



CODEN [USA]: IAJPBB

ISSN : 2349-7750

## INDO AMERICAN JOURNAL OF PHARMACEUTICAL SCIENCES

SJIF Impact Factor: 7.187

<http://doi.org/10.5281/zenodo.4381254>Available online at: <http://www.iajps.com>

Research Article

### STUDY OF TWO KILLING DISEASES: HEPATITIS B (HBV), HEPATITIS C (HCV), PREVALENCE AND RISK FACTORS IN RURAL AREAS OF PUNJAB

Dr Hafiza Ameema Saleem<sup>1</sup>, Dr Umeroman<sup>2</sup>, Dr Huma Hussain Mughal<sup>3</sup><sup>1,2,3</sup>Fatima Jinnah Medical University, Lahore.

Article Received: October 2020

Accepted: November 2020

Published: December 2020

**Abstract:**

**Objective:** The objective of this prospective study was to examine the risk factors that cause HBV and HCV and their prevalence, evaluating sex and gender as well.

**Study Design:** Descriptive

**Place and Duration:** The study was conducted on the rural area patients of Punjab attending Sir Ganga Ram hospital Lahore. Study was carried out for period of 8 months from 1<sup>st</sup> February 2020 to 30<sup>th</sup> September 2020.

**Method:** A total of 900 chronic liver failure patients were enrolled in this study. Detailed demographics of patients were recorded after written consent was adopted. The causes of hepatitis B and hepatitis C viruses were examined for frequency and risk factors. Complete data was analyzed by SPSS 24.0 version.

**Results:** In this detailed study we included 900 patients of liver diseases, Out of 900 We found 150 patients had both Hepatitis B (HBV) and Hepatitis C (HCV), 63 (7%) patients were found +Hepatitis C and 87 (9.7%) patients were found +HBV. The mean age calculated was 37.25 years. In 150 patients of HBV and HCV, men were 60 (40%) and 90 (60%) were women while 25 patients were aged of <18 years. We observed most frequently Hepatitis B and C in the patients between ages of 20 to 35 years (48 (55.17%) patients of HBV and 35(55.55%) patients of HCV viruses respectively). We found most prevalence in women (HBV infection women 51(56.7%) and 39(47.3%) women had HCV). In this study we also included the detailed history of patients such as age, sex, socio-economic status, literacy, poverty, used of pipe lined water or pumped water, smoking history, use of drugs with used injection, blood donation history and organs transplantation history.

**Conclusion:** We found that the frequency of these two killing infections in this study is too high for HBV and HCV compared to other developed countries. These viruses have mostly affected women and adults.

**Keywords:** Factors, HBV C, Hepatitis B, Frequency, Rural Areas.

**Corresponding author:****Dr. Hafiza Ameema Saleem,**

Fatima Jinnah Medical University, Lahore.

QR code



Please cite this article in press Hafiza Ameema Saleem et al, Study Of Two Killing Diseases: Hepatitis B (Hbv), Hepatitis C (Hcv), Prevalence And Risk Factors In Rural Areas Of Punjab., Indo Am. J. P. Sci, 2020; 07(12).

**INTRODUCTION:**

The 2 most common viruses and main causes of chronic liver failure, hepatocellular carcinoma familiar to chronic liver diseases, are Hepatitis B (HBV) and Hepatitis C (HCV). [1,2] According to World Health Organization (WHO) research, about three hundred and fifty million people have been infected with the Hepatitis B virus and one hundred and seventy million people have been found infected with the Hepatitis C virus. And with these two killing viruses, the death ratio is too high. The ratio of HCV virus in Pakistan is quite high and Pakistan ranks second in the world in the frequency of people infected with HCV ranges from 4.5 to 8 percent.[5,6] In the most common causes, such as blood donors, health department experts, drug abusers and patients with severe liver failure, the frequency of HBV and HCV is too high.[7] The most common factors for the transfer of Hepatitis B and Hepatitis C viruses/infections are blood donation, use of drug syringes, organ transplantation, shaving on the outside (barber shop), surgery, dental therapy and vulnerable sexual relationships.[8,9]

