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Research Article

**STUDY TO KNOW THE PREVALENCE AND RISK
FACTORS OF HEPATITIS C AMONG HEALTH CARE
PROFESSIONALS AT THQ DARYA KHAN**¹Dr.Muhammad Kashif, ²Dr.Aqsa Ali Ahmad, ³Majid Kanwar¹Quaid e Azam Medical College, bwp²Punjab Medical College, Faisalabad³Shifa Tameer E Millat University, Islamabad**Abstract:**

Introduction: Pakistan at the moment is facing a big challenge of Hepatitis C over the country. It is posing an increased risk to Health Care providers of being infected with the virus through tremendous exposure.

Aim: To find the prevalence of hepatitis C in health care providers is the purpose of this study and preventive measures practiced by health care providers Of THQ Darya Khan.

Materials and methods

The diagnostic was done through using rapid chromatography strips and blood samples were collected. Data collection was done through questionnaire and after analyzation, results were summarized.

Results: The Hepatitis prevalence was 5.17%. Those who used gloves were 67.24%. A history of needle stick injury was present in 47.41%, and 49.13% knew about the spread of Hepatitis C Virus (HCV). Just 18.96% knew about the treatment plan, and 19.83% had attended a workshop on preventive measures of infectious diseases in healthcare settings.

Conclusion: HCV frequency in health care providers was high. To increase the knowledge about hepatitis C prevention and decreasing the incidence of infection among health care professionals, the recommended plan is of training workshops and awareness programs should be mandatory.

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INTRODUCTION:

Infection of Hepatitis C Virus (HCV) is the leading causes of morbidity and mortality in developing countries. An estimate is that, 6% population of Pakistan has HCV infection, a total of staggering 10 million individuals [1]. Every year in Pakistan 240,000 cases of Hepatitis C are newly diagnosed [2]. HCV infection can cause chronic liver disease, acute hepatitis, and hepatocellular carcinoma. 1.45 million People in the world are killed by Hepatitis yearly [3]. Important risk factors of Hepatitis C transmission are unsafe drug injections and unsafe blood transfusions [4]. Other factors relating to the risk are multiple sexual relationships, female piercing, contaminated medical equipment, needle-stick injuries, razor sharing, and dental procedures by quacks [5, 6]. Further researches are needed to prove that sharing of personal items like toothbrushes can also be one of the reasons of infection [7].

The high-risk individuals are considered to be Health care providers (HCPs) because they are exposed to contaminated sharp devices and multiple infectious diseases including hepatitis C. Among healthcare workers at their workplace the risk factor for HCV transmission is a percutaneous injury like a needle stick injury [8]. In primary and secondary health care centers the rate of acquiring infection is higher among (HCPs). The overuse of injection, the lack of knowledge and training workshops, about prevention and the less use of safety equipment are a few of the reasons. On the frequency as well as determinants of Hepatitis C among HCPs in primary and secondary health care centers there aren't many previous studies available in Pakistan.

This study is designed to collect information regarding frequency and determinants of HCV in health care personnel and their knowledge about treatment and prevention of Hepatitis at THQ Darya Khan

MATERIALS AND METHODS:

The study was conducted among health personnel of THQ Hospital, Darya Khan. It

was cross-sectional study conducted during the period of four months, from October 20,2016 to Sep 3,2017. 116 samples were collected, and sampling technique used was universal. All the willing health care personnel were included. Informed consent was taken before the interview. The confidentiality of all the information was ensured and maintained. The data collection tool was a semi-structured interview questionnaire contained both open and close-ended questions. The questions were designed to assess their knowledge of HCV transmission, standard precautionary measures which are recommended by the WHO, and the treatment plan of HCV. Detailed medical history and the family history was obtained that mainly included to check if any other family member were suffering from Hepatitis C. We inquired the history of any workshops for educating and training health care workers against their occupational exposure to the blood borne pathogens. They were asked if there was any accidental needle prick or exposure to the other risk factors like blood transfusions and dental work done by quacks. They collected blood samples and tested them for Hepatitis C via rapid chromatography strip technology. SPSS 17.0 was used for data entry and analysis.

RESULTS:

The average age was 39 years. 70% were male, and 30% were female. Doctors were 31.5%, and the paramedical staff was 68.5%. Singles were 6.9%, and 93.1% were married. Figure 1 describes the prevalence of hepatitis C among health care providers. 49.13% of them interviewees knew about the spread of HCV. The knowledge an effective treatment plan (18.96%) among the health care personnel. The majority wore gloves, but they did use a needle-cutter. The majority had no prior workshop on hepatitis prevention, and they also did not observe preventive measures while handling patients affected with the virus. 45% of them at least once suffered a needle prick. Figure 2 describes the frequency of health care workers practicing different preventive measures and frequency.

