ORIGINAL ARTICLE

Frequency of Hepatitis C and Awareness of its Health Hazards among Paramedical Staff

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ABSTRACT

Background: Worldwide, hepatitis C is considered leading public health issue while paramedical staff is more at risk of acquiring infection. Frequency of anti-HCV positivity among healthcare staff ranges from 0 to 9.7% globally.
Aim: To assess the frequency of hepatitis C and awareness about its health hazards in paramedical staff at Nishtar Hospital Multan.
Method: This was cross-sectional descriptive study carried out during August 2016 among 105 paramedics working at Nishtar Hospital Multan. Data was gathered through questionnaire, which was entered into computer software SPSS version 20.0.
Results: Among 105 paramedics, 54.3% male and 45.7% were 31-40 years old. More than half (58.1%) had work experience above 10 years. Mainstream (67.6%) was aware regarding its spread while 31.4% had knowledge regarding its treatment plan. Among paramedical staff, 88.6% were examined for Hep-B and C upon joining government job. Among them, 86.7% observed safety measures during procedures and gloves were used by 46.7% during handling of patients/procedures.
Conclusion: Most of the paramedics had knowledge regarding hepatitis genus and spread. Information about treatment plans was unsatisfactory. Majority of the paramedical staff followed safety measures during procedures. There is need to provide refreshing training to paramedical staff.
Key words: Blood transfusion, Sterilization, Screening, Virus, Hep-B & C, HCV.

INTRODUCTION

Hepatitis C is one of the liver diseases that occur due to HCV (hepatitis C virus); this virus can lead to chronic and acute hepatitis, ranging in acuteness from mild infection lasting some weeks to a serious, lifetime illness. According to an estimation, 71 million individual worldwide are infected with chronic hepatitis C[1]. Hepatitis C virus, is believed like a "viral time bomb, most important hepatotropic virus and significant cause of acute pathological consequences, for example, acute hepatitis, chronic hepatocellular carcinoma and liver illness[2].

In Pakistan, hepatitis C is prevalent and the burden of disease is estimated to increase during decades to come due to excessive use of injections and unsafe surgeries. In Pakistan, among general adults HCV seroprevalence is 6.8% whereas reported active HCV infection is about 6% among the poplation[3].

The HCV is blood-borne virus. The virus mostly transferred through contaminated syringes used by drug abusers, improper sterilization of dental and medical instruments and transfusion of blood or blood products without screening[1].

Globally, the paramedical staff is at an extra risk of getting BBP (blood borne pathogens), for instance, hepatitis C virus if compared with any other professional group. It is generally caused by unique type of their profession in which they experience some hazards during health care service delivery.

An experience that could jeopardize paramedical staff for blood borne pathogens is described like percutaneous injury (for example, cut with sharp instrument or needle injury) or contact with mucous membrane and non-intact skin (exposed skin namely abraded, chapped and afflicted with dermatitis) through tissue, blood or other bodily fluids which are potentially communicable[4]. The main risk of HCV transmission happens after percutaneous harm, for instance, cuts with sharps and needle stick harm[5].

Job-related exposure of paramedical staff to hepatitis C virus infection takes place via percutaneous contact (75%) or mucosal-cutaneous contacts (25%) to infected blood, body fluids and blood derivative of the patients. Frequency of anti-HCV positivity among healthcare staff ranges from 0 to 9.7% globally[6]. Studies conducted in Pakistan demonstrated that prevalence of hepatitis C virus in paramedical staff from 5.2 to 5.6%. In Pakistan, the elevated incidence of Hep B & C in paramedical staff can potentially decrease their efficiency, compromise safety of patients and affect functioning of health system in general[4].

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Worldwide, hepatitis C is considered leading public health issue while paramedical staff is more at risk of acquiring infection.[7] Hepatitis C virus such high prevalence has previously been linked with absence of better safety measures, insufficient support for healthcare resources, insufficient barrier devices provision and great increase in the workload of paramedical staff. In addition, increased prevalence of hepatitis C virus among general personal jeopardize them of getting infection of hepatitis C virus. Safety of paramedical staff is most significant for the reason that healthful and fearless staff can provide better health services to the suffering humankind.[2] Present study is carried out to assess the frequency of hepatitis C and awareness of its health hazards among paramedical staff working at Nishtar Hospital Multan.

