

Hepatitis B (HBV) Awareness and Discrimination among the Infected Patients in Coastal Eastern India

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Abstract

Background and Aim: Hepatitis B (HBV) infection had high prevalence in India. There is paucity of data regarding knowledge and awareness amongst the hepatitis B infected patients. The present study was designed to evaluate the degree of awareness on HBV infection and feeling of discrimination amongst the infected patients.

Material and Method: The diagnosed hepatitis B infected cases attending the OPD of Gastroenterology department of IMS & SUM hospital; Bhubaneswar, Odisha in between December 2017 and April 2018 were included in the study and evaluated by a set of questionnaires.

Result: Cosequitive 53 hepatitis B infected patients (Male: Female – 3:1) were evaluated. Most (70%) of them were literate. Only 17% cases had received HBV vaccination without having enough idea regarding their immunity status against hepatitis B. 77% cases were aware that HBV infection may be transmitted by sharing of the tooth brush. 88%, 71%, and 21% cases were apprehensive that HBV transmission may occur by consuming food with infected person, by coughing and shaking of hands with infected persons respectively. 75%, 90% and 63% cases were aware that HBV infection can spread by sharing of razor, may spread sexually, and by sharing of needles respectively. 52% and 35% cases were not sure regarding mother to child transmission and HBV prevention by vaccination respectively. 54% cases were not aware that liver cancer can occur due to infection. 60% cases were unaware regarding lifelong infectiveness of infected patients. 87% cases were aware that HBV infection cannot be cured. 96% cases were ashamed of suffering from HBV infection and felt that they were discriminated by their family and colleagues in the workplace to some extent. Only 40% showed their willingness to disclose their infective status. All the cases showed their interest to prevent HBV transmission by adopting preventive measures.

Conclusion: Most of the hepatitis B infected cases from our region had insufficient knowledge regarding HBV infection, and they feel discriminated, so there is a need for mass awareness campaigning for its prevention and elimination.

Key Words: Awareness, discrimination, Hepatitis B virus, Vaccine

Introduction

Hepatitis B is a burning health problem all over the world for which major portion of health resources were utilized; although it is potentially preventable by appropriate and timely vaccination. The increasing prevalence of hepatitis B infection is a constant threat to the community as it amounts to lot of cases of liver cirrhosis and hepatocellular carcinoma resulting in significant morbidity and mortality in particular in developing and underdeveloped countries.^{1,2} Around 200 cores of the world's population have been exposed to the hepatitis B virus (HBV) infection, out of which 350 million persons harbor it chronically.³ India has the intermediate endemicity zone for hepatitis B infection (prevalence of 2–7%, with an average of 4%), with approximate disease burden of about 50 million.⁴ Higher endemicity was usually observed in the tribal and coastal areas where the higher burden was usually maintained through intracaste marriages, illiteracy, lack of awareness, poor exposure to health care resources, tribal customs and rituals. The key factors responsible for global epidemic of hepatitis B include reuse of unsterilized syringes, untested blood transfusion, tattooing by sharing needles, mother to child transmission and unsafe sexual practices. Although Hepatitis B is a significant public health problem, yet disease awareness amongst the hepatitis B infected cases was not assessed anywhere in India. As management is quite expensive and most of the patients cannot afford for it because of their financial constraint, universal vaccination following birth was usually advocated. General public particularly the health care personnel should be familiar with epidemiological factors of disease for instance communicability, sequel, prevention and control. As there is paucity of published reports on hepatitis B, this present study was carried out with an aim to assess the awareness of HBV infection and feeling of discrimination amongst the hepatitis B infected cases. This study may identify the gaps in knowledge and misconceptions about Hepatitis B infection in the hepatitis B infected cases, thereby helping in planning effective health education measures for its prevention and elimination.

Materials and Methods

The present study was conducted in the Department of Gastroenterology, IMS & SUM hospital, Bhubaneswar, Odisha of Coastal Eastern part of India. The hepatitis B infected cases attending the OPD of the Gastroenterology department in between December 2017 and April 2018 were taken into study and evaluated by set of questionnaire, which was developed to assess the knowledge regarding HBV infection; its vaccination, natural course and outcome. The questionnaire was also designed to assess the demographic status of the study subjects, including the educational status, source of the awareness, vaccination status of the study group, their children, and family members, and reasons for non-vaccination, and the perceived culpability for lack of awareness (government/media/doctors/personal) about existence/necessity of vaccine and community attitudes towards patients with HBV infection. The questionnaire was explained in detail to every included case and their opinions were recorded. Written informed consent was obtained from each of the participants. Institutional Ethical committee clearance was obtained prior to start of the study. After compilation, the data were analyzed using software SPSS 22.

Results

The present study population included 53 hepatitis B infected subjects, out of which, 70% were males and 30% were females. Most of the subjects (68%) were aged less than 40 years which indicates that most of the recruited subjects belong to younger generation. Two-thirds of the study population (65%) hailed from rural regions. The educational status was described in the table 1.

