ORIGINAL ARTICLE

KNOWLEDGE, ATTITUDES AND PRACTICES (KAP) STUDY AMONG MEDICAL AND DENTAL STUDENTS REGARDING HEPATITIS B VACCINATION

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ABSTRACT

Objective: To ascertain the level of knowledge, attitudes and practices of medical and dental students regarding vaccination against Hepatitis B virus.

Material and Methods: This descriptive research work was conducted among medical and dental students from Khyber Medical College and Khyber College of Dentistry Peshawar, Pakistan respectively from January 2017 to May, 2017. Male and female students from all academic years were recruited in the study. After informed consent, students were requested to fill in a pre-formed questionnaire. Data was collected in Microsoft excel and then tabulated using Microsoft excel. Results were tabulated in the form of percentages.

Results: One hundred thirty-one (50.4%) male and 129 (49.6%) female medical (51.2%) and dental (48.8%) students participated in the study. Their ages ranged from 19 to 24 years. Of these students, 112 (43.1%) had initiated vaccination against Hepatitis B virus whereas 148 (56.9%) had not started vaccination. Of these, only 86 (33.1%) students completed full Hepatitis B vaccination course. Among those who completed the course, majority of the students had enrolled in the 0, 1, 2 month regimen of vaccination. Of all the students, only 28 (10.8%) received booster dose after completion of vaccination. Only 8 (3.1%) of the students checked their anti Hbs Ab titers, but none of them remembered the exact values of antibody levels. Seventy-six (29.2%) students had vaccinated their family members against Hepatitis B while 31 (11.9%) students had also vaccinated themselves against Hepatitis A virus infection of the 11 (4.2%) students who were married, only 4 (1.5%) had checked their partner's Hepatitis B status.

Conclusion: Medical and dental students themselves are not much aware of the importance of vaccination and majority have not vaccinated themselves against the virus. Not all who started vaccination managed to complete the course and so their immunization status could also not be accurately ascertained.

Key Words: Knowledge, Attitudes, Practices, Medical, Dental, Hepatitis B, Vaccination

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INTRODUCTION

Vaccination against Hepatitis B virus (HBV) has recently gained considerable importance owing to the remarkable spread of the virus in the recent few decades and the potential role of vaccination in preventing this communicable disease. Health professionals are expected to have firsthand knowledge on the vaccination regimes available against Hepatitis B[1,2]. Keeping this view in mind, a study was conducted among medical and dental students of Khyber Medical College and Khyber College of Dentistry to determine their knowledge, attitude and practices regarding HBV vaccination. The aim of the study was to assess their level of understanding about Hepatitis vaccination and their practical implementation of this important health matter.

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MATERIAL AND METHODS

This descriptive cross-sectional study was carried amongst medical and dental undergraduates of Khyber Medical College and Khyber College of Dentistry, Peshawar respectively. A total 260 male and female

students from all academic years were recruited in the study. The study duration spanned from January, 2017 to May, 2017. The study was initiated after approval was taken from Ethical Review Board. Informed consent was taken from all students before requesting them to fill a pre-formed questionnaire. The questionnaire was designed to ascertain students' knowledge about hepatitis B vaccination and also their attitudes and practices extending to their families regarding hepatitis B vaccination. Practices regarding completion of vaccination schedule were also assessed, and whether hepatitis B antibody levels were checked after completion of vaccination. Data was collected in Microsoft excel and then tabulated using Microsoft excel. Results were tabulated in the form of percentages.

RESULTS

One hundred thirty-one (50.4%) male and 129 (49.6%) female medical (51.2%) and dental (48.8%) students participated in the study Table 1. Their ages ranged from 19 to 24 years. Among the participants, 133 (51.2%) were medical students, and 127 (48.8%) were dentistry students Table 2. Table 3 elaborates the percentage of students who had started vaccination, while table 4 depicts the percentage of students who completed the full vaccination course. Out of 260 students, 112 (43.1%) started vaccination, (76.78%) students were able to complete the vaccination schedule. Out of 112 students who had initiated vaccination course, 54 (20.8% of total sample) did not have any idea about the schedule they had followed; 18 (6.9%) students had followed the 0,1,6 regimen of vaccination; 27 (10.4%) had followed 0,1,2 regimen, while 13 (5%) had followed the 0,1,3 schedule of vaccination Table 5. Most common vaccination schedule followed was 0,1,2 months.

