

HEPATITIS AND AIDS FEAR AND MISCONCEPTIONS; ARE OUR STUDENTS READY FOR CONTACT WITH THESE PATIENTS?

ORIGINAL
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DR. MUHAMMAD LAIQ UZZAMAN KHAN

MBBS, FCPS
Assistant Professor Surgery
Dow International Medical College
Dow University Hospital, Karachi

DR. KAMRAN HAFEEZ

MBBS, FCPS
Assistant Professor Surgery
Dow International Medical College
Dow University Hospital, Karachi

DR. MASOOD JAWAID

MBBS, MCPS, MRCS, FCPS
Assistant Professor Surgery
Dow International Medical College
Dow University Hospital, Karachi

Dr. Ubedullah Shaikh

MBBS, (M.S GENERAL SURGERY)
Senior Medical Officer
Dow International Medical College
Dow University Hospital, Karachi

ABSTRACT... Introduction: Blood born infection is also one of the medical profession hazard which is added due to virus transmission by needles and medical instruments and Hepatitis and HIV viruses are leading viruses in this hazard. Medical students who are actively participating in clinical practices and due to contact with patients, face exposure of patient's needles, instruments, and blood and this exposure starts in clinical posting of third year when their clinical knowledge and professional skills are in early phases. **Objective:** To assess and evaluate the existing level of knowledge about these blood born infections (Hepatitis B, C and AIDS) to ensure their participation in clinical activities during their clinical posting. **Design:** An observational cross sectional study with prospective data. **Setting:** Dow International Medical College. **Period:** from 2010 to 2011. **Methodology:** This is an observational cross sectional study with prospective data, done through a questionnaire survey on third year MBBS students. **Results:** 47% of the students have fear about to be infected by patient's examination during clinical posting and majority of students have misconceptions about transmission of these infections. Students have more knowledge about HIV compare to hepatitis but there is no relation in knowledge score and student's fear as shown by p value of 0.3 and 0.73 for HBV and HIV but for HCV (p= 0.035) during this study. **Conclusions:** Up to half of the students have fear to be infected by these infections during patient's examination and this perceived risk of infection is due to lack of knowledge and these misconceptions and attitude to these patients are the sources to make them reluctant in active participation of clinical activities directly related to patient.

Key words: Blood born infection, misconceptions, hepatitis, HIV, student's participation, student's fear.

INTRODUCTION

Many professions have professional hazards and medical profession is one of them which has always risks. Throughout history, many hazards are reported in which heading the list are most probably respiratory tract infection transmission like tuberculosis and plague and at one time because of tuberculosis infection up to 25% of interns might have had to leave their program¹. Depression, sleeplessness, over work, exposure to drugs of dependence, stress patient's attendants' misbehavior in mob emergency, dangers in battle and natural catastrophes, disturbance in social life are many other hazards, which are being faced by doctors. Blood born infection is also one of the medical profession hazard which is added due to virus transmission by needles and medical instruments and Hepatitis and HIV viruses are leading viruses in this hazard.¹ These concerns are familiar to physicians and they are trained and acknowledged for prevention during practice but our

concern is about medical students who are actively participating in clinical practices and due to contact with patients, face exposure of patient's needles, instruments, and blood and this exposure starts in clinical posting of third year when their clinical knowledge and professional skills are in early phases¹.

After the intensification of health education campaigns about AIDS and Hepatitis in schools and media along with start of community medicine education from first year of medical graduation, it is presumed that students who get entry to third year clinical posting have acquired adequate information about prevention of these infections. No local study is found and only few studies^{1,2} are available in online-literature on this aspect of medical student's apprehension regarding infection transmission from patients to students during clinical skills learning which is one of the causes of students reluctance for active participation in clinical learning on patients.

Aim of the study was to assess and evaluate the existing level of knowledge about Hepatitis B, C and AIDS among girls and boys joining clinics for third year postings and to determine whether there is any need for initiation of awareness program in the beginning of the course itself to inculcate healthy habits and practices among fresh entrants and to make them confident in clinical activities participation.

METHODOLOGY

This is an observational cross sectional study with prospective data, done through a questionnaire survey on third year MBBS students of Dow International Medical College at the start of their clinical posting in 2010-2011. The questionnaire consisted of formatted questions to assess the knowledge and fear of students about Hepatitis and AIDS transmission and their Hepatitis vaccination status, distributed among 100 students and data collected during their posting in wards. SPSS version 16 was used for statistical analysis and results are shown in percentages. Chi-square test is used to check the significance of results.

