



HEPATITIS C VIRUS (HCV) INFECTION; CROSS-SECTIONAL ASSESSMENT OF KNOWLEDGE AND PRACTICE ABOUT HEPATITIS C VIRUS (HCV) INFECTION IN HCV INFECTED INDIVIDUALS

Aiza Sajjad¹, Shahnawaz Gardezi², Dr. Fatima Mukhtar³, Amna Anjum⁴, Qiarush Saeed⁵, Noor Dawood⁶

1. 4th year Student, LMDC, Lahore
2. 4th year Student, LMDC, Lahore
3. MBBS, DTM&H (U.K), MPhil
Associate Professor,
Department of Community Medicine
LMDC, Lahore.
4. 4th year Student, LMDC, Lahore
5. 4th year Student, LMDC, Lahore
6. 4th year Student, LMDC, Lahore

Correspondence Address:
MBBS, DTM&H(U.K),MPhil
Associate Professor,
Dept of Community Medicine
LMDC, Lahore.
fatimamukhtar@doctor.com

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ABSTRACT... Background: With a high magnitude of hepatitis C in the country and the burden still rising it was imperative to assess the knowledge of HCV infected individuals, which would determine the further spread of the disease or otherwise based on the adoption of good practices by these patients. **Objectives:** To evaluate the knowledge and practice regarding HCV in Hepatitis C patients presenting at Ghurki Trust Teaching Hospital, Lahore and to formulate recommendations based on study results to improve knowledge about hepatitis C. **Study Design:** Descriptive cross-sectional study. **Setting:** Ghurki Trust Teaching Hospital (GTTH), Lahore. **Period:** January to May 2015. **Methods:** The patients of hepatitis C registered at GTTH for treatment were included in the study after obtaining voluntary informed consent from the respondents and approval of the study from the institutional ethical review board. The convenience non-probability sampling technique was used to recruit 169 study participants. A pre-tested structured questionnaire was used to collect information, which was recorded and analyzed using the statistical package for social sciences version 21.0. Data is described in the form of frequencies and percentages for categorical variables and mean and standard deviation for continuous variable. **Results:** Of the 169 HCV patients, 110(65%) had heard of hepatitis C before acquiring it, the popular source of information regarding HCV was identified as relatives by 67(39.8%) of the patients. 70(41.4%) of the respondents were aware of a virus being the cause of hepatitis C, 140(82.8%) knew that HCV can be spread through sharing injecting equipment, nearly half the respondents 87(51.5%) had asked their family members to get tested for HCV and 68(40.2%) patients practiced safe sex. **Conclusion:** Majority of the respondents had heard of HCV before acquiring the disease. A large proportion of patients were aware of the disease being spread through sharing injecting equipment. Half of the patients had their family members tested for HCV. But less than half practiced safe sex.

Key words: HCV patients, HCV infections, HCV knowledge and practice.

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INTRODUCTION

Hepatitis C is an infectious disease caused by the hepatitis C virus (HCV). HCV infections pose a major public health threat. According to the World Health Organization (WHO) 130-150 million people were infected globally with HCV in 2014 and 350,000 to 500,000 people die each year from hepatitis C-related liver disease.¹ Pakistan has the second largest burden of hepatitis C in the world, with an estimated 240,000 new infections per year.² The Pakistan Medical & Research Council conducted a National sero-survey in 2008, to estimate the burden of disease in the country. The overall prevalence of anti-hepatitis

C (Anti-HCV) was found to be 4.8% and the provincial prevalence of HCV showed 5% in Sindh, 6.7% in Punjab, 1.1% in NWFP and 1.5% in Balochistan. The most populous province of the country i.e Punjab was seen to have the highest prevalence.^{3,4}

Hepatitis C infections have a wide spectrum of clinical presentations ranging from asymptomatic carrier state to acute self-limiting hepatitis. Majority of HCV infections become chronic and may lead to liver scarring, cirrhosis, liver failure and hepatocellular carcinoma.⁵ The major determinants of Hepatitis C infection are multiple therapeutic

injections, blood transfusions, reuse or sharing of syringes, barber related risks, previous surgical procedure, dental risk, tattooing, nose and/or ear piercing, needle-stick injuries in healthcare workers, and unprotected sexual intercourse.⁶ Pakistan has one of the highest rates of therapeutic injections being given to patients worldwide i.e 13.6 injections/ person/year.⁷

