

Knowledge, Attitude and Practices of Medical Students towards Hepatitis B and Hepatitis C

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Abstract: Infection with Hepatitis B virus (HBV) and Hepatitis C virus (HCV) is a problem of worldwide significance. The World Health Organization (WHO) reported HBV to infect nearly 2 billion people around the globe. Furthermore, out of those 2 billion, 350 million suffered from chronic, lifelong infection. Medical students are particularly a high risk group as they are more prone to Hepatitis B and C infection due to cases of needle stick injury and exposure to patients suffering from hepatitis. Having enough knowledge and proper attitude towards these infections are cornerstones of preventing their spread. Health staff and medical students have the most important role in preventing the disease by improving the disease knowledge among them and the patients because medical students are in close contact with hepatitis patients during their study period and afterwards. **Objectives:** To evaluate knowledge, attitude and practices towards Hepatitis B among medical students, and to evaluate knowledge, attitude and practices towards Hepatitis C among medical students. **Methodology:** A cross sectional study was carried out in the Department of Microbiology, Krishna Institute of Medical Sciences, Karad. Total 200 II MBBS students were included in the study. Informed consent was obtained from participants. Data was collected in pretested questionnaire specially designed for this purpose. **Major Findings:** Knowledge and attitude of the medical students of KIMS Karad regarding Hepatitis B and C is fairly good. Sensitization of the medical students to the various aspects of the disease and vaccination through an active health education programme is crucial to control the spread of Hepatitis B and Hepatitis C.

Keywords: Hepatitis B, Hepatitis C, Knowledge

1. Introduction

Infection with Hepatitis B virus (HBV) and Hepatitis C virus (HCV) is a problem of worldwide significance. The World Health Organization (WHO) reported HBV to infect nearly 2 billion people around the globe. Furthermore, out of those 2 billion, 350 million suffered from chronic, lifelong infection¹. Moreover, an estimated 15–40% of chronic HBV carriers are susceptible to develop liver cirrhosis and hepatocellular carcinoma^{2,3}. Furthermore, Hepatitis B is widespread in the Asia Pacific region and 10 to 15 million of the population suffer from this disease⁴⁻⁶. Hepatitis C virus infection appears to be endemic in most parts of the world^{7,8} and about 3.3 percent of the world's populations (200 million people) are infected with Hepatitis C Virus^{9,10}.

Medical students are particularly a high risk group as they are more prone to Hepatitis B and C infection due to cases of needle stick injury and exposure to patients suffering from hepatitis. Also due to lack of obligatory vaccination program and a post vaccination screening program to determine the immunity status.

Having enough knowledge and proper attitude towards these infections are cornerstones of preventing their spread. Health staff and medical students have the most important role in preventing the disease by improving the disease knowledge among them and the patients because medical students are in close contact with hepatitis patients during their study period and afterwards.

Because medical students who consist future health staff face, the threat of percutaneous injuries with the consequent risk of contracting blood-borne infections such as Hepatitis B and C viruses^{11,12}, their general knowledge and attitude about viral hepatitis and its transmission and prevention can stop the spread of this disease in hospitals and society¹³.

2. Aims and Objectives

Objectives: 1. To evaluate knowledge, attitude and practices towards Hepatitis B among medical students. 2. To evaluate knowledge, attitude and practices towards Hepatitis C among medical students.

3. Material and Methods

Methodology

The study was carried out in the Department of Microbiology, Krishna Institute of Medical Sciences, Karad.

Type of study: Cross-sectional.

Period of study: Two months.

Data collection: A questionnaire-based study was conducted among the IInd M.B.B.S students of Krishna Hospital and Medical Research Centre, Karad, Maharashtra. Total 200 II MBBS students were included in the study.

Informed consent was obtained from participants. Data was collected in pretested questionnaire specially designed for this purpose. The questions pertained to information

regarding knowledge, attitude for Hepatitis B and C infections.

The ethical clearance was obtained for study from Institutional Ethics Committee before starting the study.

4. Observations and Results

The study was conducted in the Department of Microbiology KIMS Karad. Total 200 IInd MBBS students were enrolled in the study. A pretested proforma including questionnaire was used to assess Knowledge, Attitude and Practices towards Hepatitis B and C. Data was collected and analysed by using statistical SPSS software. Tabulation of data was done and frequencies and percentages were obtained.

