is 3:1. the people with poor socioeconomic status were affected more than the other satisfactory people.

- The determinants are highest due to sexual contacts among drivers and labors.
- The drug addicts constitute the secondary determinants
- The blood transfusion, tattooing, piercing of nose, ear and other causes were least.
- Only few cases (3%) develop cirrhosis.
- One case of liver carcinoma was noticed.
- No vaccination was available in this district.

The measures which can reduce the incidence are

- Vaccination by government agencies.
- Health education of peoples by related health department.
- Proper screening of blood and blood products must be carried out before transfusion.
- Disposable syringes and razors must be promoted.
- Proper sterilization of surgical and dental instruments must be carried out.

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Address for Corresponding Author:**Dr. Muhammad Jalal,**

Assistant Professor,

Biochemistry Department, Frontier Medical College,

Abbottabad, Pakistan.