As HCV infections are silent infections, most infected people remain unaware of their disease status and silently pass the virus onto others. Additionally, no vaccine is available against HCV, and treatment is of long duration and being expensive is out of reach of the majority of the population. Pakistan is a developing country, with low literacy and poor health standards due to limited allocation of the budget on health. Hence prevention is considered one of the best ways to safeguard the health of the population.^{8,9} With a high magnitude of hepatitis C in the country and the burden still rising it was imperative to assess the knowledge of HCV infected individuals, which would determine the further spread of the disease or otherwise based on the adoption of good practices by these patients. This study was hence conducted to evaluate the knowledge and practice regarding HCV in Hepatitis C patients presenting at Ghurki Trust Teaching Hospital, Lahore and formulate recommendations based on study results to improve knowledge about hepatitis C.

METHODOLOGY

A descriptive cross-sectional study was undertaken at the Ghurki Trust Teaching Hospital (GTTH), Lahore. The study was conducted from January to May 2015 after approval of the proposal from the institutional ethical review board. The patients of hepatitis C registered at GTTH for treatment were included in the study after obtaining voluntary informed consent from the respondents. The convenience non-probability sampling technique was used to recruit 169 study participants. A pre-tested structured questionnaire was used to collect information on demographics, knowledge of the patients regarding HCV, its mode of transmission, prevention and treatment and the practices of HCV patients. The data was recorded and

analyzed using the statistical package for social sciences version 21.0. Data is described in the form of frequencies and percentages for categorical variables and mean and standard deviation for continuous variable.

RESULTS

A total of 169 registered patients of hepatitis C comprised the study subjects. There were an approximately equal proportion of males 85(50.3%) and females 84(49.7%) in the study. The mean age of the respondents was 43.44 ± 12.98 . Majority of the respondents were housewives 71(42.0%) followed by businessmen 15(8.9%) and 19(11.2%) farmers. More than half 89(52.7%) patients resided in a rural area, greater number were married 148(87.6%) and 67(36.9%) had no educational qualification. Of the 53(31.4%) respondents reporting co-morbidity, 15(8.9%) were suffering from hypertension, 15(8.9%) were suffering from diabetes and 8(4.7%) were suffering from both diabetes and hypertension. Table No. 1 below depicts the socio-demographic profile of respondents.

Variables		Number	%age
Residence	Urban	44	26.0
	Rural	89	52.7
	Semi-urban	36	21.3
Gender	Male	85	50.3
	Female	84	49.7
Educational qualification	Illiterate	67	36.9
	Primary	40	23.7
	Secondary	15	8.9
	Matriculation	17	10.1
	Intermediate	14	8.3
	Bachelorette	12	7.1
	Masters	3	1.8
	Unanswered	1	0.6
Marital status	Married	148	87.6
	Never married	17	10
	Divorced	1	0.6
	Widowed	3	1.8
History of co-morbidity	Yes	53	31.4
	No	111	65.7
	Unanswered	5	3.0

Table-I. The socio-demographic profile of respondents

The patients were asked if they had heard of HCV before acquiring the disease and 110(65%) were found to have heard of hepatitis C, however 52(31%) had not heard of the disease and a small proportion i.e 7(4%) responded that they didn't know. (Figure-1).

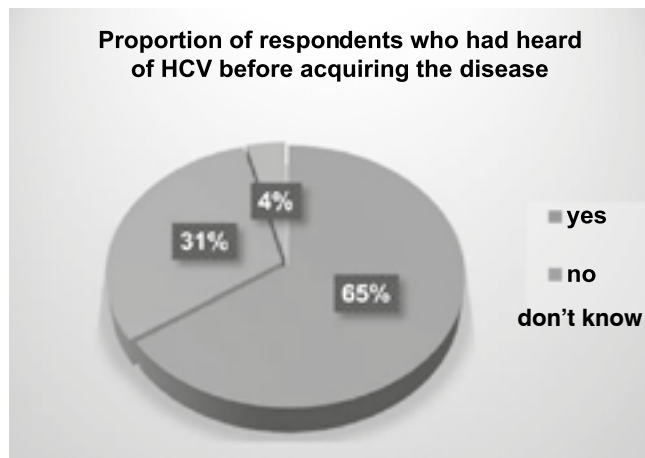


Figure-1. Proportion of respondents who had heard of HCV before acquiring the disease

On being inquired regarding the source of knowledge regarding HCV, the popular source identified was relatives by 67(39.8%) of the respondents, followed by health professionals by 57(33.5%) and television and radio were identified by 2(1.1%) and 1(0.6%) patients respectively.