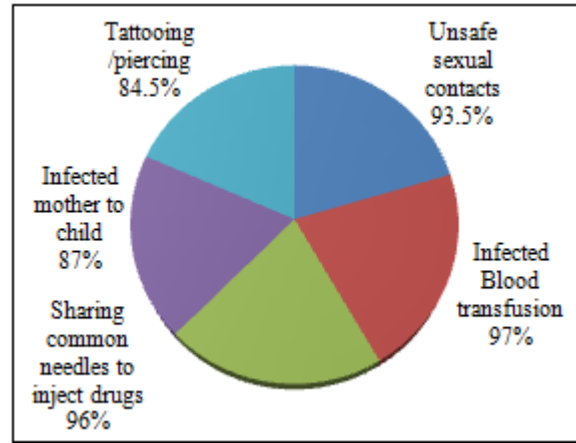


Figure 2: Knowledge of Hepatitis B risk factors

Table 1: Age and sex distribution of study population

Age in Years	Male (%)	Female	Total
19	10 (5)	12(6)	22(11)
20	53(25.5)	50(25)	103(51.5)
21	30(15)	34(17)	64(32)
22	4(2)	7(3.5)	11(5.5)
TOTAL	97(48.5)	103(51.5)	200

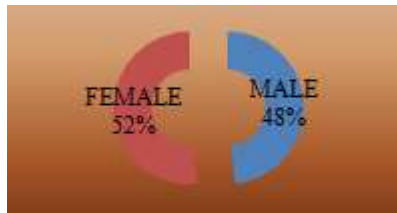


Figure 1: Sex distribution of study population

Table 1 and figure 1 shows the age and sex distribution of study population. Out of the total 200 students, 97 (48.5%) were males and 103 (51.5%) were females. Maximum participants 103 (51.5%) in the study were of the age 20yrs.

When students were asked if they had heard of Hepatitis B, 100% students had heard of hepatitis B.

When knowledge about incubation period was tested 70 (35%) students did not know the incubation period of Hepatitis B; while only 24% were aware of correct incubation period while 41% students stated wrong incubation period but 100 % of the students knew that the causative agent of Hepatitis B is virus.

Table 2: Knowledge of Hepatitis B risk factors

Risk factor	Number (%)
Unsafe sexual contacts	187(93.5)
Infected Blood transfusion	194(97)
Sharing common needles to inject drugs	192(96)
Infected mother to child	174(87)
Tattooing /piercing	169(84.5)

Table 2 and figure 2 shows knowledge about the risk factors of Hepatitis B. Responders were having knowledge about risk factors of hepatitis B; infected blood transfusion 97%, 96 % knew about needle sharing, 87% about infected mother to child, and 93.5% about unsafe sexual contact and 84.5% about tattooing/ piercing.

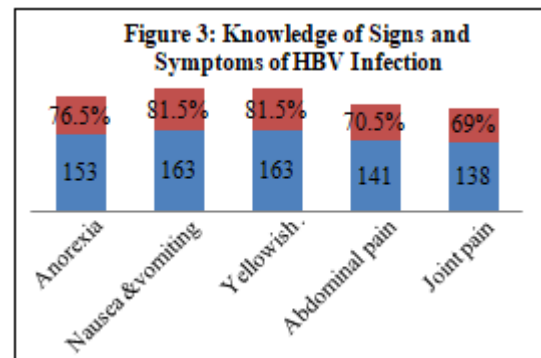
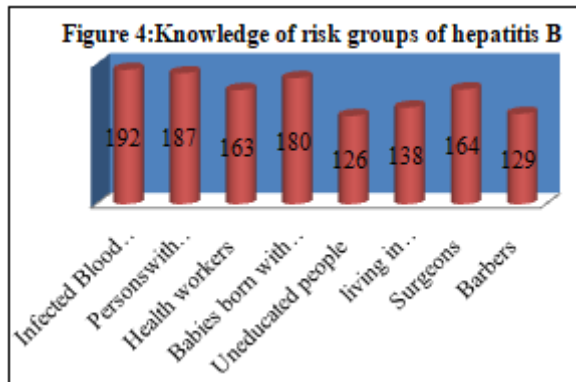


Figure 3 shows knowledge of students regarding the signs and symptoms of Hepatitis B. 81.5% of the students knew nausea & vomiting , and yellowish discoloration of eyes are signs and symptoms of Hepatitis B. 76.5% knew anorexia, 70.5% abdominal pain and 69% students knew joint pain as signs and symptoms of Hepatitis B.

