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HEPATITIS B: ITS AWARENESS, PRACTICE AND FREQUENCY OF VACCINATION AMONG SELECTED HIGH RISK HEALTH-CARE WORKERS AT TERTIARY CARE HOSPITAL

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Abstract:

Foundation: Hepatitis B infection (HBV) contamination is a worldwide issue and >350 million HBV transporters on the planet. Destinations: The point was to evaluate mindfulness, routine with regards to chosen high hazard human services laborers (HCW) in regards to chance for contracting hepatitis B and self-revealed immunization status. Materials and Methods: A cross-sectional investigation was led among 300 chose HCW of Holy Family Hospital Rawalpindi Jan to March 2018. Results: About 72.1% respondents were females with by and large mean period of 24.10 (standard deviation ±7.011). 67.5% females were inside the age gathering of 18-23 years. Lion's share (70.4%) of the members were nursing understudies and (92.5%) family units (54.6%). Lion's share (69.3%) of them knew that hepatitis B transmission was conceivable through perilous sex, tainted blood/body liquid, sullied syringe, needle and surgical tool, 19.6% knew through tainted blood and body liquids, 5.7% knew through defiled syringe, needle and surgical tool, 1.8% knew through risky sex. 59.3% had a past filled with contact with known hepatitis B case. 62.2% were inoculated with three portions of hepatitis B immunization. Dominant part of the members had presented to hepatitis B positive case while at work (P = 0.001). The uncovered people with known hepatitis B cases have counseled specialist, immunized and treated with prescriptions (P = 0.002); utilized needle destroyer (P = 0.012); inoculated with 3 portions of hepatitis B immunization (P = 0.001); and utilized sterile gloves while performing work (P = 0.000), particularly while managing blood and body liquid. End: notwithstanding having great information, the manner in which they practice for aversion of hepatitis B diseases were lacking and need further improvement.

Key words: *Health care workers, hepatitis B, knowledge, practice, tertiary care hospitals.*

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INTRODUCTION:

Hepatitis B infection (HBV) contamination is a worldwide pandemic, and there are >350 million HBV bearers on the planet and with low, nonprofessional dispositions and practices.[1] HBV is a DNA infection and one of numerous disconnected infections that reason viral hepatitis and can prompt liver cirrhosis and hepatocellular carcinoma.[2,3] More than seventy five percent of its diseases happen in Asia, Middle East and Africa.[4,5] According to a WHO gauge, >2 billion individuals on the planet have serological proof of earlier HBV infection.[6] Of the world's transporters of HBV, 75% are from Asia.[7] Globally, in excess of a million people kick the bucket every year from its related causes.[8] This high predominance rate with its continuations like liver cirrhosis and hepatocellular carcinoma makes HBV disease an illness of significant general wellbeing significance worldwide.[9] The pervasiveness of HBV insufficient strategies and conflicting authorization of transporters shifts from least in Japan (<0.00005%),[10] to most elevated (10-20%) in regions like southeast Asia, China and sub-Saharan Africa.[11] According to an investigation from Lahore, commonness of HBsAg in ordinary subjects was 2.6%,[12] and 3.37% in blood benefactors of Multan.[13] By ideals of occupation, the medicinal services specialists (HCW) are put in consistent threat of getting HBV from the tainted patients.[14,15] It is the most usually transmitted as blood-borne infection.[16] Nosocomial transmission can be forestalled by the immunization of social insurance workers.[17] The hepatitis B antibody gives security against the infection.[18] The HCW and research center laborers by and large looked with numerous word related dangers at work and his/her wellbeing and security might be seriously imperiled if sufficient preventive measures are not taken. The aversion of word related dangers requires an exhaustive learning of the dangers and functional measures to be taken.[19] They ought to acclimate themselves with "general work insurances," as characterized by Center for Disease Control, are a lot of safety measures intended to counteract transmission of HBV/hepatitis C infection (HCV), human immunodeficiency infection (HIV), and other blood borne contaminations while giving emergency treatment or medicinal services. Under all inclusive safety measures, blood and certain body liquids of all patients are considered conceivably irresistible for HIV, HBV/HCV and other blood borne pathogens.[20] It is prescribed that all HCW play it safe to avert wounds brought about by needles, surgical blades, and other sharp instruments or devices.[21]