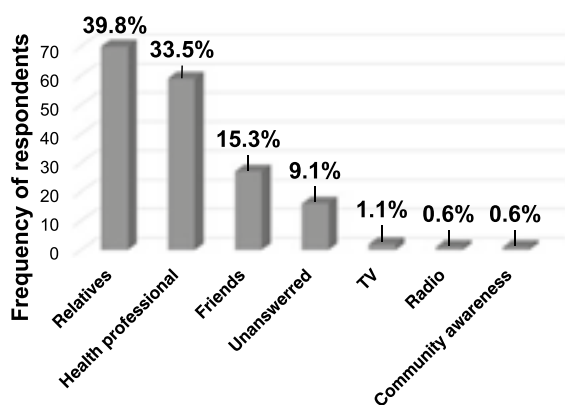


Figure-2. Source of respondents' knowledge regarding HCV

The knowledge of HCV patients regarding hepatitis C was ascertained through questions regarding the etiological agent of the disease, its mode of transmission, prevention and control as-

pects and complications associated with it. The responses of the patients are highlighted in table-II, which shows 70(41.4%) of the respondents were aware of a virus being the cause of hepatitis C, 140(82.8%) knew that HCV can be spread through sharing injecting equipment, such as needles and operation tools and 125(74%) were aware that HCV can be spread from mother to baby through unscreened blood transfusion.

The table-III below shows the responses to practices regarding Hepatitis C among HCV patients. Half the respondents 87(51.5%) had asked their family members to get tested for HCV, 109(64.5%) asked for a new syringe to be opened before blood was drawn or an injection was given to them or their family member, 86(50.9%) inquired regarding blood screening before blood transfusion and 68(40.2%) practiced safe sex.

DISCUSSION

Hepatitis C a blood borne infection is a significant health problem, affecting 130-150 million people globally according to the WHO. This study was undertaken to assess HCV infected patients knowledge and practice regarding hepatitis C. The literature review conducted was unable to identify substantial number of studies conducted on the same study population, thus reference is made to studies assessing HCV knowledge and practice on different study populations than ours. Our study found that 65% of the respondents had heard about the disease before acquiring it and less than half of the patients new the causative agent of the disease. Comparable results were found by Mengal et al's study conducted on adolescent population in Quetta. They obtained 51% mean score on the knowledge items.¹⁰ In contrast, the study by Dennison et al reported that 85.4% of the HCV patients had heard of hepatitis C.¹¹

Screening of blood is important to prevent the spread of blood-borne infections. The respondents were asked about the transmission of infection through unscreened blood and 74% were aware of this route of transmission.

	Yes n(%)	No n(%)	Don't know n(%)	Unanswered n(%)
Will a HCV infected individual carry the virus all their life	51(30.2)	75(44.4)	43(25.4)	0(0.0)
Is HCV caused by a virus	70(41.4)	18(10.7)	81(47.9)	0(0.0)
Is HCV caused by a bacteria	35(20.7)	49(29.0)	85(50.3)	0(0.0)
Can HCV be spread by a mosquito	37(21.9)	69(40.8)	63(37.3)	0(0.0)
Can HCV spread through close personal contact such as touching, talking or kissing	41(24.3)	91(53.8)	36(21.3)	1(0.6)
Can HCV be spread through sharing dishes with an HCV patient	53(31.4)	93(55.0)	23(13.6)	0(0.0)
Can HCV be spread through sharing injecting equipment, such as needles and operation tools	140(82.8)	11(6.5)	17(10.1)	1(0.6)
Can HCV be spread from mother to baby	99(58.6)	24(14.2)	45(26.6)	1(0.6)
Can HCV be spread from mother to baby during breast feeding	79(46.7)	37(21.9)	53(31.4)	0(0.0)
Can HCV be spread from mother to baby through unscreened blood transfusion	125(74.0)	13(7.7)	30(17.8)	1(0.6)
Does undergoing a dental procedure increase chances of contracting HCV	83(49.1)	31(18.3)	55(32.5)	0(0.0)
Is sexual transmission a common mode of spread of HCV	87(51.5)	39(23.1)	43(25.4)	0(0.0)
Is HCV spread through air in an enclosed environment such as a room, bus etc.	30(17.8)	89(52.7)	48(28.4)	2(1.2)
Is there a vaccine available for HCV	96(56.8)	25(14.8)	48(28.4)	0(0.0)
Is HCV treatable	147(87.0)	9(5.3)	12(7.1)	1(0.6)
Is there a treatment available for the disease	157(92.9)	7(4.1)	5(3.0)	0(0.0)
Are you aware that most patients of HCV remain asymptomatic	47(28.7)	52(30.8)	63(37.3)	7(4.1)
Can HCV cause the liver to stop working	118(69.8)	21(12.4)	30(17.8)	0(0.0)
Can HCV cause liver cancer	95(56.2)	32(18.9)	42(24.9)	0(0.0)

