Original Article

Knowledge Regarding Spread, Diagnosis and Treatment of HCV Patients among Primary Health Care Physicians in Islamabad and Rawalpindi

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Abstract

To explore the basic knowledge of primary health care doctors on transmission routes, risk factors and management of HCV infection. A cross-sectional facility-based study of six month (Dec.2008-June 2009) duration. Universal sampling technique. Thirty three Basic Health Units (BHUs) in Islamabad and Rawalpindi districts with their attached 07 dispensaries were surveyed. A total of 40 Primary Health Care Physicians (PHCP) from two cities (Islamabad and Rawalpindi) were interviewed. A pre tested questionnaire with multiple choices was used to record their knowledge on transmission routes, causative factors and management of this infection. A total of 40 primary care physicians were interviewed. There was poor knowledge about modes of disease transmission while diagnosis and treatment was well known in majority. The frequency of disease transmission to neonate and the time of checking the child in case of a HCV positive mother were not known by many GPs, which need to be taken seriously specially in our setting where GP is the first or second line person that is approached by the patient. Majority of the physicians knew that HCV is not transmitted through breast feeding. Genotyping is done by about 61% physicians thus adding a very expensive test with very limited use. About 60% GPs counsel the patients that are found positive for the test, which is a good sign. The study identified a strong need for continuing education program for the primary care physicians on HCV infection.

Introduction

Hepatic infection with C virus (HCV) is a major health problem worldwide. Most of the developed countries have prevalence of anti-HCV between 1% to 2% (Di Bisceglie 1998). In US chronic infections transmitted through blood, HCV is the commonest one (1998). This chronic infection is responsible for approximately 20% cases of acute hepatitis, 70% of chronic hepatitis and 30% of fatal liver disease (Crawford 1997). In a recent study, prevalence of anti HCV in Pakistan is 5% (2009). While another study in NWFP showed that prevalence of HBsAg was 3.5% and anti HCV was 13.8% giving the combined prevalence of 17.3% (Ahmad, 2009) on the whole.

Excess of published information on various aspects of hepatitis C virus is currently available. In Pakistan many studies have been done on awareness and practices about AIDS and viral hepatitis in various population/ groups and most studies have shown deficient awareness in all groups including health care professionals (1998). Awareness about hepatitis C is crucial because currently there is no vaccine available for its prevention and persons with chronic infection play crucial role in spread of disease to others and are at a risk for developing chronic viral illness (Di Bisceglie 1998). More over doctor to patient and vice versa transmission is also reported (Goujon 2000). Primary health care physicians, who are major part of health care delivery system, must have basic information on these infections as these doctors have key role in stopping disease spread and identifying those from vulnerable groups at the earliest before they develop fatal complications (2000).

The present study was done to explore the extent of information of health care personnels on transmission, diagnosis of hepatitis C infection and proper management of such patients.

Objective

The study was done to determine the extent of information of primary health care providers related to the transmission, diagnosis and treatment of patients.

Methods

Study design: A cross-sectional study with universal sampling technique.

Study area / setting: The study was conducted in 33 basic health Units of district Islamabad and Rawalpindi. A total of 13 BHUs (Basic Health Units) of Islamabad and 20 BHUs from Rawalpindi were surveyed. Some dispensaries of Federal Government Services Hospital Islamabad were also included in the study to achieve the target sample size.

Sample size: A total of 40 Primary Health Care Physicians were interviewed from 33 BHUs and 07 Government dispensaries in six months.

Inclusion Criteria: Only Primary health care physicians in public sector were enrolled in the study.

Exclusion Criteria: All private physicians were excluded along with PHCP who refused to give consent for the study.

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NUST Publishing, © (2012), ISSN: 2072-4659

Methods

Primary Health care Physicians (PHCP) from two cities (Islamabad and Rawalpindi) in Pakistan were enrolled in the study and interviewed. Information was recorded on pretested proforma which comprised of close ended questions with multiple choices. Demographic variables with total duration of overall practice period were recorded. Data was also collected on availability of diagnostic services at the BHUs along with physician's knowledge on the routes of transmission of HCV, its diagnostic tests, genotypes, information regarding HCV in pregnancy and lactation, its treatment and side effects and finally counseling regarding the disease.