Table 3: Knowledge of risk groups of Hepatitis B

Risk group	Number	%
Infected Blood receivers	192	96
Persons with multiple sexual partners	187	93.5
Health workers	163	81.5
Babies born with infected mothers	180	90
Uneducated people	126	63
People living in unhygienic conditions	138	69
Surgeons	164	82
Barbers	129	64.5



The risk groups tested were; Infected blood receivers, persons with multiple sexual partners, health workers, babies born with infected mothers, surgeons, barbers. Knowledge about risk groups of Hepatitis B is shown in table no. 3.

173 (86.5%) students were aware that Hepatitis B can be transmitted by needle stick injury. None of the students ever had needle stick injury. Only 68 (34%) students knew about universal safety guidelines.

185 (92.5%) students knew about availability of Hepatitis B vaccine. 50 (25%) students had been screened for Hepatitis B before and the same number of the students were aware that vaccine can prevent the disease . 121(60.5%) students were vaccinated for Hepatitis B . 59 (29.5%) of 200 knew the correct immunization schedule for Hepatitis B.

Table 4: Knowledge of Hepatitis C risk factors

Risk factor	Number (%)
Unsafe sexual contacts	124 (62%)
Infected Blood transfusion	175 (87.5%)
Sharing common needles to inject drugs	161 (80.5%)
Infected mother to child	150 (75%)
Tattooing /piercing	126 (63%)

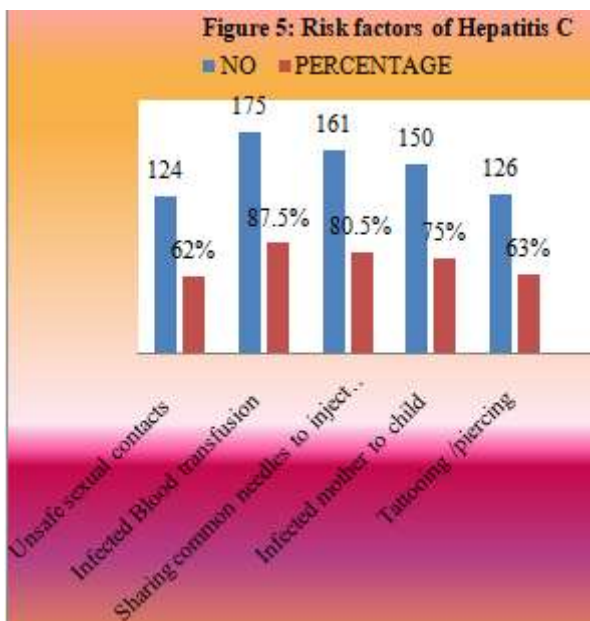


Table 4 and figure 5 show knowledge about the risk factors of Hepatitis C. Responders were having knowledge about risk factors of Hepatitis C; infected blood transfusion 87.5%, 80.5% knew about needle sharing, 75% about infected

mother to child, and 62% about unsafe sexual contact and less knowledge about tattooing/ piercing i.e. 63% was shown.

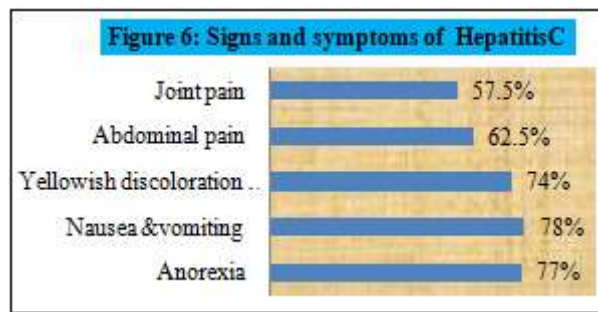


Figure 6 shows knowledge of students regarding signs and symptoms of Hepatitis C.

About 78% students knew nausea & vomiting, and 74% knew yellowish discoloration are signs and symptoms of Hepatitis C. 77% knew anorexia, 62.5% abdominal pain and 57.5% students knew joint pain as signs and symptoms of Hepatitis C.