As a serious infection, HBV and HCV viruses resulted, but it remains in the body of some patient and could be the chronic liver failures. Approximately 16 to 26 percent of HBV chronic liver patients have severe liver problems, such as hepatocellular carcinoma and cirrhosis. A vaccine used to prevent HBV is used in medical treatment, but there is no vaccine or medication for the prevention of HCV.[11] HBV indications include loss of appetite, fever, nausea, abdominal pain, vomiting, joint pain, jaundice, and dark urine. [10]

**MATERIAL AND METHODS:**

This descriptive study was conducted at Sir Ganga Ram hospital Lahore. Study was carried out for period of 8 months from 1<sup>st</sup> February 2020 to 30<sup>th</sup> September 2020. In this study we included 900 patients of chronic liver failure to examine the frequency and risk factors causes of Hepatitis B and Hepatitis C viruses.

We also included the detailed history of patients in this study, such as age, gender, socio-economic status, literacy, poverty, use of pipe-lined water or pumped water, history of smoking, use of injection drugs, history of blood donation and history of organ transplantation.

**RESULTS:**

Out of 900, 150 patients had both Hepatitis B (HBV) and Hepatitis C (HCV), 63 (7%) patients were found + Hepatitis C and 87 (9.7%) patients + HBV.

**Table 1 Frequency of HBV and HCV Viruses**

| Virus       | Frequency | %age |
|-------------|-----------|------|
| Hepatitis B | 87        | 9.7  |
| Hepatitis C | 63        | 7    |

The mean age calculated was 37.25 years. In 150 patients of HBV and HCV, men were 60 (40%) and 90(60%).

**Table 2. Gender wise distribution**

| Characteristics | HBV-HCV | %age |
|-----------------|---------|------|
| Men             | 36-24   | 40   |
| Women           | 51-39   | 60   |

We observed most frequently Hepatitis B and C in the patients between ages of 25 to 35 years (48 (55.17%) patients of HBV and 35(55.55%) patients of HCV viruses respectively). We found most prevalence in women (HBV infection women 51(56.7%) and 39(47.3%) women had HCV).

**Table 3. Age wise distribution of patients**

| Age   | HBV Patients<br>n/% Total 87 | HCV Patients<br>n 63/%age |
|-------|------------------------------|---------------------------|
| 5-15  | 18 20.7%                     | 10 18.9%                  |
| 15-25 | 12 13.8%                     | 8 12.5%                   |
| 25-35 | 48 55.17%                    | 35 55.55%                 |
| 35-45 | 6 6.9%                       | 6 9.5%                    |
| >45   | 3 3.44%                      | 5 7.94%                   |

We also included the detailed history of patients in this study, such as age, sex, use of pipe-lined water or pumped water, smoking history, use of injection drugs, history of blood donation and history of organ transplantation.

**Table 4. Risk Factors associated with HBV and HCV**

| Characteristics       | Frequency | %age  |
|-----------------------|-----------|-------|
| Using Pipe-Line Water | 100       | 11.11 |
| Home pumped water     | 350       | 38.9  |
| Smoking persons       | 140       | 15.55 |
| Abuser of drug        | 80        | 8.9   |
| Blood donor           | 80        | 8.9   |

**DISCUSSION:**

The 2 most common viruses and main causes of chronic liver failure, hepatocellular carcinoma familiar with chronic liver diseases, are hepatitis B (HBV) and hepatitis C (HCV). [1,2] The ratio of patients with HBV and HCV is too high in developing countries. In this study, compared to other developing countries, we observed a similar situation. We included 1050 patients related to liver diseases in this study, where we found 150 patients with both Hepatitis B and Hepatitis C viruses, respectively.