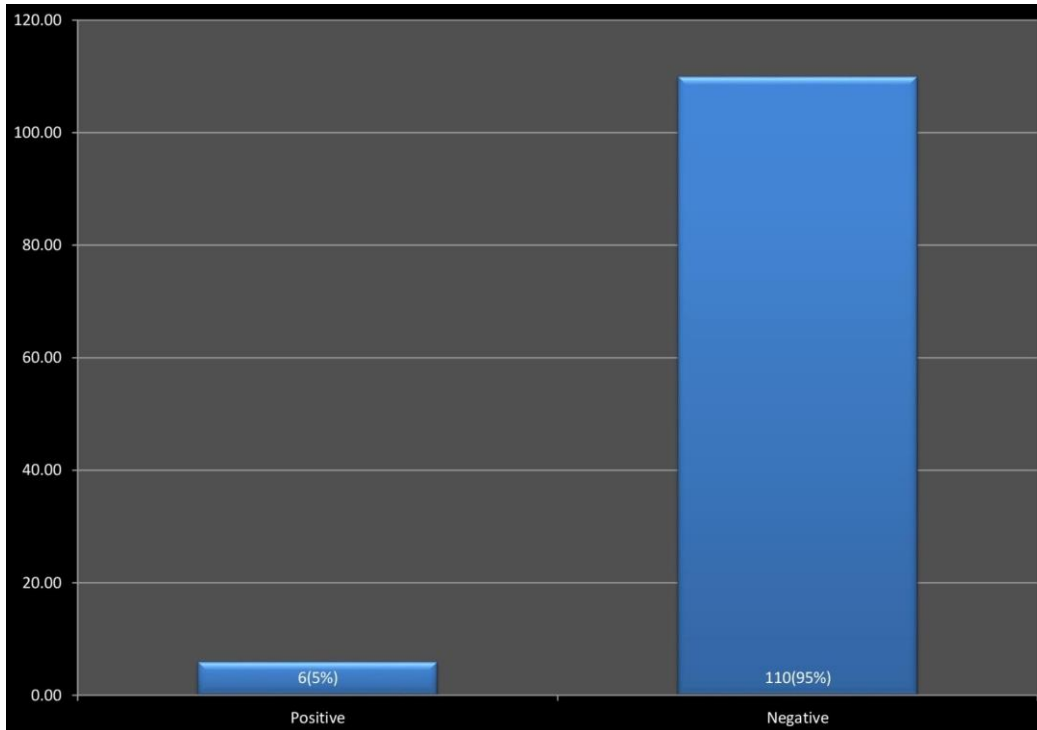


FIGURE 1: Frequency of hepatitis C in health care providers.

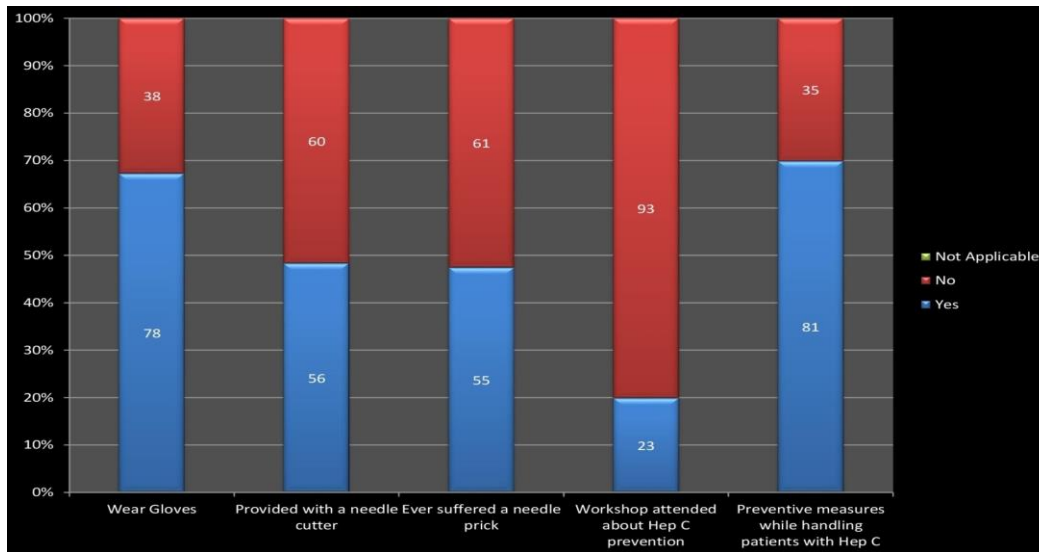


FIGURE 2: Preventive measures of hepatitis C practiced by health care providers and its risk factors at workplace.

There is a mandatory screening of all the HCPs for HCV as they start the job there are no regular scheduled screenings. A single HCP had a tattoo, and a single HCP had multiple sexual partners. Medical and surgical history of health care providers is a risk factor for Hepatitis C transmission. Nose or ear piercing is the most common risk factor found in all females. After this, the most common risk factor followed by a family member suffering from HCV was the dental procedure by a quack, blood transfusion history and spouse suffering from HCV. Figure 3 provides details of these risk factors among healthcare providers.

