

Original Article

Clinical and Preclinical Evaluation of Student's Knowledge about Hepatitis B in Dentistry

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Abstract:

Dentists are at risk for many infectious diseases. Hepatitis B virus (HBV) is one of them. HBV infection is a common infection in the world and in our country. Health care workers are located in the top spot in the rankings of risk of HBV and the importance and prevention of this disease should be explained by giving education to physicians. The aim of this work is to evaluate the knowledge level of 114 clinical and preclinical students in İnönü University Faculty of Dentistry. A questionnaire form was administered to preclinical and clinical students. General information about HBV, ways of transmission, prevention, HBV serology evaluations were carried out under the headings. As a result of this study, it was observed that preclinical students are at risk for HBV infection, they have lack of information, HBV serologic parameters should be monitored periodically and the susceptible students do need to be vaccinated.

Key Words: Hepatitis B virus, HBV serology evaluations.

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Introduction

Hepatitis B virus (HBV) is a DNA virus of the family Hepadnaviridae. Its specific areas in body are limited and they can cause deadly diseases like acute infection, persistent infection, fulminant hepatitis, cirrhosis and hepatocellular carcinoma where they settled in.^[1] HBV infection is common in the world and is a major public health problem and can lead to serious complications such as carcinoma, chronic cirrhosis, re-infection.^[2-4] Hepatitis B causes mortality and morbidity at a considerable extend. It has been informed that

approximately 400-500 million people around the world, in our country of 3 million people is a carrier of HBV infection and this infection results in approximately the death of 1-2 million people worldwide each year.^[5-7] Healthcare staff have a higher risk in terms of contamination and spread of viral, bacterial, fungal and protozoal diseases compare to other segments of society. In this regard, hospital employees should be taught the ways of protection from viral hepatitis and vaccination programs should be

implemented. So you would have taken precautions against HBV and a reduction in complications occur depending on the HBV can be observed.^[8]

Material and Method

This study at Inonu University Faculty of Dentistry is a descriptive research conducted with the participation of 114 students in the intern. The survey questions were prepared for the purposes set out by the researcher and, based on previous literature. Before the study, all participants were informed about the subject and verbal consent was obtained. The applied survey consists of a total of 34 parts including general information about with HBV, transmission routes, prevention, serological reviews and the right answers were marked. (Table 1)

Findings

After the evaluation, the received responses and the results have been shown in Table 2.

Discussion

Health workers HBV constitute an important risk group. Earlier studies have identified risk for HBV infection more than two times in health care staff and employee compare to other members of the population.^[9]

Health staff should be careful while performing their professional duties and the necessary measures are required both during treatment or during the examination by taking the risk of carrying a contagious disease for each patient into account.

Dialysis patients, frequent blood product recipients, people in frequent contact with blood and blood products due to their are professionals, persons with more than one partner, or with immune deficiency or persons undergoing immunosuppressive therapy for a long time should be evaluated in terms of potential HBV infection very well.^[10,11]

Acute HBV infection can be symptomatic or asymptomatic. Because the majority of patients were asymptomatic in the acute stage is usually not detectable. Clinical findings of a large portion of the cases that can be followed without hospitalization. There is no specific treatment for acute HBV, but the patient is recommended to rest. In Clinical and biochemical data, until there is improvement, alcohol intake, use of analgesics, sedatives and hepatotoxic drugs should be prohibited. Liquid supplements should be made in patients with severe vomiting. Severe nausea, vomiting, mental changes, should be monitored in the hospital for patients with encephalopathy.^[12,13]

In the treatment of chronic HBV, interferon alfa-2a and 2b, pegylated interferon alfa-2a and 2b, lamivudine, adefovir, entecavir, and tenofovir are present in our country and user-approved drugs.^[14] HBV-infected pregnant women should be evaluated for hepatic flare.^[14]

When the survey results were evaluated, the preclinical and clinical students were identified not have enough information about the review.HBV transmission routes and HBV serology. In evaluation, one of the ways in which HBV infection transmits (sexually transmitted) was asked. However, when the results of the survey assessed, approximately 50% of the respondents have stated that HBV doesn't sexually transmit while the other half accepted that idea. Especially when looking at the results of serological markers, participants were observed that they do not have sufficient knowledge.

