A survey study on awareness of Hepatitis-C in different groups

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ABSTRACT

Hepatitis C virus (HCV) is a major public health problem and can cause severe liver disease. The public has little understanding of hepatitis C. Therefore, a survey was performed to investigate the awareness of Hepatitis C in General population, Medical and Pharm D students in Karachi. A questionnaire on hepatitis C was publicized and distributed among General population, Medical and Pharm D students from October 20 to November 20, 2013. The questionnaire included thirteen questions and covered the etiology, epidemiology, diagnosis, treatment, and prevention of hepatitis C. From the questionnaire we observed that Medical and Pharmacy students are well aware about the disease but General Pubic have a little knowledge about the disease and its infection, prevention, treatment and vaccines. From the survey we conclude that among three groups General public has least awareness about hepatitis C.

Keywords: awareness, hepatitis C, General Population, Medical and Pharm D students

INTRODUCTION

Hepatitis C virus (HCV) is a major cause of liver-related morbidity and mortality worldwide and represents a major public health problem [1-6]. HCV can spread parenterally through contact with infected blood, transfusion of infected blood and its products, intravenous drug use, contamination during medical procedures, and a lack of attention to health precautions. Despite a declining incidence of new infections [7,8], the burden of the disease, both in terms of mortality and cost, is expected to increase over the next decade, and HCV infection will maintain to be a potential cause of morbidity and mortality and need for transplantation in the future[9,10].

It is estimated that around 170 to 200 million individuals are living with HCV infection worldwide [11,12], and there is significant geographical variation in the prevalence of HCV infection across countries and regions [13] An estimated 18 million Pakistani population is infected with the hepatitis B and C virus in all including nearly seven million infected with HBV and 11 million with HCV while the disease is constantly swelling. Every 10th Pakistani is believed to be suffering from viral hepatitis. On average, as many as 150,000 deaths per year can be attributed with hepatitis B and C mainly because of cirrhosis and liver cancer while 150 million people are chronically infected with hepatitis C virus in the world but only five per cent of them know it.

ABOUT VIRUS

The hepatitis C virus (HCV) is a small, enveloped, single-stranded, positive-sense RNA virus.[14] It is a member of the *Hepacivirus* genus in the family *Flaviviridae*. The genotypes are divided into several subtypes with the number of subtypes depending on the genotype. In the United States, about 70% of cases are caused by genotype 1, 20% by genotype 2 and about 1% by each of the other genotypes Genotype 1 is also the most common in South America and Europe. The half life of the virus particles in the serum is around 3 hours and may be as short as 45 minutes. In an infected person, about 10^{12} virus particles are produced each day. Lerat, H; Hollinger, FB (2004 Jan 1). "Hepatitis C virus (HCV) occult infection or occult HCV RNA detection.In addition to replicating in the liver the virus can multiply in lymphocytes. "Hepatitis C virus infection in the immunocompromised host: a complex scenario with variable clinical impact.

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SYMPTOMS

Most people do not have any symptoms until the hepatitis C virus causes liver damage, which can take 10 or more years to happen. Others may have symptoms of feeling tired, muscle soreness, upset stomach, stomach pain, fever, loss of appetite, diarrhea, dark-yellow urine, light-colored stools, yellowish eyes and skin, called jaundice.When symptoms of hepatitis C occur, they can begin 1 to 3 months after coming into contact with the virus. See a doctor right away if you or a child in your care has symptoms of hepatitis C.

DIGNOSTIC TESTS

Liver enzyme tests, formerly called liver function tests (LFTs), are a group of blood tests that detect inflammation and damage to the liver. They can also check how well the liver is working. Liver enzyme testing includes ALT, AST, alkaline phosphatase; true liver function tests (LFTs) include PT, INR, albumin, and bilirubin.A high ALT level often means there is some liver damage, but it may not be related to hepatitis C. It is important to realize the ALT level goes up and down in most patients with hepatitis C. The ALT level does not tell you exactly how much liver damage there is, and small changes should be expected. Changes in the ALT level do not mean the liver is doing any better or any worse. The ALT level does not tell you how much scarring (fibrosis) is in the liver and it does not predict how much liver damage will develop .A high AST level often means there is some liver damage, but it is not necessarily caused by hepatitis C. A high AST with a normal ALT may mean that the AST is coming from a different part of the body. It is important to realize that the AST level in most patients with hepatitis C goes up and down. The exact AST level does not tell you how much liver damage there is, or whether the liver is getting better or worse, and small changes should be expected. However, for patients receiving treatment for hepatitis C, it is helpful to see if the AST level goes down.Presently, there is no vaccine for hepatitis C, but there are vaccines for hepatitis A and B.