Usually at each BHU one medical doctor is deputed while at Rural Health Centers (RHCs) 2-3 doctors were working. After taking their informed consent, the questionnaire was distributed to PHCPs at their facilities. Interviewer briefed the facility incharges on importance of study for 10 minutes. To respond to any query raised by respondent, availability of the researcher was ensured at the time of interview. One researcher was present during the survey administration to answer queries raised by respondents. Interview took about half an hour. Data was entered on computer Excel spread sheet for analysis.

Results

There were 22 female and 18 male doctors who were interviewed. The ages of interviewees were recorded to be 27 to 58 years. Their median age was 40.2 years. The average number of years spent in the practice was 12.8 years. Diagnostic facilities for HCV rapid testing kits (Agglutination method) were available in 15 (37.5%) health care centers. To refresh their knowledge 25% respondents review related books once in a week time while only 20% used internet to get latest information.

Only 27.5% of the PHCPs knew that HCV spreads through blood and body secretions and 5% knew that the virus could survive outside the human body for over 12 hours at room temperature and yet can infect others. Only 35% physicians knew the actual dilution of chlorine that was used in their facility to disinfect the surfaces against HCV infection. All respondents knew that tattooing is also a source of HCV transmission.

Knowledge about the diagnosis of infection was adequate in most PHCPs. Though 70% physicians test their patients for anti-HCV within three months of exposure but only 30% knew that patients could be tested by PCR within 1-2 weeks of exposure. Majority (90%) of physicians had knowledge that even in presence of normal Liver Function Tests (LFTs) patients could have chronic HCV infection. A list was provided of the high risk individuals who should be tested for HCV, 95% physicians could identify the high risk individuals who should be screened. After diagnosis 85% of the PHCPs referred their patients to Hepatologist for the treatment.

Majority (87.5%) of respondents said that they test antenatal women for HCV, while others did not. Knowledge about the disease transmission through breast milk was poor in 35% physicians as they stopped the mother from breast feeding the child. Similarly 52% physicians knew that a high viremic mother could transmit the disease to her newborn. Almost all (95%) PHCPs did not know when to test the baby born to a HCV positive mother and 52% did not know when to treat the child.

Regarding genotyping, 85.5% of PHCP knew about genotypes of HCV and 77.5% thought it is necessary to know the genotype before starting treatment for HCV.

Out of 40 PHCPs, 85% knew that HCV positive patient should be vaccinated against HBV. Knowledge about dietary intake in HCV was poor in 65% of the physicians as they restricted their patients from eating fatty and protein rich diet and only 35% allowed them a normal diet.

After diagnosis 85% of the PHCPs referred their patients to Hepatologist for the treatment. Out of 40 respondents, 37.5% were not aware of the treatment for HCV while 62.5% knew right treatment is with interferon and ribavirin. Regarding treatment of HCV in children only 20% knew that interferon should not be given to the children of less than 5 years of age. Similarly there was knowledge gap in tests to be done during and after treatment of HCV.

Discussion

This study explored the level of knowledge of primary care physicians regarding HCV spread, diagnosis and treatment along with gaps. Similar results were reported from France and America where general doctors knowledge about hepatitis C was not upto the mark (Fattovich 2003, Ouzan *et al*. 2003a, Ouzan *et al*. 2003b).

Another study conducted in Turkey on approach of general physicians to diagnose and treat viral hepatitis indicated that GPs were well informed of various risk groups and the transmission routes of HBV and HCV infections but knowledge on when to test for viral hepatitis and which is the appropriate treatment for this infection, considerable gaps were found. These findings are consistent with our results. However in our study knowledge about survival of the virus outside the human body was quite deficient. The Turkish study further found that in primary health care centers they had insufficient knowledge about correct diagnoses and follow up of the patients (Shehab *et al*. 2001).

In the present study knowledge about disease transmission, diagnostics that can be used for early detection, maternal to child transmission were deficient in many physicians, as 70% physicians were not aware that PCR can detect infection within 1-2 weeks. On the other hand 52.5% responded knew about reduced vertical transmission of HCV as compare to HBV.

Only 15% health care centers had diagnostic facilities for HCV testing. Yildiz *et al* also reported that only a few health facilities had diagnostic for viral hepatitis (Peksen *et al*. 2004). These finding suggest that lack of availability of diagnostic facilities for this infection may cause wrong diagnosis, multiple tests and over ambitious treatment.

In our study population 72.5% physicians had poor information on spread of HCV where as only 27.5% could tell that transfusion of blood or blood products, organ transplantation, sexual intercourse, intravenous drug use, infected HCV mother and hemodialysis are possible routes

of transmission for HCV. A study conducted in Pakistan showed that 56% of surgeons had no knowledge about the fact that disease could be spread by unprotected sex, 82% did not know about vertical transmission. On the other hand 93% knew that infected blood could spread the illness and 88% knew that a needle-stick injury is a risk factor (Rana *et al*. 2000).