MATERIAL AND METHODS

It was cross-sectional descriptive study conducted among 105 paramedics working at Nishtar Hospital Multan. Data was gathered through questionnaire which was entered into computer software SPSS version 20.0. Confidentiality of the data was ensured and proper consent was taken before data collection.

RESULTS

Table-1 describes that out of 105 paramedics, 30 (28.6%) were ≤ 30 years old and 48(45.7%) were 31-40 years old while 27(25.7%) paramedics were > 40 years old. Among paramedical staff, 57(54.3%) were males and 48(45.7%) were females. Out of 105 paramedics, 25(23.8%) studied upto matric and 21(20%) had intermediate certificates while 59(56.2%) had graduation degrees and above. Out of 105 paramedics, 44(41.9%) had ≤ 10 years work experiences while majority 61(58.1%) had >10 years work experience. Table 2 asserts the risk factors regarding hepatitis C among paramedical staff. Result shows that 19(18.1%) had history of jaundice, 25 (23.8%) paramedics had history of blood transfusion or blood products, 39(37.1%) ever had surgery or dental procedure, major proportion 91(86.7%) of staff mostly handled the syringes and more than half 62(59.1%) suffered needle prick or sharp needle injury at work place.

Table 3 depicts the awareness of paramedical staff regarding hepatitis C and found that 65(61.9%) had knowledge about types of hepatitis, 71(67.6%) about spread, 33(31.4%) regarding treatment plan, 81(77.1%) about safe injection procedure, majority 91(86.7%) observed safety measures during procedures, 49(46.7%) used gloves during the procedures and handling patients, significant majority 99(94.3%) washed their hands regularly and 27(25.7%) attended refresher training about hepatitis C while among paramedical staff only 29(27.6%) were tested in the hospital for hepatitis C periodically. Table 4 highlights that among 105 paramedical staff, 4(3.8%) had Anti HCV Antibody positive and major proportion 101(96.2%) had Anti HCV Antibody negative.

Table-1: Socio-demographic characteristics

	Frequency	%age
Age		
Upto 30 years	30	28.6
31-40 years	48	45.7
More than 40 years	27	25.7
Total	105	100.0
Sex		
Male	57	54.3
Female	48	45.7
Total	105	100.0
Education		
Matric	25	23.8
Intermediate	21	20.0
Graduate & above	59	56.2
Total	105	100.0
Work experience		
Upto 10 years	44	41.9
More than 10 years	61	58.1
Total	105	100.0

Table-2: Risk factors of hepatitis C

Risk facors	Yes	No
History of jaundice	19(18.1%)	86(81.9%)
History of blood transfusion/ blood products	25(23.8%)	80(76.2%)
Surgery/ dental procedure	39(37.1%)	66(62.9%)
Handling of syringes	91 (86.7%)	14(13.3%)
Needle prick/ sharp needle injury	62(59.1%)	43(40.9%)

Table-3: Awareness about hepatitis C

Awareness	Yes	No
Knowledge regarding of hepatitis types	65(61.9%)	40(38.1%)
Knowledge regarding hepatitis C spread	71(67.6%)	34(32.4%)
Knowledge regarding treatment plan	33(31.4%)	72(68.6%)
Knowledge regarding safe injection procedures	81(77.1%)	24(22.9%)
Safety measures observed during procedures	91(86.7%)	14(13.3%)
Gloves use during procedures and handling pts	49(46.7%)	56(53.3%)
Hand washing regularly	99(94.3%)	6(5.7%)
Refresher training about hepatitis C	27(25.7%)	78(74.3%)
Test done in hospital for hepatitis C periodically	29(27.6%)	76(72.4%)

Table-4: Frequency and percentage of Anti HCV antibody

Anti-HCV antibody	No.	%
Positive	4	3.8
Negative	101	96.2
Total	105	100.0

DISCUSSION

Hepatitis C is an escalating public health problem while the paramedical staff due to their occupation is at elevated risk of getting this infection. Current study was carried out to know the frequency of hepatitis C among paramedical staff at Nishtar Hospital Multan. To acquire proper results, a total of 105 medical staff was interviewed. During study it was found that among paramedical staff, 28.6% were upto 30 years old, mainstream (45.7%) was 31-40 years old while remaining proportion (25.7%) was above 40 years old. A similar study conducted in 2012 by Shoaei and colleagues confirmed that 30.8% healthcare workers were upto 30 years old and 33.8% were 31-40 years while 35.4% were above 40 years old.[8] Study disclosed more than half (54.3%) of respondents were males and rest of the respondents (45.7%) were females. But the study undertaken by Shoaei and colleagues showed different scenario that most of the healthcare workers (56.7%) were females and 43.3% were males[8].