TREATMENT

Genotypes 2 and 3 are treated with pegylated interferon and ribavirin (standard dose is 800 mg/day, but weight based dosing is also used in some cases). Duration of treatment ranges from three to 12 months, depending on hepatitis C viral load, liver damage, insulin resistance, and early response to treatment. Most people are treated for six months because the risk for relapse is greater when treatment is shortened. SVR rates among first-time treatment takers can be over 90 percent for genotype 2, and are 65 percent or more in HCV genotype 3. HCV genotype 4 is treated with 48 weeks of pegylated interferon and weight-based ribavirin; SVR rates in people living with HCV being treated for the first time are as high as 70 %.

METHODOLOGY

During October 20 to November 20 a questionnaire was distributed among students of MBBS, Pharm.D and non medical students in different universities in Karachi having close ended questions related to their knowledge about Awareness of Hepatitis C. Overall,70% of students returned the questionnaire, divided irrespective of gender into three equal groups with 75 students in each group.(n=225)

RESULTS

We have selected a sample of 223 students out of which 73 were medical students, 75 were Pharm D and 75 were other students. Our survey result shows 100 % Medical students, 97% Pharm D, 85% students of non medical group have knowledge about infection type of Hepatitis C. About Prevention of disease 81% Medical, 80% Pharm D and 56% others have knowledge. Regarding symptoms 96% Medical, 93 % Pharm D and 50% others have knowledge. As well as our survey regarding treatment result shows that 44% Medical, 71% Pharm D and 7% others knows about the treatment. Further we got 70% of Medical, 83% Pharm D and 21% others have knowledge about liver enzymes. 68% Medical, 93% Pharm D and 52% Others know about Liver Function test. Our findings regarding Knowledge about all possible consequences of Hepatitis C result shows only 38% Medical, 59% Pharm D and 32% Others have known. Further 54% Medical, 40% Pharm D and 35% Others students have known that Vaccine has not been developed yet.

And the results of all three groups were compared by using SPSS Version 20. Chi-Square and independent sample t test were used to compare the variables with significant p value <0.005**.**

DISCUSSION

In our research100 % Medical students, 97% Pharm D, 85% students of non medical group have knowledge about infection type of Hepatitis C with a chi square value (16.555^3) and p value(.000). About Prevention of disease 81% Medical, 80% Pharm D and 56% others have knowledge with a chi square value (14.783^3) and p value (.001).

Regarding symptoms 96% Medical, 93 % Pharm D and 50% others have knowledge with a chi square value (59.782[3]) and p value (.000). 44% Medical, 71% Pharm D and 7% others knows about the treatment with a chi square value (64.358[3]) and p value (.000). 70% of Medical, 83% Pharm D and 21% others have knowledge about liver enzymes with a chi square value (64.277[3]) and p value (.000). 68% Medical, 93% Pharm D and 52% Others know about Liver Function test with a chi

square value (31.727[3]) and p value (.000). Our findings regarding Knowldge about all possible consequences of Hepatitis C result shows only 38% Medical, 59% Pharm D and 32% Others have known with a chi square value (11.852[3]) and p value (.003). Further 54% Medical, 40% Pharm D and 35% others students have known that Vaccine has not been developed yet with a chi square value (5.636[3]) and p value (.060).

Table 1: Chi- Square Tests (P Value) In all cases

	Pearson Chi Square		
	Value	df	Asymp. Sig. (2-sided)
Qualification * Knowledge about infection	16.555[a]	2	.000
Qualification * Knowledge about Preventation & Transmission	14.783[a]	2	.001
Qualification * Knowledge about Symptoms	59.782[a]	2	.000
Qualification * Knowledge about Treatement	64.358[a]	2	.000
Qualification * Knowledge about Liver Enzymes	64.277[a]	2	.000
Qualification * Knowledge about Liver Function Test	31.727[a]	2	.000
Qualification * Knowledge about Disease Consequences	11.852[a]	2	.003
Qualification * Knowledge about Vaccines	5.636[a]	2	.060