The prevalence of HBV and HCV has been observed to be too high for women compared to men. Hepatitis B and C were most frequently observed in patients aged 25 to 35 years (48 (55.17 %) HBV patients and 35 (55.55 %) HCV virus patients, respectively). In women (51(56.7%) and 39(47.3 %) women had HCV), we found the most prevalence in women (HBV infection women).

A detailed history of all 900 patients was included in this study. We found 100 liver disease patients using pipe lined water, 350 patients were using home pumped water, 140 were smokers, 80 were drug abusers, and 80 were donors of blood. The most common factors for the transfer of Hepatitis B and Hepatitis C viruses/infections are blood donation, use of drug syringes, organ transplantation, shaving on the outside (barber shop), surgery, dental therapy and vulnerable sexual relationships. It is similar to other HBV and HCV-related studies [8,9].

There is a vaccine for HBV virus treatment, but for HCV patients, there is no vaccine. An increase in the morbidity and mortality ratio may be caused.

In addition, this is not a sufficient study; for better treatment and to reduce morbidity and improve the quality of life of infectious patients, we should have to assess the significance and factors associated with this disease.

**CONCLUSION:**

In this study we observed the frequency of HBV and HCV is too high as compared to other national studies. It may be due to less literacy level, poverty, less pure water, lack of facilities and lack of awareness. Government should have to take more actions regarding these two silent killing diseases.

**REFERENCES:**

1. Guidelines for the screening, care and treatment of persons with chronic hepatitis C infection. updated version, April 2018. Geneva: World Health Organization; 2018

2. Hepatitis delta. Fact sheet. Geneva: World Health Organization; July 2016.
3. Perz JF, Armstrong GL, Farrington LA, Huttin YJ, Bell BP. The contribution OF HBV and HCV infections to cirrhosis and primary liver cancer worldwide. *J Hepatol* 2006;45:529-38. AND
4. Wild CP, Montesano R. A model of interaction: aflatoxins and hepatitis viruses in liver cancer aetiology and prevention. *Cancer Lett* 2019;286:22-28
5. WHO. Guidelines for the prevention, care and treatment of persons with chronic hepatitis B infection. 2015.
6. Han G-R. Management of chronic hepatitis B in pregnancy. *World J Gastroenterol*.2012;18(33):4517. doi: 10.3748/wjg.v18.i33.4517.
7. GBD 2013 Mortality and Causes of Death Collaborators. Global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet*. 2015; 385: 117–171 and
8. Attaullah S, Khan S, Khan J. Trend of transfusion transmitted infections frequency in blood donors: provide a road map for its prevention and control. *J Transf Med*.2012;10(1):1. doi: 10. 1186/1479-5876-10-1.
9. Khatak MF, Salamat N, Bhatti FA and Qureshi TZ. 2002 Seroprevalence of HBV, V and HIV in blood donors in northeren Pakistan. *JPMA*, 52, 398-402.
10. Abbas Z, Jeswani, NL, Kakepoto GN, Islam M, Mehdi K 2008. Prevalence and mode of spread of HBV and HCV in rural sindh. *Pakistan Journal of trop Gastroenterol*, 29(4), 210-6.
11. Strader DB, Wright T, Thomas DL, Seef LB *Hepatology*,39:1147-1171.
12. Syed Asad ali, Rafe MJ, Donahueb, Huma Qureshi and Sten H. Nermunda, HBV and HCV in Pakistan, Prevalence and risk factors, *Int J, Infected Dis*. 2009 jan:13(1): 9-19.
13. Ali M et al, HBV in Pakistan: A systematic review Of prevalence and risk factors, awareness status and genotype, *Virology Jounal* 2011,8:102.
14. Waheed Y, Shaffi T, Safi SZ, Qadri I, Hepatitis C virus ion Pakistan. A systematic review of prevalence, genotypes and risk factors. *World J. Gastroenterol* 2009; 15(45): 5647-5653.