



## Research Article

### ASSESSMENT OF AWARENESS OF HEPATITIS B VIRUS INFECTION IN THE PATIENTS ATTENDING NIUM, BANGALORE, INDIA

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#### ABSTRACT

Hepatitis-B is such a disease which is life threatening and contributing a large man power as well as economical loss worldwide. It is a serious and common infectious disease of the liver affecting millions of people worldwide. Hepatitis-B virus can cause the acute as well as chronic infection. The knowledge and awareness in the general population is of much necessity to avoid the risk of the disease. The present study focuses on the knowledge and awareness about Hepatitis B in the people of Bangalore city, India. The main objective of the study is to assess the awareness about Hepatitis-B Virus Infection in the Patients Attending National Institute of Unani Medicine, Bangalore, Karnataka, India. The present study was a hospital based cross sectional study in which every 10<sup>th</sup> patient was taken for the study from the registration register of NIUM hospital and enquired about the knowledge about Hepatitis-B virus infection through a pretested semi-structured questionnaire, till the statistically calculated sample size of 903 was obtained. The study revealed that the people of Bangalore city, India which is counted among the cities having high literacy rates in India, merely 45 i.e. 5 % out of 903 people enquired have the knowledge about this life threatening disease. The study shows that merely 45 i.e. 5 % out of 903 people have the knowledge about Hepatitis-B Virus infection. In India hepatitis-B is a major health problem. The outcome of this study shows that people of Bangalore city, India are at high risk to develop the disease. More studies with larger sample size should be conducted to refine these results so that more awareness programs should be conducted to create the awareness among the people of Bangalore city, India.

**Keywords:** Hepatitis B; Prevalence; Incidence; Hepatitis-B infection; Hepatitis-B awareness.

#### INTRODUCTION

Hepatitis-B is such a disease which is life threatening and contributing a large man power as well as economical loss worldwide. It is a serious and common infectious disease of the liver affecting millions of people worldwide.<sup>1</sup> It is caused by hepatitis-B virus which can be transmitted through percutaneous i.e. puncture through the skin and mucosal route i.e. direct contact with mucosal membrane, exposure to infectious blood or blood products, through the body fluids.<sup>2</sup> Vertical transmissions of the virus i.e. from mother to child, unsafe sexual inter-course are also important routes for the transmission of the disease. Hepatitis-B virus can cause the acute as well as chronic infection. Acute hepatitis implies a condition lasting less than 6 months, culminating either in complete resolution of the liver damage with return to normal liver functions and structure or a rapid progression of the acute injury towards extensive necrosis and a fatal outcome. Chronic hepatitis is defined as sustained inflammatory process in the liver lasting longer than 6 months.<sup>3</sup> It can progress towards the cirrhosis of the liver, liver cancer, liver failure and death. Persons with chronic infection also serve as reservoir and source for continued hepatitis-B virus transmission.<sup>1</sup> Hepatitis-B is the 10<sup>th</sup> leading cause of death in the world, on the other hand hepato-cellular carcinoma (HCC) ranks 5<sup>th</sup> among the most frequent cancer in human.<sup>3</sup> Now hepatitis-B is becoming a public health problem of increasing concern worldwide, especially in developing countries. Globally about 2 million people are infected with hepatitis-B virus, 350-400 million are chronic carriers and tens of millions of new cases occur annually, of those infected 15-40 % develops cirrhosis or hepatocellular carcinoma.<sup>1</sup> According

to WHO survey more than 2000 million people alive today have been infected with hepatitis-B virus at some time in their life, of these, about 350 million remain infected chronically and become carrier of the virus. Three quarters (3/4) of the world's population live in high endemicity areas. Every year 4 million acute clinical cases of hepatitis-B virus occur and about 25 % of them become carriers. One million people a year die from chronic active hepatitis, cirrhosis or primary cancer.<sup>1</sup> We can easily asses that hepatitis-B is a kind of disease which is responsible for millions of deaths worldwide thus it is of public health concern. These deaths can be avoided or at least can be minimize up to great extent by simply creating awareness among the people and by the implementation of the hepatitis-B vaccination among the adults and especially in children. Vaccination against hepatitis-B virus infection can be started at birth and provides long term protection in more than 90 % of healthy people.<sup>4</sup> Safe and effective vaccines have been available to prevent hepatitis-B infections since 1981. In 1992, the WHO recommended that childhood hepatitis-B vaccination should be included in immunizations programmes of all countries. Over a decade later in 2003, 151 (79 %) of 192 member countries had adopted universal childhood hepatitis-B vaccination policies.<sup>5</sup> This has produced a remarkable reduction in hepatitis-B virus related diseases e.g. in Taiwan, the prevalence of chronic infection in children declined by more than 90 %.<sup>4</sup> Regions are divided into areas of low (< 2 %) prevalence, intermediate (2-8 %) and high (> 8 %) prevalence.<sup>6</sup> In India hepatitis-B is a major health problem. India has intermediate prevalence of HBsAg i.e. 2-10 %.<sup>7,8</sup> The overall carrier rate is often quoted as 4.7 %<sup>9</sup> among the populations studies based on meta analysis.<sup>10</sup> Limited studies have been conducted so

far to know that how much general population actually know or at least have an idea about this fatal disease and its outcomes in India. Hospital based study can't represent any area confined community. But the sufficient sample size may help in knowing the city's prevalence and may pave the way for area confined studies. Hospital always attracts the representative sample of whole community from near and remote areas. Sample from hospital can't definitely be attributed to a particular area of the city. Protection of health and prevention of disease has been the endeavor of human beings since time immemorial. Present study was aimed to find out, that how much population of Bangalore city aware or have the knowledge about Hepatitis-B virus infection. By knowing this we can predict the future risk of hepatitis-B virus infection in the Bangalore city, India community, so that, the preventive measures can be recommended, planned and implemented at appropriate place and at appropriate time.