This arrangement of disease control is, subsequently, significant if the danger of transmission of contaminations in working spots are to be limited, as they may not know about the result of blood and liquid examples until they are investigated.[20]

In Tripura, Hepatitis Foundation of Tripura (HFT) a Non Governmental Organization (NGO) is effectively working for fighting hepatitis B contamination in the state. Till 2011, an aggregate of 69, 8811 people have been inoculated with a populace inclusion of 19.41%.[22] It should be referenced that hepatitis B inspiration rate in Tripura is somewhere in the range of 4% and 5%.[23] Further, 12% of the state's all out Muslim populace and 8% of the complete innate populace experience the ill effects of hepatitis B infection.[24]

The reason for this investigation is along these lines to decide information of HBV and hepatitis B antibody, recurrence of inoculation, and understanding the hazard factors for HBV contamination among nursing staff, nursing understudies, nursing assistants, and research center specialists who are viewed as high hazard and are working in tertiary consideration medical clinics in Agartala city.

MATERIALS AND METHODS:

A cross-sectional examination was led among HCW of Holy Family Hospital Rawalpindi from jan to march 2018 . An example size of 300 was determined dependent on 60% prevalence[25] with a flat out mistake of 6% including 10% nonresponse. Singular example was chosen by accommodation inspecting and information were gathered by pre tried organized survey. The poll had three sections, the initial segment incorporated the general data identified with the members, and the second part contained the inquiries identified with information and third part identified with training/self-revealed immunization status on HBV. There were 15-thing addresses identified with information and reaction was twofold, recorded as either yes or no. Every thing with the right answer was given 1 (one) with a most extreme score of 15 and wrong answer 0 (zero) with at least 0 (zero). The learning part had been scored into three classes, that is, poor (0-5), normal (6-11) and great (12-15). The members were approached to finish the poll without leaving any un-endeavored or inadequate inquiries, which were pertinent. Verbal educated assent was gotten from the members and exacting secrecy kept up. Laborers who had a past filled with HBV contamination, improbable to interact with blood/body liquid, and the individuals who did not concur were rejected from the examination. High-

chance HCW were characterized as clinic staff presented to more serious danger of obtaining HBV contamination because of the particular idea of occupation including inhabitants, house officers, nursing staff, nursing associates, clean specialists, and woman wellbeing laborers working in medical procedure/partnered, prescription/unified and gynecology/obstetrics task theaters, crisis gathering, Intensive Care Units, hemodialysis office and dental unit.[25] Effectively immunized subjects were characterized as the individuals who had gotten three dosages of hepatitis B antibody as indicated by the timetable (0, 1 and 6 months).[25] Data were entered in the PC in the wake of getting ready ace diagram and broke down utilizing Epi information form 6.0, CDC, Atlanta, Georgia, USA. Microsoft Corporation, Redmond, Washington, USA.

RESULTS:

In the present investigation, larger part of the respondent's (72.1%) were females and inside the age bunch 18-23 years (67.5%) with a general mean time of 24.10 (standard deviation [SD] ±7.011), running from 18 to 57 years. Larger part (70.4%) of the members were nursing understudies and remaining were nursing staff (21.1%), lab specialist (4.6%) and nursing internees (3.9%). Among them, 92.5% were Muslims, 2.9% Hindu, 2.9% Christian, 1.8% Buddhist and greater part of them (54.6%) had a place with the family unit.