In present study respondents had good knowledge about HCV genotypes and 82.5% were aware of term genotype. Majority (77.5%) of the physicians were agreeing that HCV patients genotyping is necessary in management of infection while 22.5% did not. Information about genotypes is important for clinical progress and especially to monitor the response in interferon treatment (Raja and Janjua 2008). Over 80% cases have genotype 3 in Pakistan, therefore the use of routine genotyping is not recommended as it is a very expensive test. It should be checked in individuals who have a chance of getting infected from a non Pakistani strain of the virus. The present study therefore shows that a lot majority of physicians are wasting a large amount of patient's money on a very non significant test. Majority of the physicians (70%) knew that a person can be infected with more than one HCV genotype at a time, however 90% of them could not tell the reason that why do most of the patients remain infected despite of treatment.

Manns *et al* also reported that required information for HCV treatment were found poor, reason might be advancement in this field. In their study all of the practitioners were unaware of pegylated interferon as treat option (Fried *et al*. 2002, Manns *et al*. 2001) and only 3 were aware of importance of combination therapy. Five general practitioners believed interferon monotherapy as right treatment option where as other two suggested treatment with lamivudine and interferon. In contrast to the above report, in the present study, 62.5% physicians had knowledge that combination therapy with interferon and ribavirin is the treatment of choice for HCV infection where as 37.5% PHCPs could not tell the current treatment and 7.5% respondent told that Ribavirin alone is a treatment of choice. Same findings were reported by d'Souza *et al* where primary health care physicians had no knowledge on the current treatment for hepatitis c and also a significant number of these doctors could not infer anti HCV results (D'Souza *et al*. 2004). This is in contradiction to results found in our study where majority of our PHCPs were aware of diagnostic tests for HCV and about its chances of being false positive and false negative.

In a study conducted by Zanetti most GPs believed that vertical route is common mode of transmission for HCV therefore to avoid possible transmission, GPs asked mothers not to breast feed (Resti 1999). However all GPs wanted routine screening of all pregnant women for HCV. Thomas *et al* in their study found that though there is only 6% risk of transmission through vertical route, over 80% blamed this route to be most important causative factor for HCV transmission (Shehab *et al*. 1999). In our study 52.5% of the respondents knew that as compared to HBV infection, materno fetal transmission of HCV is less (5%) and 87.5% routinely tested pregnant patients for HCV infection, though no international or national guidelines recommend testing of pregnant cases for HCV. As far as breast feeding is concerned though majority (65%) advised their HCV positive mothers to continue breast feeding to their newborns but still 35% stopped it due to fear of disease transmission. The findings of the survey conducted in USA on risk factors, management and attitude on diagnosis for hepatitis C by health care providers indicated diagnosis and referral for hepatitis C patients may not be at optimal level (Shehab *et al*. 2001). Our Findings are different and 90% of PHCPs suspect HCV infection even though LFTs are normal and 85% send HCV positive patients to the specialist after diagnosis for further management. In the specialized era, it has been observed that specialists doctors are made responsible to treat patients with HCV infection. As patients don't know the extent of their illness so they usually go to these first level physiscians for diagnosis and treatment, so it is important that their level of knowledge should be advance enough to filter patients with HCV and could timely refer them to the specialist. Due to the large bulk of patients and low number of specialists patients have to wait longer to get services that aggravate patient's worries as well their family doctors. In this scenario it becomes essential to change the mind set of doctors at primary health care level for HCV infection, its diagnosis and treatment. Needless to say that primary health care physician are the first who interact with infected individuals, so they should have knowledge and basic training on diagnosis, the latest treatment for HCV infection. In addition they must know reppropriate time for referral (where and to whom) for such patients. To keep them upraised about common ailements and their treatment, they need to undergo regular training and medical education.

Conclusions

Our PHCPs recognize their shortcomings. During our survey all emphasized need for training on HCV management especially in children. Continued medical education and disease specific protocols are required for GPs are required to develop the capacity of this cadre for the best service deliver for HCV infected individuals for quality labs and referral mechanism at primary health care level.

Acknowledgement

This work was funded by Pakistan Medical Research Council (PMRC), Islamabad. We are grateful to the PHCPs for sparing their precious time for this study.

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