RESULTS

Data collected through questionnaire shows 47 students out of 100 (47%) in which 27 (48%) are male and 20 (45%) are females have fear about to be infected by patient's examination during clinical posting and majority of students have misconceptions about transmission of these blood born infections as indicated by their perceptions of saliva, sweat, hand shake, cough and eating utensils for sources of transmission for these blood born infections (Table-I). Relation between student's knowledge score and fear to be infected is shown in Table-II with p value 0.3, 0.035 and 0.73 for HBV, HCV and HIV respectively. Student's level of knowledge for different sources of transmission for these infections are shown in Fig. 1-3 in the form of scores out of maximum 17 and these results show students have more knowledge about HIV compare to hepatitis but there is no relation in knowledge score and student's fear as shown by p value of 0.3 and 0.73 for HBV and HIV. Prophylactic status of immunity of the students for hepatitis B is shown in Table-III.

Fig-1. Knowledge of HBV transmission sources (Max. Score 17)

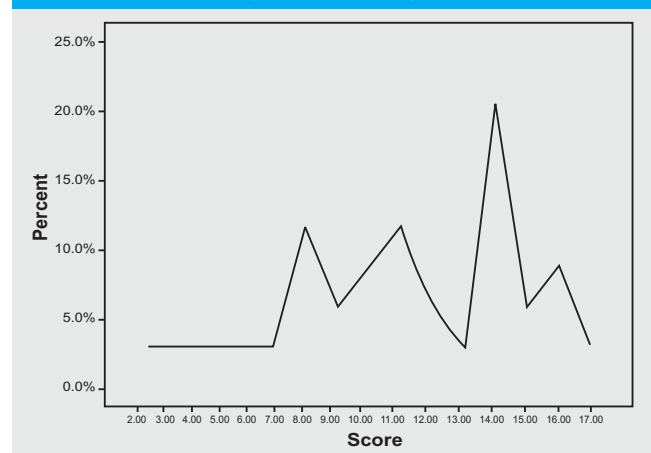


Fig-1. Knowledge of HBV transmission sources (Max. Score 17)

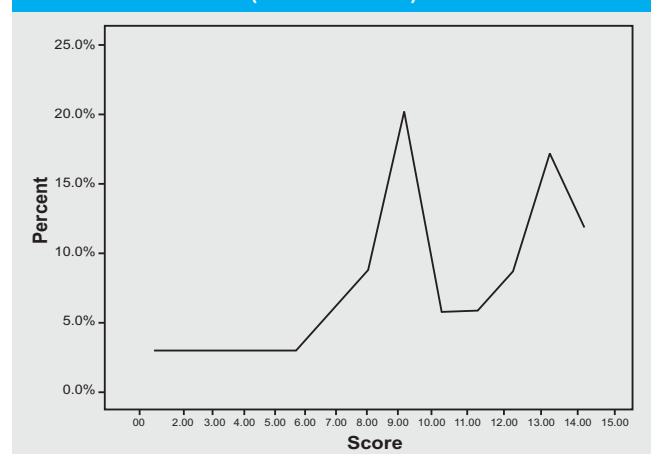


Fig-3. Knowledge of HIV transmission sources (Max. Score 17)

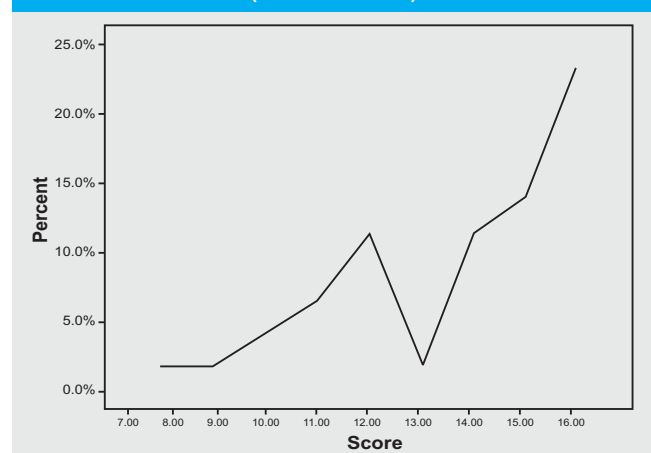


Table-I. Student's perceptions for sources of transmission of HBV, HCV, HIV (%)			
Sources of transmission	HBV	HCV	HIV
Sweat	56	18	12
Saliva	56	56	35
Intact skin to skin contact during examination	18	23	12
Bed of the patient	15	15	06
Patient's clothes	09	18	09
Vomit without blood	50	35	23
Blood	91	85	100
Needle stick injury	82	76	88
Urine	38	38	29
Wound dressing	53	44	59
Wound	77	68	85
Drain tubes fluid	56	56	53
Eating utensils of the patients	44	32	18
Hand Shake	09	06	88
Cough	38	29	18
Vaginal secretions	65	53	91
Semen	68	56	97

DISCUSSION

Hepatitis B, C and AIDS are global problems today. These Infections are spreading very fast in Pakistan and according to a survey (2007-2008) of Pakistan Medical Research Council the prevalence of Hepatitis B is 2.5% while Hepatitis is 4.9% in general population of Pakistan. A local study conducted on patients admitted for surgery shows prevalence of hepatitis B and C about 9.8%.³ By the year 2000, it is estimated that around 7 million people would have been infected with HIV in India alone.