Table-II. Knowledge regarding Hepatitis C among the respondents (n=169)

	Yes n(%)	No n(%)	N/A n(%)	Unanswered n(%)
Have you asked your family members to get tested for HCV	87(51.5)	82(48.5)	-	0(0.0)
Do you ask for a new syringe to be opened before blood is drawn or an injection is given to you or your family member	109(64.5)	49(29.0)	11(6.5)	0(0.0)
Do you ask for a new blade to be used when at the barber	72(42.6)	33(19.5)	63(37.3)	1(0.6)
Do you ask regarding sterilization of instruments when at the dentist	69(40.8)	55(32.5)	44(26.0)	1(0.6)
Do you inquire regarding blood screening before blood transfusion	86(50.9)	44(26.0)	39(23.1)	0(0.0)
Do you use others tooth brush or razor	30(17.8)	133(78.7)	-	6(3.6)
Do you practice safe sex	68(40.2)	51(30.2)	38(22.5)	12(7.1)
Do you plan to take/complete treatment regarding HCV	149(88.2)	17(10.1)	3(1.8)	0(0.0)

Table-III. Practice regarding Hepatitis C among the respondents (n=169)

In contrast only 4.34% of the 100 HCV patients registered with Prime Minister's Hepatitis Control Program in Islamabad were reported to be aware of this mode of disease transmission.¹² Approximately half the respondents identified sexual transmission as a common mode of spread of the disease. However, only 5.07% of the hepatitis C patients in Islamabad identified unsafe sexual habits as a perceived cause of the disease.¹²

Vaccination plays an important role in the primary prevention of diseases; however there is no vaccination available for hepatitis C. More than half the respondents reported the availability of a vaccine against hepatitis C in our study. Whereas, 36% and 13.7% of the respondents thought there was a vaccine available against hepatitis C in a study conducted among two groups of university students in Lahore.¹³

The practice amongst the patients was assessed by various questions. Less than half the patients practiced safe sex. Hassan et al highlight similar results in their study on chronic hepatitis C patients in Egypt.¹⁴

There was a fairly mixed response of the patients regarding the knowledge and practice towards hepatitis C, however keeping in mind the socio-economic status and educational background of the patients their knowledge and practice was much better than what could have been expected. It was a hospital-based study targeting a small proportion of population therefore it lacks generalizability.

CONCLUSION

Majority of the respondents had heard of HCV before acquiring the disease. A large proportion of patients were aware of the disease being spread through sharing injecting equipment. Half of the patients had their family members tested for HCV. But less than half practiced safe sex.

RECOMMENDATIONS

Health education sessions should be conducted for hepatitis C patients to improve their knowledge and practice regarding the disease.

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“Just because you're taking longer than others does not mean you're a failure. Keep going.”

Unknown



AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Aiza Sajjad	Literature Review, Data Collection, Write Up	
2	Shahnawaz Gardezi	Data entry, compilation of results	
3	Dr. Fatima Mukhtar	Determination of research Methodology, Literature Review	
4	Amna Anjum	Final proof reading	
5	Qiarush Saeed	Literature Review	
6	Noor Dawood	Data collection	