During study educational status of the paramedical staff was assessed. It is pertinent to mentioned that more than half of the paramedical staff had graduation degrees while remaining proportion had matric and intermediate certificates, respectively. It is worth-mentioning here that 58.1% respondents had above 10 years work experience and 41.9% had upto 10 years work experience. The significant role of experience cannot be ignored because it helps paramedical staff in adopting safety measures. The findings of our study are better than the study undertaken by Yaghi et al. (2012) who confirmed that just 16.8% paramedics had above 10 years job experience and majority (83.2%) had $\leq$ 10 years job experience[9].

When the risk factors of hepatitis C among paramedical staff were identified, study indicated that 18.1% paramedical staff had jaundice history. The findings of our study exhibited better situation than the study carried out by Ghosh and teammates (2010) who confirmed that 25% staff had jaundice history[10].

Without adequate screening of blood before transfusion could be significant cause of HCV infection. Study disclosed that among paramedical staff, 23.8% had blood transfusion history while another study performed by Sarwar and associates (2008) indicated that 30.0% of paramedical staff had such history[11]. Dental treatment is considered most significant cause of HCV infection if instruments are not properly sterilized. Study pointed out that 37.1% of paramedical staff had history of dental procedure. The results of our study are much better than the study performed by Sarwar and associates (2008) who reported that 70.0% of paramedical staff had history of dental procedure[11].

In health care facilities, use of needles and sharps objects is routine practices of paramedical staff while injury caused by these objects can transmit HCV infection. The results of the study confirmed that majority (86.7%) of staff handled syringes and 59.1% experienced needle prick or sharp injuries. A comparable study undertaken by Sarwar and associates (2008) exhibited better scenario who confirmed that 40.0% paramedical staff had needle prick history[11].

Adequate knowledge among paramedical staff prevents from hepatitis C and several other infectious diseases. Study showed very encouraging results that most of the staff had knowledge about types and mode of spread about hepatitis C. Despite this knowledge, study showed very appalling results that significant majority of the staff was not aware about treatment plan.

Safe injection practices play an imperative role and protect health care staff from infection. It is significant to mention that most of the paramedical staff had adequate knowledge regarding safe injection procedure and also observed safety measures in this association.

The role of gloves is most important not only in the prevention of hepatitis C but also several other infections. During study no good practices about use of gloves were observed because 46.7% paramedical staff ensured the use of gloves during procedures or handling patients. The outcomes of a study conducted by Yaghi et al[9] showed better situation by confirming that 79.0% of paramedical staff used gloves while performing procedures[9].

For the prevention of infectious diseases among paramedical staff, hand washing is believed most useful technique. It is important to mention that massive portion (94.3%) of paramedical staff washed their hands always before and after examining the patients. The results of our study are comparable but showed better scenario than the study done by Timilshina and fellows (2011) who confirmed that 63.0% paramedics always washed their hands before and after examining the patients[12].

Refreshing training plays a considerable role in enhancing knowledge and providing innovative techniques for the prevention of infectious diseases. Study showed very discouraging results that only 25% paramedics were provided refreshing training about hepatitis C.

Among paramedical staff, periodic check up is essential to prevent them from numerous infections. It was appalling to note that among paramedical staff only 27.6% were periodically tested for hepatitis C. The results of the study confirmed that 3.8% of paramedical staff had anti HCV antibody positive. The result of our study showed better situation than the study performed in 2009 by Tariq and his partners who reported that 11.4% paramedical staff had anti HCV antibody positive.[13] The results of another study performed by Khan and collaborators (2011) showed 4.1% prevalence among paramedical staff which could be compare but not better than the results of our study[2].

CONCLUSION

Study concluded that most of the paramedical staff had knowledge regarding hepatitis genus and spread. Information about treatment plans was unsatisfactory. Most of them followed safety measures during procedures. There is need to provide refreshing training to paramedical staff. The prevalence of Hepatitis C among staff was 3.8%. Furthers studies are required to be conducted on large scale to boost awareness among paramedical staff to prevent them from HCV infection.

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