There is a higher rate of exposure to at least once to potentially infectious body fluids during the clinical years of medical school as recalled by forty five to sixty five percent of all graduating medical students^{4,5}, and these

Table-II. Relation of Knowledge Score and Fear for HBV, HCV & HIV					
Knowledge score	Fear to be infected by patient's examination	Total		P-values	
		Yes	No		
HBV					
Score <11	Yes	21	21	42	0.30
	No	23	35	58	
Total		44	56	100	
HCV					
Score <10	Yes	18	12	30	0.035
	No	26	44	70	
Total		44	56	100	
HIV					
Score <14	Yes	18	21	39	0.73
	No	26	35	61	
Total		44	56	100	
*Mean Knowledge score out of 17 score (HBV = 11, HCV=10, HIV=14) χ^2 - test used for analysis					

Table-III. Hepatitis B immunity status in students (%)			
Hepatitis B vaccine status	Male	Female	Total
Vaccinated	79	93	86
Booster dose	63	67	65
Check for antibody status (Anti HBsAg)	21	13	17

incidents happen in early period of clinical training.⁶ The lack of experience and skills make students more prone to risk of infection during practice of invasive medical procedures⁴, because of these medical students are high risk group for blood born infection⁷ as they are in direct contact with patient, blood, needle and surgical instruments⁵, they receive more percutaneous injuries

compare to health care workers.^{9,10}

Hepatitis is more infective than AIDS. Hepatitis B can be prevented by vaccination but for AIDS and HCV effective vaccination still remains a dream. These infections can be prevented by Health education, which is the only method to prevent or control these scourges. Student's status of immunity prophylaxis for HBV and their awareness for checking the immunity status shows that there is no awareness for checking the immunity level after vaccination.

There are myths about the modes of spread of these infections even among the medical students and because of these misconceptions they have got fear to be infected by these infections during examination of patients on start of their clinical training. Some students avoid active participation in clinical activities with patients because of these fears.² The Association of American Medical Colleges has promulgated, and every medical school has accepted, the idea that students must be involved in the care of all types of patients, regardless of the potential risk. This approach has made it incumbent on schools to train their students in safe procedures and to establish response capacities for any break in technique that leads to a possible exposure to blood borne pathogens^{1,11-15}. Our study shows 47% of students are fearful of the contagion by the patient while Tabet S. R. and his colleagues reported 81% and show significant correlation of fear with lack of knowledge in their study².

The reluctance of students for participation in clinical activities and patient examination during their clinical posting in wards and out patient department is partially based on the perceived risk of transmission of HIV² and Hepatitis viruses from patient contact. We hypothesize that fear of contagion is due to lack of knowledge and misconceptions existing not only in locally educated students but also in those students who got their education in developed countries like USA, UK and Canada. This hypothesis is supported by our study for HCV knowledge (P= 0.03) but for HBV and HIV results show that knowledge score has no relation with fear of students for patient's examination (p value is 0.3 and 0.73 respectively), which indicate that student's fear to be infected during patient's examination should be

addressed along with other knowledge regarding these blood born infections so that students can participate in clinical learning actively without fear on the basis of misconceptions. Joukar F., Mansour-Ghanaei F., Soati F., Meskinkhoda P. showed a strong relation between knowledge score and attitude score towards Hepatitis C patients in their study (P= 0.02).¹⁶ Richmond JA, Dunning TL, Desmond PV also pointed out discriminatory attitude of health professionals towards Hepatitis C patients and recommended that focusing on education strategies on changing health professional attitude towards these patients rather than concentrating solely on medical information may ultimately improve patient's care in their study¹⁷. Reis C. and et al also mentioned in their study discriminatory attitude of health professionals towards HIV patients and emphasize on education to change attitude¹⁸. We developed this hypothesis on the basis of results of our study over third year MBBS students, who entered in clinical learning by exposure of patients in Out Patient Department and wards during their clinical posting, which is started from third year.

CONCLUSIONS

Up to half of the students were found had fear to be infected during patient's examination and this perceived risk of infection is due to lack of knowledge and misconceptions which are the sources to make them reluctant in active participation of clinical activities directly related to patient's care. But these are not the only factors for student's fear because those students who had good knowledge score also showed fear during this study it shows that this issue required separate attention to alleviate student's fear to be infected by patient's examination.

We need awareness program as part of syllabus about transmission of these infections in preclinical years and at start of clinical posting to encourage students for active participation in patient's examination and clinical activities.

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Correspondence Address:

Dr. Ubedullah Shaikh
Senior Medical Officer
Dow International Medical College
Dow University Hospital, Karachi
drubedullah@gmail.com

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