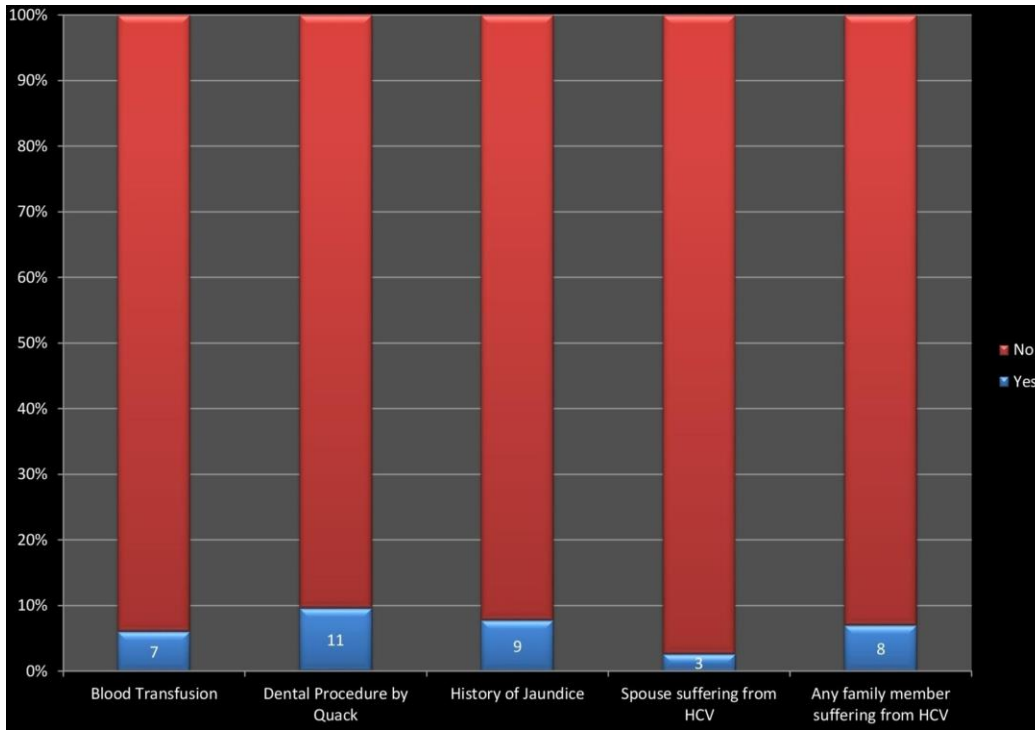


FIGURE 3: Risk factors associated with medical, surgical and family history of health care providers.

DISCUSSION:

We found that the prevalence of Hepatitis C among HCPs was 5.17%. It is more than that of another study having a prevalence of 4.13% among HCPs [8]. It was even more than the prevalence of HCV among HCPs as shown by a study conducted in India [9]. This difference is the HCPs adopt better preventive measures in tertiary health-care centers in India. Another reason could be that that we performed our study in the secondary health-care center having lesser trained HCPs. According to a study, the HCV prevalence in healthy adults in the general population of Pakistan was 3.0% [10]. We found that about half of the HCPs were conscious of the spread of HCV but only 18.96% had the information on an effective treatment plan. The findings of other studies

had better results on the knowledge where 42.5% and 31.4% of HCPs were known of an effective treatment plan of HCV [11, 12]. More than half (67.24%) of HCPs used gloves while handling patients. Another study shows 62.7% of the HCPs knew the importance of using gloves for the prevention of HCV infection [13]. The result of our study is even better than a study conducted in Pakistan where 46.7% of HCPs used gloves [12].

In our study, availability of a needle cutter was 48.28% and about half of the HCPs (47.41%) had a history of needle stick injury (NSI). In another study, a needle cutter was available to 93.5% of the HCPs and a history of NSI was present in 31% of the HCPs, it shows that we can prevent more than 80% of the needle stick injuries with the use of

safe needle devices [14].

In our study, 6.03% had a history of blood transfusion, 9.48% had a history of dental procedure by a quack. Nose and ear piercing was the most common risk factor found in all females. Most quacks performed it without undertaking aseptic measures. Just a single HCP had a tattoo. A few had a history of jaundice, razor sharing and other family member suffering from HCV. Only one HCP had multiple sexual partners.

Only 19.83% of the HCPs ever went to a training workshop on preventive measures. In a study at Nishtar Hospital, 25.7% of HCPs attended a training workshop on HCV [12]. It is recommended to the health department that they should organize continuous training workshops for prevention of HCV in all the primary and secondary health care centers. In case of accidental exposure, an efficient system should be in place and affected health care worker should receive treatment. The use of preventive measures should be accorded with the standards of the World Health Organization (WHO). The use of safety equipment and needle devices should be made available in all facilities and worker should be trained well. The research had some limitations. The study was descriptive and there was no representation of the general population to compare its frequency of HCV with health care providers.

CONCLUSIONS:

The frequency of HCV is high and the knowledge about the prevention and treatment is poor among health care providers. The use of preventive measures is hardly existent. Safety equipment and safe needle devices should be made available. There should be mandatory training workshops available for prevention of HCV in every hospital.

Disclosures

All authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work.

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