Conclusion

As in the whole World, HBV infection is becoming increasingly common in our country. In our study, we've determined that dental students don't pay attention the required importance during treatment and don't know what to do in case of injection-pricking. If the necessary conditions are present, physicians are

Table 1: Correct Answers Of Survey Questions

General Information	True	Wrong	No Idea
1. HBV infection is not contagious.		✓	
2. Vaccine is available and protection is high.	✓		
3. Vaccine of HBV infection is not necessary to make three doses and single dose is sufficient.		✓	
4. There is no carrier of HBV infection.		✓	
5. HBV infection can cause liver failure.	✓		
6. HBV infection does not cause cancer.		✓	
7. Newborn babies are vaccinated to HBV.	✓		
Ways Of Contamination	True	Wrong	No Idea
8. HBV infection can not be sexually transmitted		✓	
9. HBV infection can not be transmitted through blood		✓	
10. HBV infection is transmitted from mother to baby during pregnancy	✓		
11. HBV infection is not transmitted from mother to baby at birth		✓	
12. HBV infection is transmitted by the common use of toothbrush.	✓		
13. HBV infection is transmitted by handshake.		✓	
14. HBV infection is transmitted by the common use of razor blades	✓		
15. HBV infection is transmitted through the use of shared bathroom toilet		✓	
16. HBV infection is transmitted by the multiple use of syringes.	✓		
17. HBV infection is transmitted through the use of a common spoon, knife and fork	✓		
18. HBV infection is not transmitted through sweat.	✓		
Protection	True	Wrong	No Idea
19. Vaccines are provided.	✓		
20. Immunization with immunoglobulin are provided.	✓		
21. Gloves and masks should wear during the intervention	✓		
22. Using a disposable injector	✓		
23. Wash your hands after glove removal	✓		
Hepatitis B Serology Comments	True	Wrong	No Idea
24. HBs Ag antigen is first arose during infection	✓		
25. Anti-HBs Shows the immunity	✓		
26. Anti-HBc IgG is indicative of acute hepatitis.		✓	
27. Anti-HBc Lg M is indicative of acute hepatitis.	✓		
28. HBeAg is indicative of viral replication and infectiousness	✓		
29. There is no treatment in acute hepatitis.		✓	
30. Antivirals is effective in chronic hepatitis.	✓		
31. 4 doses of hepatitis B vaccine is available at the present time		✓	
32. If the mother is HBs Ag +, immediately newborn should be Vaccinated after birth and HBV immunoglobulin should be applied	✓		
33. After contact with HBV,if anti-HBs is bigger than 10 IU, HBIG is applied.		✓	
34. At the injector sinking , the most risk is HIV then HBV		✓	

Table 2: Survey Questions and Answers

General Information	True	Wrong	No Idea
1. HBV infection is not contagious.	10	104	0
2. Vaccine is available and protection is high.	108	5	1
3. Vaccine of HBV infection is not necessary to make three doses and single dose is sufficient.	4	109	1
4. There is no carrier of HBV infection.	19	89	6
5. HBV infection can cause liver failure.	89	2	23
6. HBV infection does not cause cancer.	33	52	29
7. Newborn babies are vaccinated to HBV.	90	13	11
Ways Of Contamination	True	Wrong	No Idea
8. HBV infection can not be sexually transmitted	50	57	7
9. HBV infection can not be transmitted through blood	1	112	1
10. HBV infection is transmitted from mother to baby during pregnancy	65	41	8
11. HBV infection is not transmitted from mother to baby at birth	11	99	4
12. HBV infection is transmitted by the common use of toothbrush.	91	22	1
13. HBV infection is transmitted by handshake.	0	114	0
14. HBV infection is transmitted by the common use of razor blades	104	5	5
15. HBV infection is transmitted through the use of shared bathroom toilet	32	61	21
16. HBV infection is transmitted by the multiple use of syringes.	112	0	2
17. HBV infection is transmitted through the use of a common spoon, knife and fork	61	53	0
18. HBV infection is not transmitted through sweat.	65	26	23
Protection	True	Wrong	No Idea
19. Vaccines are provided.	113	1	0
20. Immunization with immunoglobulin are provided.	101	8	4
21. Gloves and masks should wear during the intervention	114	0	0
22. Using a disposable injector	114	0	0
23. Wash your hands after glove removal	114	0	0
Hepatitis B Serology Comments	True	Wrong	No Idea
24. HBs Ag antigen is first arose during infection	41	7	66
25. Anti-HBs Shows the immunity	68	33	13
26. Anti-HBc IgG is indicative of acute hepatitis.	20	16	78
27. Anti-HBc Lg M is indicative of acute hepatitis.	20	11	83
28. HBeAg is indicative of viral replication and infectiousness	31	6	77
29. There is no treatment in acute hepatitis.	17	56	41
30. Antivirals is effective in chronic hepatitis.	50	2	62
31. 4 doses of hepatitis B vaccine is available at the present time	21	66	27
32. If the mother is HBs Ag +, immediately newborn should be vaccinated after birth and HBV immunoglobulin should be applied	61	7	47
33. After contact with HBV,if anti-HBs is bigger than 10 IU, HBIG	24	13	77
34. At the injector sinking , the most risk is HIV then HBV	37	20	57

required to ask ELISA test results from the patients routinely. It will be a more accurate approach to treat the patients according to the results. Society should be informed about the importance of HBV infection, its transmission and means of protection issues. After contact with individuals infected with HBV, vaccine should be administered as soon as possible or if necessary (to contact the person who has not been vaccinated) IgG HB should be applied. One of the most effective methods in order to prevent HBV risk is that physicians carefully get anamnez from the patients.

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