Dominant part (98.2%) of them reacted that hepatitis B as an infection and the staying (1.8%) of them reacted that hepatitis B as a microbes. Among them, 259 (92.5%) members thought about HFT (a NGO) started the hepatitis B inoculation in the entire state (in sponsored rate) of Tripura. Dominant part (69.3%) of them realized that hepatitis B transmission was conceivable through hazardous sex, blood/body liquid, syringe, needle and surgical blade, 55 (19.6%) knew through blood and body liquids, 16 (5.7%) knew through contaminated syringe, needle and surgical tool, 5 (1.8%) knew through sexual course just and the staying 3.6% couldn't clarify. Seventy-five members (26.8%) wrongly announced that particular remedial treatment was accessible, though 73.2% of them revealed no such treatment was accessible. As indicated by 251 (89.6%) members, transmission was conceivable from contaminated mother to tyke and 245 (87.5%) knew that mother to youngster transmission was preventable potentially through immunization (91.8%) during childbirth.

Examination of the learning of hepatitis B disease uncovered that 171 (61.5%) respondents realized that hepatitis B immunization could be given to pregnant mother, while lion's share of them (62.1%) realized that the antibody ought to be stayed away from to intensely febrile patient. Among the respondents, 245 (87.5%) thought around three dosages of the antibody while 223 (79.6%) of them knew that the immunization was powerful for the existence time. Greater part of the respondents (52.9%) effectively thought about the methods of aversion of hepatitis B contamination. Practically half (51.1%) of the respondents knew about the conceivable reason for transmission; (55.7%) could clarify that hepatitis B contamination prompts liver cirrhosis, 36 (12.9%) people clarified for liver malignancy and 64 (22.9%) people clarified for both liver cirrhosis and disease. The control of the members was a significant related factor for mindfulness with respect to hepatitis B contamination (P = 0.005). The age, religion, sort of family and pay did not assume any job in consciousness of hepatitis B disease among the inspected populace [Table 1].

One hundred and sixty-six (59.3%) members revealed the historical backdrop of contact with known hepatitis B case. Among the respondents who had reached with known hepatitis B case 34.9% had counseled a specialist, inoculated and treated. 155 (53.6%) respondents recapped needles after use and 89.6% of respondents utilized needle destroyer. 267 (95.4%) of the respondents were inoculated with hepatitis B antibody however 168 (62.2%) members had finished three portions of hepatitis B immunization till the season of doing of this overview. 271 (96.8%) utilized sterile gloves while infusing or drawing blood, 96.8% utilized sterile types of gear and 84.6% disposed of the utilized needle and syringe in the sheltered cut evidence holder [Table 2]. The examination of learning with training uncovered that dominant part of respondents had reached with hepatitis B positive case while at work (P = 0.001); counseled specialists, inoculated and treated with prescriptions (P = 0.002); utilized needle destroyer (P = 0.012); 3 dosages of hepatitis B immunized (P = 0.001); and utilized sterile gloves before performing work (P = 0.000), particularly while managing blood and body liquid [Table 3].

Table 1: Association of knowledge with selected sociodemographic variables

Variables	Knowledge score			*P*
	0-5, *n* (%)	6-11, *n* (%)	12-15, *n* (%)	
Age (years)				
18-24	0 (0.0)	15 (27.8)	39 (72.2)	0.066
25-29	0 (0.0)	7 (63.6)	4 (36.4)	
≥30	0 (0.0)	1 (50.0)	1 (50.0)	
Sex				
Male	3 (3.8)	36 (46.2)	39 (50.0)	0.20
Female	3 (1.5)	78 (38.6)	121 (59.9)	
Occupation				
Nursing staff	2 (3.4)	21 (35.6)	36 (61.0)	0.005
Intern nursing	0 (0.0)	8 (72.7)	3 (27.3)	
Nursing student	2 (1.0)	79 (40.1)	116 (58.9)	
Lab technician	2 (15.4)	6 (46.2)	5 (38.50)	
Religion				
Muslim	6 (2.3)	103 (39.8)	150 (57.9)	0.248
Christian	0 (0.0)	3 (37.5)	5 (62.5)	
Buddhist	0 (0.0)	5 (100.0)	0 (0.0)	
Hindu	0 (0.0)	3 (37.50)	5 (62.5)	
Type of family				
Joint	4 (3.1)	49 (38.6)	74 (58.3)	0.494
Nuclear	2 (1.3)	65 (42.50)	86 (56.2)	
Income (Rs.)				
≤10,000	4 (1.6)	103 (41.5)	141 (56.9)	0.281
10,001-20,000	1 (5.3)	5 (26.3)	13 (68.4)	
20,001-30,000	1 (12.5)	4 (50.0)	3 (37.5)	
≥30,001	0 (0.0)	2 (40.0)	3 (60.0)	