Table 2: Knowledge about infection

				Total
		No	yes	
Qualification	MBBS	0	73	73
	Pharm D	2	73	75
	Others	11	64	75
Total		13	210	223

Table 2a:Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.555[a]	2	.000
Likelihood Ratio	18.149	2	.000
Linear-by-Linear Association	14.515	1	.000
N of Valid Cases	223		

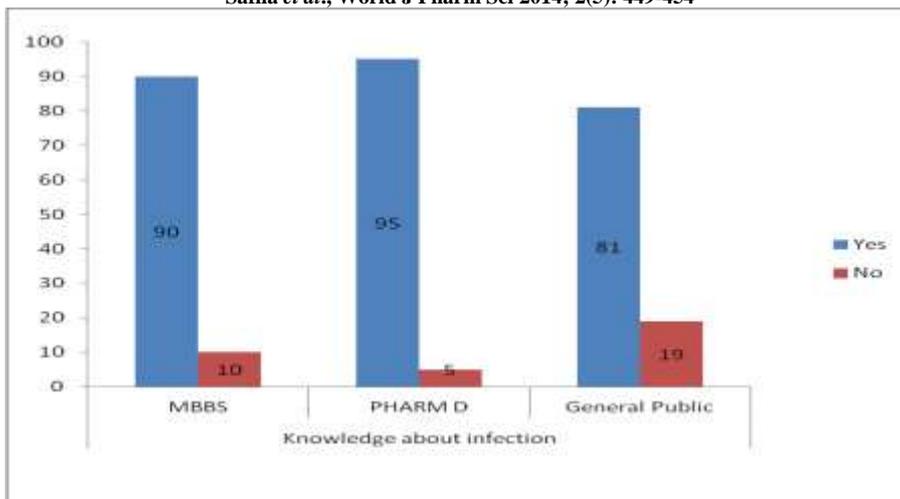a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 4.26.

Figure 1: Awareness about infection

Table 3: Awareness about Symptoms

		Knowledge about Symptoms		Total
		No	yes	
	MBBS	3	70	73
Qualification	Pharm D	5	70	75
	Others	37	38	75
Total		45	178	223

Table 3a: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	59.782[a]	2	.000
Likelihood Ratio	58.560	2	.000
Linear-by-Linear Association	47.141	1	.000
N of Valid Cases	223		

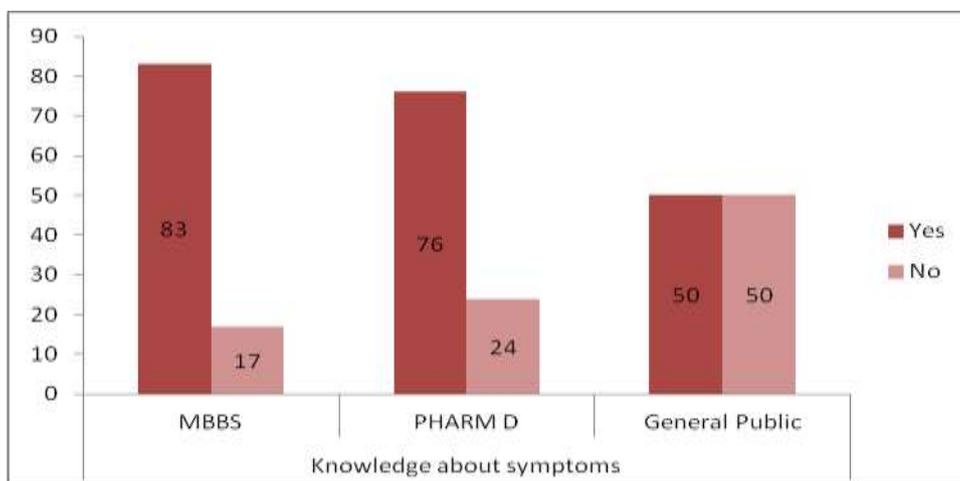a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.73.