Table 6 shows that 28 (10.8%) students received a booster dose after having completed Hepatitis B vaccination. Only 8 (3.1%) students checked their anti Hbs titers at the end of Hepatitis B vaccination course. Total of 76 (29.2%) students had vaccinated their family members against Hepatitis B, while 184 (70.8%) students had not vaccinated their family members. A total 0f 31 (11.9%) students had also been vaccinated against Hepatitis A virus infection. Among 11 married students, only 4 had checked their partners' hepatitis B status.

Table 1: Gender-wise distribution of students.

Variable	Frequency	Percent (%age)
Male	131	50.4
Female	129	49.6
Total	260	100.0

Table 2: Speciality-wise distribution of students.

Variable	Frequency	Percent (%age)
BDS	127	48.8
MBBS	133	51.2
Total	260	100.0

Table 3: Hepatitis B Vaccination started.

Variable	Frequency	Percent (%age)
Yes	112	43.1
No	148	56.9
Total	260	100.0

Table 4: Hepatitis B Vaccination course completed.

Variable	Frequency	Percent (% ages)
Yes	86	76.8
No	26	23.2
Total	112	100.0

Table 5: Vaccination schedule followed.

Variable	Frequency	Percent (% ages)
No	148	56.9
No Idea	54	20.8
0,1,6 month schedule	18	6.9
0,1,2 month schedule	27	10.4
0,1,3 month schedule	13	5.0
Total	260	100.0

Table 6: Booster dose received.

Variable	Frequency	Percent (% ages)
Yes	28	10.8
No	232	89.2
Total	260	100.0

DISCUSSION

Hepatitis B infection is one of the major causes of deadly liver diseases[3]. It is also a major occupational infection, acquired by health care professionals through contact with blood and body fluids after needle prick injuries and other sharp forms of trauma. Fortunately, it is easily diagnosed and treatable too[4]. The infection can be prevented by vaccination. Medical and dentistry students play an important role in creating awareness regarding hepatitis B vaccination. They can create awareness about hepatitis B infection and promote vaccination trends.[5] This study was conducted to evaluate

medical and dental students' own knowledge, attitudes and practices regarding hepatitis B vaccination.

Our study mainly focused on practices of medical and dental students regarding hepatitis B vaccination. The current study shows that 43.1% of medical and dental students had started vaccination schedule against hepatitis B. Among these, 76.8% had completed the course. As is evident from the data, students have scanty knowledge about hepatitis B vaccination, and their attitude trend towards vaccination also indicates the same. Possible explanations could be insufficient training strategies regarding preventive measures and control of Hepatitis B infections. Medical and dental students need to have an introductory lecture on importance of hepatitis B vaccination so they are aware of importance of vaccination. In another study conducted among medical students in Saudi Arabia, less than 37% medical undergraduates have core knowledge about HBV infections and its infectivity rate in comparison to HIV infections[6]. These data linchpins deficient knowledge prevailing in medical undergraduates mainly in perspectives of infectivity and transmission rates. Hepatitis B is a highly virulent and easily transmissible virus and can sustain virulence in dried blood products even up to period of one week. Our research findings are consistent with international data due to following reasons. Health care workers such as medical and dental undergraduates receive scarce training in infection control measures. More than 90% of medical and dental undergraduates confess insufficiency in knowledge, attitude and practice regarding standard precautions about infections control measures and their willingness to improve this important skill by further training. International data is also documenting poor awareness and education regarding hepatitis B Virus infection amongst all health-care professionals. Moreover, the mean knowledge and attitude levels of medical and dental undergraduates are sub-optimal for Hepatitis B infection[7,10]. Another important factor to be added in our part of the world is cost issue. Students often hail from poor socio-economic background and even if they are aware of importance of vaccination, due to financial restraints, they are unable to either initiate vaccination or complete the vaccination schedule. Free of cost vaccination programs for medical and dental students or vaccine provision at affordable prices are alternative remedies[11,12].