Table 5: Knowledge of risk groups of Hepatitis C

Risk group	Number	%
Infected Blood receivers	179	89.5
Persons with multiple sexual partners	129	64.5
Health workers	146	73
Babies born with infected mothers	146	73
Uneducated people	132	66
People living in unhygienic conditions	139	69.5
Surgeons	147	73.5
Barbers	129	64.5
Haemodialysis patients	147	73.5

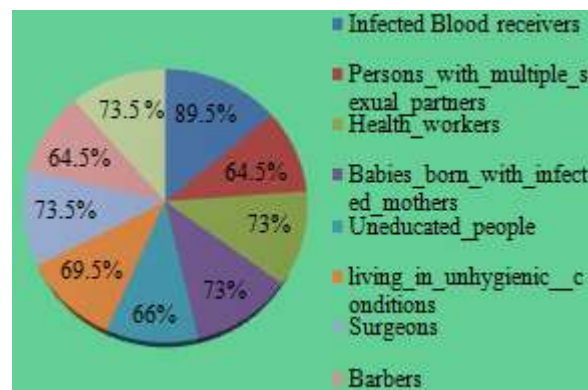


Figure 7: Knowledge of Hepatitis C risk groups

The risk groups tested were; Infected blood receivers, persons with multiple sexual partners, health workers, babies born with infected mothers, uneducated people, people living in unhygienic conditions, surgeons, barbers, haemodialysis patients. Knowledge about risk groups of Hepatitis C is shown in table 5.

Only 56 (26.5%) students knew there is no vaccine for Hepatitis C. 73.5% of the students had no knowledge about Hepatitis C vaccine.

5. Discussion

Our present study evaluates the Knowledge, Attitude and Practices of Medical students towards Hepatitis B and C infections.

200 medical students from II MBBS were included in the study. Out of total 200 students, 97 (48.5%) were males and 103 (51.5%) were females. 11% students were from age group 19yrs, 51.5% from 20yrs, 32% from 21yrs and 5.5 % were of age 22 yrs.

In our study 100% of the students had heard of hepatitis B and the same number were aware about the causative agent of Hepatitis B. Abdnur Abdela et al¹⁴ reported that about 77 % of the medical students were aware that they are at-risk for HBV infection, and 83.3 % agreed that following infection control guidelines would protect them from being infected at work.

In our study, responders were having knowledge about risk factors of Hepatitis B; infected blood transfusion 97%, 96 % knew about needle sharing, 87% about infected mother to child, and 93.5% about unsafe sexual contact and less knowledge about tattooing/ piercing was 84.5%. The findings are in line with Lahore study¹⁵, they reported that the knowledge about transmission of Hepatitis B and C through blood and blood products (80.7%) , sexual route (53.6%) and by used needles and syringes (80.0%) was found to be high. But through Faeco oral route (27.5%) and contaminated water (43.2%) was low among medical students. Similar findings have been reported by B.J Medical study¹⁶. In that study the knowledge that tattooing, dental procedures and sexual contact are potential sources of HCV and HBV transmission was incorrectly known or not known by reasonable proportions of the participants.

In a similar study conducted among dental students shows knowledge about risk factors of Hepatitis B ranges between 31.6% to 93.7% and Hepatitis C was 40.5% to 86.1%. 73.4% were vaccinated for Hepatitis B while 87.1% had correct knowledge about doses of Hepatitis B vaccination. But the knowledge about Hepatitis C post exposure prophylaxis was poor (1.3%)¹⁷.

In our study 121(60.5%) students were vaccinated for Hepatitis B. 59 (29.5%) of 200 knew the correct immunization schedule for Hepatitis B. Our data indicates that there is a positive correlation between medical students' knowledge toward Hepatitis B and C and their attitude towards the diseases in a way that higher knowledge is associated with better attitude. This result is consistent with the results of some similar surveys. The epidemiological study¹⁸ on Medical students' awareness of and compliance with the hepatitis B vaccine in a tertiary care academic hospital reported almost half of the study participants had medium to low knowledge levels of HBV, and almost half of the participants were non-compliant with the vaccination program. Awareness programs and campaigns should be developed to increase the overall awareness and prevention of this disease.

Othman SM et al¹⁹ in Iraq reported students' knowledge about HBV vaccine was not satisfactory, in which 64% of students had knowledge about vaccination against HBV infection as one way of prevention of the disease. A low proportion of the students (45%) had received HBV vaccination.

Study from Tanta University medical students towards hepatitis B and C showed that more than three-quarters of the participants had a positive attitude towards B and C viral hepatitis. Small proportions of the respondents had negative or not-sure attitudes towards accepting screening for B and C viral hepatitis, getting further investigations and treatment if found positive for hepatitis B or accepting marriage with a hepatitis B or C person. Most of the students in the study (81.6%) did not accept to share or practice sharing syringes, toothbrushes, or barbers blades with others²⁰. Our findings correlate similarly with this study.

The students had good knowledge, positive attitude and good practices towards B and C viral hepatitis. Areas of insufficient knowledge needed to be reinforced included some modes of transmission, complications, and treatment for B and C viral hepatitis.