The knowledge score of (0-5) was clubbed with average knowledge score (5-11) while performing Chi-square test

Table 2: Distribution of participant's according to their practice regarding hepatitis B infection

Variables	Number	Percentage
History of contact with known hepatitis B case		
Yes	166	59.3
No	114	40.7
Precautionary measure taken after contact with infected case		
Consult a doctor and vaccinated	100	60.2
Consulted doctor, vaccinated and treatment received	58	34.9
Wait and watch	3	1.8
Nothing	5	3.0
Recapping needles after use		
Yes	150	53.6
No	130	46.4
Use of needle destroyer		

Yes	251	89.6
No	29	10.4
Vaccinated with hepatitis B vaccine		
Yes	267	95.4
No	13	4.6
Number of doses received		
One	4	1.5
Two	8	3.0
Three	168	62.2
More than three	86	31.9
Don't remember	4	1.5
Use of sterile gloves while injecting or drawing bloods		
Yes	271	96.8
No	9	3.2
Use of sterile equipments before using		
Yes	271	96.8
No	9	3.2
Discarding the used syringe in		
Safe puncture proof container	237	84.6
Polythene bag	17	6.1
Empty carton box	26	9.3

Table 3: Association of knowledge with practice of the respondent's regarding hepatitis B infection

Variables	**Response variables**	**Knowledge score**			***P***
		(0-5), *n* (%)	**(6-10), *n* (%)**	**(11-15), *n* (%)**	
History of contact with known hepatitis B case	Yes	0 (0.0)	60(36.14)	106 (63.86)	0.001
	No	6 (5.26)	54(47.36)	54(47.36)	
Measures taken after contact with hepatitis B case*	Consult a doctor and vaccinated	0 (0.0)	44 (44.0)	56(56.0)	0.002
	Consulted doctor, vaccinated and medicines taken	0 (0.0)	12(28.69)	46(79.31)	
	Wait and watch	0 (0.0)	3 (100.0)	0 (0.0)	
	Nothing	0 (0.0)	1(20.0)	4(80.0)	
Recap needles after use	Yes	3 (2.0)	54 (36.0)	93(62.0)	0.209
	No	3 (2.31)	60(46.15)	67(51.54)	
Use of needle destroyer	Yes	4 (1.6)	97 (38.6)	150 (59.8)	0.012
	No	2 (6.9)	17 (58.6)	10 (34.5)	
Vaccinated with hepatitis B vaccine	Yes	5 (1.9)	108 (40.4)	154 (57.4)	0.309
	No	1 (7.7)	6(46.2)	6(46.2)	
Number of doses taken**	One	1 (25.0)	1(25.0)	2(50.0)	0.001
	Two	1 (12.5)	4(50.0)	3(37.5)	
	Three	1 (0.59)	67(39.89)	100(59.52)	
	More than three	2 (2.33)	33(38.37)	51(59.30)	
	Don't remember	0 (0.0)	4 (100.0)	0(0.0)	
Use of sterile gloves while	Yes	4 (1.48)	110 (40.60)	157(57.93)	0.000

injecting or drawing bloods	No	2 (22.00)	4(44.0)	3 (34.00)	
Use of sterile equipments	Yes	5 (1.85)	109 (40.22)	157(57.93)	0.086
	No	1 (11.11)	5 (55.56)	3 (33.33)	
Discarded the used needle/ syringe in***	Safe puncture proof container	3 (1.27)	95(40.08)	139(58.65)	0.158
	Polythene bag	1 (5.88)	7 (41.18)	9 (52.94)	
	Empty carton box	2 (7.70)	12(46.15)	12(46.15)	