## MATERIAL AND METHODS

The present study entitled "Assessment of Awareness of hepatitis-B Virus Infection in the Patients Attending Nium, Bangalore, India" was conducted to assess the awareness in general population of Bangalore city, India. To get the representative sample of the said population, outdoor patients, coming from almost all part of the Bangalore city, India and adjacent areas were taken for sampling. Though the population selected as sampling frame may precisely not be representative of the particular area of the Bangalore city, India. But this sample reflects the whole demographic characteristics of the major part of the Bangalore, India. Because of economic, temporal and manual constraints systematic samples were taken from the registration register of the NIUM Hospital. Every 10<sup>th</sup> patient was taken and enquired about the knowledge about hepatitis-B virus infection, till the statistically calculated sample size of 903 was obtained. In the present study all aspects relevant to Hepatitis-B infection were taken into consideration like demographic profile (age, sex, education status, profession etc.) and the other data of relevance viz. history about vaccination, smoking, drinking, unprotected sex, needle prick injury, intravenous drug abuse, and tattooing the skin etc.

**Table 1: Distribution of Patients according to Age (n = 903)**

Age (in year)	No. of Patients	Percentage (%)
1-19	88	10
20-29	178	20
30-39	225	25
40-49	169	19
50-59	120	13
60-69	96	10
70 and above	27	3
Total	<b>903</b>	<b>100</b>

**Table 2: Distribution of Patients according to Sex (n = 903)**

Sex	No. of patients	Percentage (%)
Male	503	56
Female	400	44
Total	<b>903</b>	<b>100</b>

**Table 3: Distribution of Patients according to Place of Birth (n = 903)**

Place of Birth	No. of Patients	Percentage
Bangalore	886	98
Outside Bangalore	17	2
Total	<b>903</b>	<b>100</b>

**Table 4: Distribution of Patients according to Occupation (n = 903)**

Occupation	No. of Patients	Percentage
Unemployed	620	69
Semiskilled	178	20
Skilled	82	9
Professionals	23	2
Total	<b>903</b>	<b>100</b>

**Table 5: Distribution of Patients according to Knowledge about Hepatitis-B (n = 903)**

Knowledge about Hepatitis-B	No. of Patients	Percentage
Yes	45	5
No	858	95
Total	<b>903</b>	<b>100</b>

**RESULTS AND DISCUSSION**

As shown in Table 1, in the present study, out of 903, 88 (10 %) patients were observed in age group of 1-19, 178 (20 %) were in age group of 20-29, 225 (25 %) patients were in 30-39 years age group, 169 (19 %) patients were in 40-49 years age group, 120 (13 %) patients were in 50-59 years age group, 96 (10 %) patients were in 60-69 years age group and 27 (3 %) patients were in 70 and above years age group. As shown in Table 2, in the present study sexual distribution revealed out of 903, male patients were observed as 503 (56 %) while 400 (44 %) were observed as females. The present study consisted of 98 % volunteers from Bangalore, India while the 2 % were from outside the Bangalore, India. (Table 3) On the basis of this finding it can safely be said that the sample was representative of Bangalore city, India as, the data was recorded on the basis of birth place, not on residence. So, this sample can be quoted as of Bangalore city, India which was further substantiated by the observations of 100 % urban resident of Bangalore, India. As shown in the Table 4 in the present study, the occupational distribution of under studied sample was enquired as Unemployed, Semiskilled, skilled and Professionals, occupational percentage was as 69 % (620), 20 % (178), 9 % (82) and 2 % (23) respectively. Profession bears a direct relation with chances of exposure to hepatitis-B as some professions are such in which chances of frequent injuries are very high e.g. laborer, tailor, barber etc. These professionals may contact hepatitis-B inadvertently. As shown in the Table 5 in the present study, Distribution of Patients according to Knowledge about Hepatitis-B of under studied sample was found that only 45 (5 %) have the knowledge and 858 (95 %) did not know anything about hepatitis-B virus infection. The knowledge of the disease bears a direct relation with chances of exposure to hepatitis-B and steps taken to avoid the exposure and thereby the infection of the disease.

**CONCLUSION**

As the study shows that the people of Bangalore city, India which is counted among the cities having high literacy rates in India, merely 45 i.e. 5 % out of 903 people enquired have the knowledge about this threatening disease. In India hepatitis-B is a major health problem. India has intermediate prevalence of HBsAg i.e. 2-10 %. The overall carrier rate is often quoted as 4.7 % among the populations studies based on meta analysis. This outcome shows that people of Bangalore city, India are at high risk to develop the disease. Limited studies have been conducted so far to know that how much general population actually know or have an idea about this fatal disease and its outcomes in India. More studies with larger sample size should be conducted to refine these results so that more awareness programs should be conducted to create the awareness

among the people of Bangalore city, India.

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