Table 1 Educational status of the study population

Education	No of cases	%
Matriculation	4	7
undergraduate	12	23
Graduate	25	47
Post graduate	12	23

Most of the subjects (70%) were literate. Only 17% cases received hepatitis B vaccination in the past but they never tested their immunity status against hepatitis B and also not taken the scheduled vaccine doses at appropriate time. The level of awareness regarding HBV infection in the study population was narrated in the table 2.

Table2 Level of awareness regarding HBV infection in the study population

Knowledge about HBV	Yes (%)	No (%)	Not sure (%)
Can it be spread by someone who looks healthy	52	25	23
Can it be spread from person to person by eating food prepared by the infected person	75	6	19
Can it be spread by sharing a toothbrush with an infected person	77	4	19
Can it be spread by eating food that has been pre-chewed by an infected person	88	2	10
Can it be spread by being coughed on by an infected person	71	10	19
Can it be spread by sharing razors with an infected person	75	6	19
Can it be spread by sharing food plates with someone who is infected	88	2	10
Can it be spread by having sexual intercourse with an infected person	90	0	10
Can it be spread when intravenous drug users share needles with each other	63	8	29
Can it be spread by holding hands with an infected person	21	40	39
Can it be spread from mother-to-child during birth	48	2	50
Would it be preventable by vaccination	65	6	29
Can it cause advanced liver disease (cirrhosis)	65	5	30

Can it cause liver cancer	46	4	50
Is it fatal	48	10	42
Do you think people with hepatitis B can be infected for whole life	40	10	50
Do you think a person infected with hepatitis B can be cured	13	10	77

The feelings of the infected patients after hepatitis B infection was described in table 3.

Table 3 Feelings of the hepatitis B infected patient after acquiring hepatitis B infection

Feelings of the HBV infected patients after acquiring HBV infection	Yes (%)	No (%)
Feeling ashamed	95	5
Felt that they brought trouble to their family	96	4
They felt guilty of themselves	100	0
Felt that they put others at risk for HBV infection	96	4
Felt that they should avoid close contact with others such as kissing or hugging	88	12
Felt that they should avoid using same utensils for feeding or drinking water with other family members	62	38
Felt that they were isolated by others	42	58
Felt that they were viewed badly by others in the community as having a shameful sexually transmitted disease (STD)	33	67
Felt that they may be trusted not to bring harm to others	90	10
Felt that they may be trusted as friends	100	0
Felt that they were viewed as undesirable as a husband or wife	52	48
Felt that they were discriminated at work place	94	6
Felt that they were discriminated in their own family	88	12
Felt that they were discriminated in the hospital	87	13
Showed their voluntary willingness to divulge that they were infected	40	60
Showed their voluntary willingness to adopt appropriate life style measures to avoid transmission of infection	100	0

During evaluation only 2% of study population could recapitulate that they have been tested for HBV infection in the past. Most of our study subjects had inadequate and improper knowledge about HBV infection and its natural outcome. Also most of the subjects were ashamed to disclose about their HBV infection status and felt that they were discriminated in the community to some extent which may further increase the chance of spread of HBV infection and delay in the start of effective treatment due to delay in the disclosure of infective status amongst the hepatitis B infected patients in the community.

Discussion

This current study is the first study of its kind to document the hepatitis B awareness and feelings of discrimination in the infected patients after acquiring hepatitis B infection, one of the unique studies from Eastern part of India. HBV infection