Figure 2: Awareness about Symptoms

Table 4:Knowledge about Treatement

		No	yes	Total
	MBBS	41	32	73
Qualification	Pharm D	22	53	75
	Others	70	5	75
Total		133	90	223

Table 4a:Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	64.358[a]	2	.000
Likelihood Ratio	73.207	2	.000
Linear-by-Linear Association	21.611	1	.000
N of Valid Cases	223		

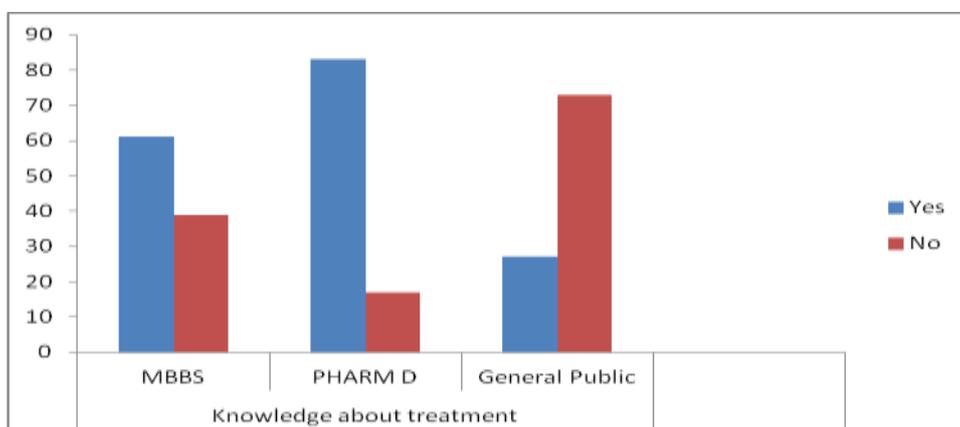a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 29.46.

Figure 3: Awareness about Treatment

Table 5: Knowledge about Liver Enzymes

		No	Yes	Total
	MBBS	22	51	73
Qualification	Pharm D	13	62	75
	Others	59	16	75
Total		94	129	223

Table 5a:Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	64.277[a]	2	.000
Likelihood Ratio	67.352	2	.000
Linear-by-Linear Association	36.067	1	.000
N of Valid Cases	223		

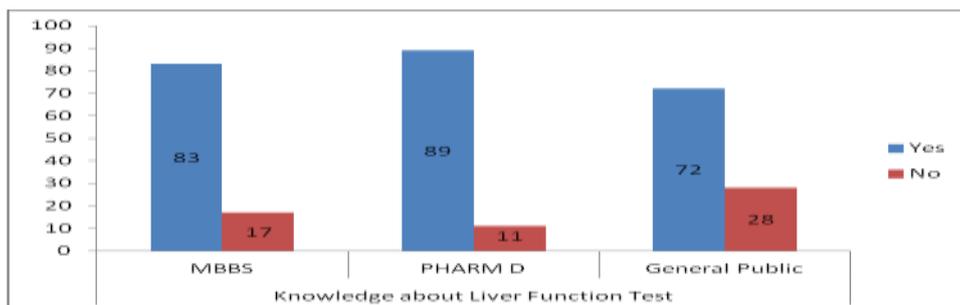a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 30.77.

Figure 4: Awareness about Liver Function Test

Table 6: Knowledge about Vaccines

		Knowledge about Vaccines		Total
		No	Yes	
Qualification	MBBS	34	39	73
	Pharm D	45	30	75
	Others	49	26	75
Total		128	95	223

Table 6a: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.636[a]	2	.060
Likelihood Ratio	5.630	2	.060
Linear-by-Linear Association	5.279	1	.022
N of Valid Cases	223		

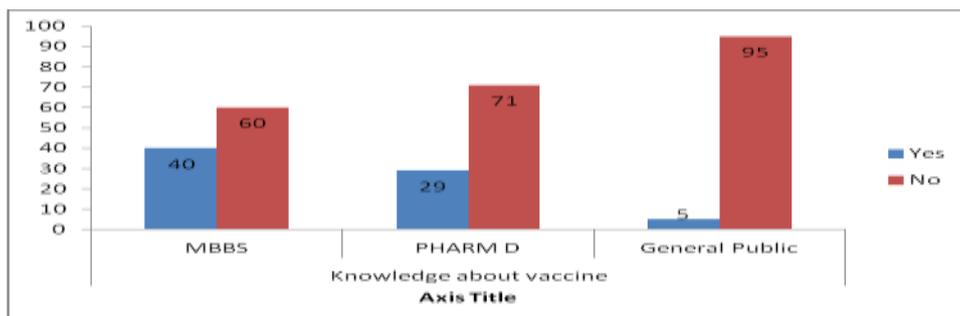a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 31.10.

Figure 5: Awareness about Vaccines

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