NB: The knowledge of (0-5) for *, ** and *** were clubbed together with average score (6-11) and 0 cells were also clubbed with adjacent row while performing Chi-square test was likewise in simultaneousness with an examination in Kuwait where lion's share of the respondents were taken an interest from medical attendants and doctors.[27] The accessibility in the working spot amid working hours and more prominent numbers situated in various wards and centers in the emergency clinics may be the purpose behind more investment from this gathering contrasted with research facility and others professionals.

Dominant part (98.2%) of them reacted that hepatitis B as an infection. An examination from Sindh, Pakistan demonstrated that 67.76% ladies accurately reacted that infection was a reason for hepatitis.[28] We found that most of them realized that hepatitis B transmission was conceivable through hazardous sex, tainted blood/body liquid, debased syringe, needle and extremely sharp steel. Bakry et al. detailed that, 98.6% of medical attendants, 94.8% of lab professionals and 95.7% of other paramedical realized that HBV transmitted by means of blood.[29] An examination from Sindh,[28] Pakistan demonstrated that 33.88% transmission of HBV by means of tainted blood transfusion, 40.49% polluted needles, 38.0% un-sanitized instruments, and 19.0% referenced sex.

As per members, transmission was conceivable from a contaminated mother to kid and knew that the mother to tyke transmission was preventable perhaps through immunization (91.8%) during childbirth. An investigation among Pakistani ladies from Sindh demonstrated that transmission could be conceivable from the mother to youngster (17.35%). Just 42.14% ladies realized that the antibody was accessible for prevention.[28] The learning level we found in the present investigation was very high. This could be because of actuality that the IEC exercises conveyed out by NGOs like HFT may have contributed in this respects, well beyond the general wellbeing segment exercises.

In the present examination, 87.5% realized that three dosages of the immunization as a full course while 79.6% of them knew that the antibody was viable for the existence time. 168 (62.2%) members had taken three portions of hepatitis B antibody. Shagufta et al.[26] announced that 57.6% were totally immunized, 18.3% incompletely inoculated and 24% were not immunized by any stretch of the imagination. Over half ($P < 0.001$) of HCW were not inoculated against HBV.[29] Jitendra and Jignai revealed that 91.5% were not vaccinated against HBV among the investigation participants.[21] Lack of mindfulness and negative demeanor was distinguished as the principle factor in charge of the absence of vaccination.[26] In the present examination, 53.6% respondents recapped needles after use and 89.6% utilized needle destroyer. Bakry et al. detailed that 81% of the respondents were routinely used to recap needles after use.[29] Recapping of needle was pivotal for inadvertent finger prick damage prompting contracting blood borne illness including hepatitis B. Dominant part of respondents had reached with hepatitis B positive case while at work; counseled specialists, inoculated and treated with medications; immunized with 3 dosages of hepatitis B antibody. Shagufta et al. (2010)[26] detailed that 53.5% had been presented to needle stick damage at any rate 1-5 times in their entire expert life; 48.1% (99) of the needle stick damage uncovered faculty knew about post presentation prophylaxis while 51.9% of them were unmindful of standard prophylaxis.

Two hundred and seventy-one (96.8%) wear sterile gloves while infusing or drawing blood, 96.8% utilized sterile types of gear and 84.6% disposed of the utilized needle and syringe in the sheltered cut evidence holder. Jitendra and Jigna announced that all lab experts (100.0%) among the examination members wore gloves while performing work in the wellbeing facility.[21] It was in simultaneousness with our investigation results.

CONCLUSION:

Regardless of having great information, the manner in which they practice for the avoidance of hepatitis

B diseases were insufficient and required further improvement. Reorientation preparing for the HCW is to be completed consistently to build mindfulness and changes of demeanor among them. Further research is prescribed including all dimension of HCW.

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