6. Conclusion

Knowledge and attitude of the medical students of KIMS Karad regarding Hepatitis B and C is fairly good. Sensitization of the medical students to the various aspects of the disease and vaccination through an active health education programme is crucial to control the spread of Hepatitis B and Hepatitis C.

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References

- [1] World Health Organization: Hepatitis B. Fact sheet no: 204.
<http://www.who.int/mediacentre/factsheets/fs204/en>.
- [2] Lok ASF, McMahon BJ: Chronic hepatitis B. *Hepatology* 2007, 45:507–539.
- [3] Lee WM: Hepatitis B virus infection. *N Engl J Med* 1997, 337:1733–1745.
- [4] Lesmana LA, Leung NWY, Mahachai V, Phiet PH, Suh DJ, Yao G, Zhuang H: Hepatitis B: overview of the burden of disease in the Asia Pacific region. *LiverInt* 2006, 26:3–10.
- [5] Mohamed R, Desmond P, Suh DJ, Amarpurkar D, Gane E, Guangbi Y, Hou JL, Jafri W, Lai CL, Lee CH, Lee SD, Lim SG, Guan R, Phiet PH, Piratvisuth T, Sollano J, Wu JC: Practical difficulties in the management of hepatitis B in the Asia-Pacific region. *J Gastroenterol Hepatol* 2004, 19:958–969.
- [6] André F: Hepatitis B epidemiology in Asia, the middle East and Africa. *Vaccine* 2000, 18:S20–S22.
- [7] Talpur AA, Memon NA, Solangi RA and Ghumro AA. Knowledge and attitude of patients towards hepatitis B and C. *Pakistan J of Surgery* 2007; 23: 162-165.

- [8] Khokhar N, Gill ML and Malik GL. General seroprevalence of hepatitis B and C virus infection 2004; 14: 534.
- [9] Wands JR. Prevention of hepatocellular carcinoma. *N Engl J Med* 2004; 351: 1567-1570.
- [10] Waheed Y, Shafi T, Safi Sh Z and Qadri I. Hepatitis C virus in Pakistan: A systematic review of prevalence, genotypes and risk factors. *World J Gastroenterol* 2009; 15: 5647-5653.
- [11] Mohammadi N, Allami A, Malek Mohammadi R. Percutaneous exposure incidents in nurses: Knowledge, practice and exposure to hepatitis B infection. *Hepat Mon.* 2010;11:186–190.
- [12] Shiao J, Guo L, McLaws ML. Estimation of the risk of blood borne pathogens to health care workers after a needle stick injury in Taiwan. *Am J Infect Control.* 2002;30:15–20.
- [13] Ghahramani F, Mohammadbeigi A, Mohammadsalehi N. A survey of the students' knowledge about hepatitis. *Hepat Mon.* 2006;6:59–62.
- [14] Abdela A, Woldu B, Haile K, Mathewos B, Deressa T. Assessment of knowledge, attitudes and practices toward prevention of hepatitis B virus infection among students of medicine and health sciences in Northwest Ethiopia. *BMC research notes.* 2016 Dec;9(1):410.
- [15] Shahbaz TA, Raza SM, Manzoor ZA, Jamshid A. Hepatitis B and C: Knowledge, attitude and Perception of medical students at Lahore Medical & Dental College, Lahore. *PJMHS.* 2014;8(3):789-93.
- [16] Singh A, Jain S. Prevention of Hepatitis B; knowledge and practices among Medical students. *Healthline.* 2011 Jul;2(2):8-11.
- [17] Mane PM, Patil SR, Patil SS, Karande GS. Study of Knowledge, Attitude, and Practices toward Hepatitis B and C Infections among Undergraduate Dental Students. 2018;5(7):G6-G9.
- [18] Ghomraoui FA, Alfaqeeh FA, Algadheeb AS, Al-alsheikh AS, Al-Hamoudi WK, Alswat KA. Medical students' awareness of and compliance with the hepatitis B vaccine in a tertiary care academic hospital: An epidemiological study. *Journal of infection and public health.* 2016 Jan 1;9(1):60-5.
- [19] Othman SM, Saleh AM, Shabila NP. Knowledge about hepatitis B infection among medical students in Erbil city, Iraq. *European Scientific Journal, ESJ.* 2014 Jan 14;9(10).
- [20] Atlam SA, Elsabagh HM, Shehab NS. Knowledge, attitude and practice of Tanta University medical students towards hepatitis B and C. *Int J Res Med Sci* 2016;4:749-56.

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