Medical and dental undergraduates must be encouraged and supported to take all precautionary measures mandatory for control and prevention of occupational risks of Hepatitis B infections. The most pivotal steps in this perspective are vaccination and universal precautions for infections control[13,14]. Most of the feedbacks from undergraduates in this study are encouraging as far as preventive measures against HBV infections are concerned. Students were aware that wearing disposable gloves before any procedure or examination in infected patients is the first line of defense against hepatitis B, followed by vaccination. However, the most effective strategy against HBV infection and its long-term sequelae is to follow full vaccination schedule against hepatitis B[15,16]. Responses of students differed in different parts of the world depending on different level of awareness and training received by respective students at different centers.

A study from Northwest Ethiopia documented a favorable outcome in the attitude domain of medical undergraduates towards Hepatitis B infections. More than 75 % of undergraduates have effective background knowledge regarding high risk of transmission of HBV to health care professionals and affectivity and safety of HBV vaccine[17]. These findings were similar to a report from Saudi Arabia among dentists[6]. Our study revealed that most of the study participants had negligent practices towards HBV prevention, in spite of their good knowledge and positive attitude on the disease and its prevention measures. The Ethiopian study also revealed that risky practices among the study participants were highly prevalent, with 28.6 % of them having been exposed to blood accidentally; and 46.3 % had no intension to report the accident[18]. This finding suggesting that there is a need to address the gap by strengthening health education on universal safety precaution for prevention of infections. Yet, when compared with the reports from other countries, the finding (28.6 %) of accidental exposure to blood was lower than the 55.9 % rate reported from Cameroon, 48 % from Nigeria and 40 % from Palestine[19,21]. In terms of vaccination against HBV, W.H.O. recommends the preventive vaccine to all health care workers in countries with high HBV endemicity[22]. However, this study revealed the least vaccine acceptance rate (2 %) among the study participants compared to a number of similar studies[22].

Another study among medical students concluded that 98.8% of medical students had correct knowledge regarding vaccine for hepatitis B. Study showed good knowledge regarding spread and risk factors for hepatitis B. 98.5% of the students gave the correct answer that hepatitis B is diagnosed by hepatitis markers test. Regarding treatment, 98.2% said that vaccination is the choice for treatment of hepatitis B. With respect to post exposure prophylaxis 97.1% said that vaccination is main source of post exposure prophylaxis and 91.8% said that hepatitis B immunoglobulin (HBIg) is used for post exposure prophylaxis. Regarding the vac-

cination status of students for hepatitis B, 26.7% were fully vaccinated and 36.4 % were partially vaccinated and 37% were unvaccinated[23]. This study showed that knowledge and attitude of medical students are good towards hepatitis B but practice is not sufficient as 1/3 rd of students are unvaccinated.

CONCLUSION

Both medical and dental students have an idea about hepatitis B vaccination, but the practice of vaccination among students and its extension to their families is somewhat limited. This may indirectly mean that they are not well-versed with the significance of hepatitis B vaccination.

Recommendations

We are thankful to all students who participated in this study. There is dire need to educate the medical and dental students about Hepatitis B vaccination so that they can implement it in their lives and also pass it on to those who daily come in contact with them. A larger, multi-center study would hilight the issue in greater detail. It is recommended that medical and dental students should be given introductory lectures at the time of their admission to university regarding Hepatitis B vaccination, so they are well-versed with significance of vaccination.

FOOTNOTE

The current study was presented in 17th Annual Conference of Pakistan Society of Hepatology (PSH) dated 3-5 November, 2017 in Peshawar.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

Haider I: Main idea, data collection, overall supervision.

Badshah A: Data compilation, Data analysis, article writing and formatting.

Yousaf A: Literature Search, final draft proof reading.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.