

Knowledge, Attitude and Practices of dentists regarding modes of transmission of Hepatitis B virus in our society

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Objective: To assess the level of knowledge, attitude and practices among the practicing dentists regarding modes of transmission Hepatitis B disease for the patients.

Methodology: This cross-sectional descriptive study collected data from dentists at private clinics. Duration of study was 2 months and sample size was 70 subjects. Close ended questionnaire was used to collect the information regarding knowledge, attitudes and practice for hepatitis B. Descriptive statistics were used for analysis.

Results: Out of 70 participants, there were 23(44.3%) males and 47(55.7%) females. Only 55 (78.6%) answered that HBV is contagious, 14 (20%) said no and 1 (1.4%) was not sure. On asking, HBV carrier may look healthy without showing any symptoms of the disease, 61 (87.1%) said yes. On asking, "Do you think medical

personnel infected with hepatitis B should avoid patient treatment", 24.3% said yes, 45.7% said no and 40% did not know. All thought "Vaccination is mandatory by higher health authorities". Only one was afraid of injection and 5.7% thought "It is not effective in disease protection". Most (97.1%) disagreed to statement "I am not at high risk of contracting HBV."

Conclusion: Dentists had sufficient knowledge about the hepatitis B virus itself, it's risk factors and transmission. However, they lacked self-assurance and gave incoherent opinions about the defensive measures. Their awareness about their own behaviour about possible risks factors and occupational supervision was also varying. (Rawal Med J 202;45:278-281).

Keywords: Hepatitis, blood borne infection, unsterilized.

INTRODUCTION

Hepatitis B a is a blood borne infection caused by hepatitis B virus (HBV). Almost nine million populations are infected and rate is increasing day by day.¹ Hepatitis B surface antigen (HBsAg) is positivity is 2-10% in Pakistan.² All over the world, approximately 350 million chronic carriers and two billion people are infected by HBV.³ Common transmission of HBV is from contaminated needles, blood, unprotected sexual intercourse, unsterilized dental instruments.⁴

Dental setting is a common area where instruments direct contact with saliva or blood of infected patients and these instruments recurring use can cause of transmission of HBV.⁵ Previous studies have shown that dentists spread of virus 6 time higher in general population.⁶⁻⁸ HBV can be controlled by awareness regarding its vaccination and risk of spread among population and health care provider.⁹ There is lack of awareness about transmission and risk factors in our society and health professionals show carelessness regarding sterilization of

instruments in hospitals and dental clinics. Risk of exposure is greater than 3-4 times in clinics of dentists.^{9,10} Dental professionals are at a high risk of infections by various microorganisms like HIV, HBV and HCV, caused by accidental injuries during treatment of patient.¹¹ Thus, knowledge and awareness based research study is needed for infection control. Our study objective was to assess the level of knowledge, attitude and practices among the practicing dentists regarding modes of transmission Hepatitis B.

METHODOLOGY

This cross sectional descriptive study was done on dentists who worked in private clinics. Dentists who were agreeable to give permission or fill the questionnaire were included in this study. Duration of study was 2 months and sample size was 70 subjects. A close-ended Questionnaire was used to collect the information regarding knowledge, attitudes and practices for hepatitis B. Descriptive statistics used to analyse the results.

RESULTS

Out of 70 dentists, there were 23(44.3%) males and 47(55.7%) females. The age of most participants was less than 30 years (Table 1). Only 55(78.6%) answered that HBV is contagious, 14 (20%) said no and 1(1.4%) was not sure. On asking, HBV carrier may look healthy without showing any symptoms of the disease, 61(87.1%) said yes and others said no (Table 2).

Table 1. Demographic information.

Variable	Number	Percentage
Gender wise distribution		
Males	47	67.1%
Females	23	32.9%
Age wise distribution		
≤35 years	30	42.9%
35-45	18	25.7%
>45	22	31.4%

There were 82.9% who said that "HBV is lethal and 85.7% knew that patients can spread hepatitis to dentists. Almost 82.9% answer to asking that "dentists can spread the virus to their patients", Responding to statement "HBV vaccination can prevent hepatitis" 72.9% said yes. While on asking, "HBV vaccination is contraindicated in pregnancy", and 17.1% said yes, 41.4% said no and 41.4% did not know. There were 98.6% dentists who said yes that HBV can transmit with "Broken skin in contact with saliva contaminated with blood of HBV positive patient". On asking, "Do you think medical personnel infected with hepatitis B should avoid patient treatment", 24.3% said yes, 45.7% said no and 40% did not know (Table 2).