is possibly the most important chronic viral infection affecting Indians. Although an effective vaccine against HBV infection is readily available now a days, but unfortunately this infection remains a serious threat to public causing a lot of morbidities and mortalities due to lack of awareness in the community. Most of our study population were male, belong to younger generation and hailed from the rural part. Most of our cases were unvaccinated and also improperly vaccinated against HBV infection although they were quite aware regarding the availability of HBV vaccine, which is a matter of serious concern and needs to be immediately addressed. Most (65%) of our patients were aware regarding the hepatitis B vaccine in contrast to result of study by Mishra B et al,⁵ from this part of Coastal Eastern India who showed that only 32% study population had HBV vaccine awareness and study by Yasobant S et al,⁶ from Western India who revealed that only 36% cases were aware regarding HBV vaccination. Only 17% of our study population had received HBV vaccination which was similarly found in study by Yasobant S et al,⁶ who showed that only 24% cases had been immunized against HBV infection. Most of our patients had not adequate and proper knowledge regarding hepatitis B infection which was similarly observed by Mishra B et al,⁵ who showed that only 38% of study populations were aware regarding hepatitis B infection; in contrast to observations of other worldwide study.⁷⁻¹⁴ Although most of our cases were literate despite of rural residential status, but they had a lot of misconceptions and improper knowledge regarding HBV infection which should be taken seriously and judiciously addressed so that spread of HBV infection could be appropriately prohibited and HBV infected cases could be properly managed without any social stigmata and discrimination. Previous study from Jammu on married women of reproducible age group reported that only 20% of the women were fully aware regarding mode of transmission of HBV infection, which was quite low.⁷ 50% of the women had misconceptions regarding HBV transmission.⁷ Similarly, another study from Eastern part of India revealed that community awareness about the disease and the vaccine among the subjects was 38% and 32%, respectively.⁵ In another Indian study it was found that 50% of subjects, who were aware regarding HBV infection had inadequate knowledge regarding hepatitis B mode of transmission, infectivity, and HBV vaccination importance.¹⁵ All these studies had clearly proven much lower level of community awareness regarding HBV and its vaccination which was similarly observed in our study. Study by Sharma R et al. showed that only 4% of women, 30% of children up to 5 years and 15% of children above 5 years were fully immunized with hepatitis B vaccine where as 80% of children up to 5 years and 75% of children above 5 years were fully immunized against other preventable childhood diseases under universal immunization programme⁷ which clearly states that HBV vaccination should be included under universal immunization programme so that HBV vaccination status in the community could be increased. Previous studies reported that subjects who read newspapers and listened to radio were comparatively more aware regarding HBV infection and vaccination against it; therefore social media may play a vital role in promoting awareness in the community regarding the prevention and transmission of HBV.^{8,12,13,16-18} These studies clearly showed that educated subjects were more aware regarding HBV infection and its vaccine which was in contradiction to our results. The findings of previous studies were not surprising as it was easily understood that subjects with better education were more likely to have read or heard about HBV infection in schools or through the mass media. Besides, the better educated subjects were more likely to seek professional advice and understand the complexity of various aspects of HBV infection and its incurability. All these previous studies strengthens the fact that interventions to create awareness and public education measures to augment community awareness regarding HBV infection and its

vaccine should especially focus on subjects with less or no education, and limited access to mass media.^{8,12,13,16} The success which can be achieved by media-based, community outreach campaign when combined with treating physician intervention was clearly shown in a study targeting the Vietnamese community in northern California. In this study following a 1-year intervention, the percentage of adults who were aware about hepatitis B increased from 52 to 85% ($P < 0.001$) and the percentage who had undergone serologic testing increased from 24 to 48% ($P < 0.001$). Further, the childhood hepatitis B immunization rates too increased from 41 to 61% ($P < 0.05$) as a result of the intervention.¹⁶ In our study only 17% of study subjects were vaccinated as similarly observed in study by Misra B et al;⁵ which reported that only 20% of study subjects were vaccinated, whereas in 30% subjects, their children were vaccinated. The common reason for non-vaccination was lack of awareness (50%).⁵ 60% of unaware subjects blamed government/doctors/ media for this sort of ignorance.⁵ Majority (56%) received the vaccine from government hospitals or health centers.⁵ Only (10%) obtained vaccination from private centers.⁵ Reasons cited for non-vaccination included ignorance (50%), carelessness (12%), high cost (10%), and non-availability (6%). Source of information regarding hepatitis B included television (75%), newspapers (55%), and radio (26%). HBV control now focuses both on pregnancy screening and on vaccinating risk groups, such as newborns from HBV-infected mothers, children with parent(s) from an HBV-endemic area, and people with high-risk behavior. These programs, however, have not contributed to the health of the general adult population, leaving a substantial part of this population both undetected and unprotected regarding HBV. The level of ignorance and the low awareness about immunization should draw attention of policy makers at the earliest.

Limitations

Our study results could not be fully representative of the entire hepatitis B infected patients of Odisha, India as most of our study subjects hailed from rural region where community awareness presumed to be lower compared to urban region. We could not enquire about the causes of unawareness in the hepatitis B infected cases although most of our study subjects were literate. We have not accessed the level of awareness among the health care providers, common publics and media persons who might play a vital role in dissipating the HBV awareness in the community.

Conclusions

Most of our study subjects had inadequate and improper knowledge about HBV infection and its natural outcome. Also most of the subjects were ashamed to disclose about HBV infection and felt that they were discriminated in the community which may further increase the chance of spread of HBV infection and delay in the start of effective treatment. Majority of subjects were unvaccinated against HBV infection which is a matter of serious concern and needs to be immediately addressed. Continued efforts should be made from time to time to develop and implement hepatitis B educational campaigns/health promotion programme to educate the community. Special emphasis should especially be laid on awareness campaigns to educate the public that hepatitis B is a vaccine-preventable disease which may not necessarily spread by polluted water or by sharing utensils for which the infected persons should be strictly isolated and segregated and forced to bear lonely life. Rather it could be easily prevented by three simple, easily available, inexpensive shots of hepatitis B vaccine which is readily available in the community. Also the infected persons should be brave enough to disclose about their infectiveness so that they could receive effective treatment (antivirals) as early as possible and the spread of the disease could be restricted by appropriate measures. The government, health agencies and physicians

should all work together to educate the masses about hepatitis B and its vaccine. The mass media should come forward and work aggressively to educate the community about this easily preventable infection so that lot of morbidities and mortalities could be largely prevented.

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Conflict of Interest

All authors read the manuscript and there is no conflict of interest in author sequence.

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