Table 2. Knowledge and Attitude of the subjects

Question	Yes	No	Not sure
Hepatitis is contagious	69(98.6%)	0 (0%)	1(1.4%)
HBV carrier may look healthy without showing any symptoms of the disease	61(87.1%)	9(12.9%)	0 (0%)
Hepatitis can be lethal	58(82.9%)	12(17.1%)	0(%)
Patients can spread HBV to dentists	60(85.7%)	8(11.4%)	2(2.9%)
Dentists can spread the virus to their	58(82.9%)	11(15.7%)	1(1.4%)
HBV vaccination can prevent hepatitis	51(72.9%)	17(24.3%)	2(2.9%)
HBV vaccination is contraindicated in pregnancy	12(17.1%)	29(41.4%)	29(41.4%)
Broken skin in contact with saliva contaminated with blood of HBV positive Patient	69(98.6%)	1(1.4%)	0(0%)
Broken skin in contact with blood of HBV positive patient	66(94.3%)	4(5.7%)	0(0%)
Broken skin in contact with saliva of HBV positive patient	46(65.7%)	22(31.4%)	2(2.9%)
Intact skin with intact skin of HBV positive patient	2(2.9%)	68(97.1%)	0(0%)
Needle stick injury	68(97.1%)	2(2.9%)	0(0%)
Aerosol produced by a hand piece	28(40%)	26(37.1%)	16(22.9%)
Do u think medical personnel infected with hepatitis B should avoid patient treatment	17(24.3%)	32(45.7%)	21(30%)
I am at risk because of the nature of my Work	67(95.7%)	3(4.3%)	0(0%)
Vaccination prevents spread of infection to patients	68(97.1%)	2(2.9%)	0(0%)
Vaccination protects my family members	69(98.6%)	1(1.4%)	0(0%)
Vaccination is mandatory by higher	70(100%)	0(0%)	0(0%)

Table 3. On average, what percentage of patients did you refer for hepatitis B vaccination during your career?

Percentage	Number	Percent
<10%	40	57.1
10-29%	19	27.1
30-40%	6	8.6
50% or more	5	4.3
Total	70	100.0

All participants thought "Vaccination is mandatory by higher health authorities". Only one was afraid of injection and 5.7% thought "It is not effective in disease protection". Most of dentists 97.1% disagreed to statement "I am not at high risk of contracting HBV." Only 60% patients were referred for vaccination for HBV (Table 3).

DISCUSSION

Hepatitis is inflammation of liver and in many cases HBV can lead to permanent liver injury including cirrhosis or hepatocellular carcinoma and even death.¹¹ Dentists along with dental personnel should be continuously educated about the risk of infection from their patients. Knowledge about prevention and awareness plays an important role in controlling the HBV infections.¹²

Talpur et al reported that there was significant lack of knowledge and poor attitude towards hepatitis in surgical patients at Nawabshah area.¹² Dentists are at high threat of acquiring HBV from their patients in usual dental practice.¹³ In view of the fatally dangerous outcomes and problems associated with this disease, its contagiousness and lack of knowledge about this in our population we performed this study. Dentists have commonly contact with patient's saliva and blood and both fluid are carrier of HBV. Most dentist agreed that we would be able to treat patients safely if they are properly vaccinated and routinely assess their anti-HBs status. In such an environment, infected patients would not need to discuss their infected state.^{15,16} Current study showed that 100% dentists thought "Vaccination is mandatory by higher health authorities". These results are higher than Riccò et al who reported that 88.3% of subjects were in favour of vaccination.¹⁷

CONCLUSION

Current study concludes that dentists had sufficient knowledge about the hepatitis B virus itself, it's risk factors and transmission. However, they lacked self-assurance and gave incoherent opinions about the defensive measures. The dentists should make an environment, where infected patients can be treated and proper disposable instruments are used. There is need for applying proper sterilization and using disposable instruments to decrease the possibility of cross-infection.

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