ORIGINAL ARTICLE

FREQUENCY OF HEPATITIS B AND C IN OPD PATIENTS

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ABSTRACT

Background: The prevalence of hepatitis B and C varies in different population worldwide. The objective of the study was to determine the frequency of Hepatitis B and C in OPD patients.

Material and Methods: This record based, descriptive cross-sectional study was conducted in different hospitals of tehsil Rawalakot, district Poonch, Azad Jammu and Kashmir, Pakistan. The data of previous 3 years was retrieved from these hospitals with the approval of hospital ethical committee from May 2014 to May 2017. Sample size was 6041 selected through convenient sampling technique. Demographic variables was gender whereas research variables were presence of HB and presence of HC. All the data being categorical were analyzed descriptively using SPSS version 16.

Results: The prevalence of hepatitis B and hepatitis C was 1% and 2% respectively in Rawalakot Azad Kashmir. Hepatitis B was more common in male than female, while male female ratio was equal in hepatitis C.

Conclusion: The frequency of hepatitis B and C was 1% and 2% respectively in Rawalakot, Pakistan, with male preponderance in hepatitis B.

Keywords: Hepatitis; Hepatitis B virus; Hepatitis C virus; Prevalence.

This article may be cited as: Said F, Akram M, Sadaqat A, Rehman SU, Mustafa SB, Akhlaq M, Ramzan M, Hussain A. Frequency of Hepatitis B and C in OPD patients. Gomal J Med Sci 2017;15:165-7.

INTRODUCTION

Hepatitis B and C are serious health troubles all over the World. Hepatitis B virus was discovered in 1967 and the blood test that is used to detect the virus invented the first hepatitis B vaccine in 1969 and the hepatitis C virus was initially isolated from the serum of a person in 1989 by Choo.[1] Chronic HBV infection progresses nonlinearly through 3–4 phases, from the immune-tolerant phase to immune clearance or immune active phase, to non replicative inactive phase and possible reactivation.[2] Hepatitis C virus (HCV) is a single stranded RNA virus belonging to the family "Flaviviridae". It has six major genotypes1–6, globally genotype1 being the most prevalent genotype (46%), followed by genotype 3 in 22% and genotype 2 and 4 in 13% each.[3] In WHO report, it has been declared that hepatitis B virus (HBV) and hepatitis C virus (HCV) are among the ten leading cause of death from infectious disease.[4] Based on the prevalence of hepatitis B surface antigen (HbsAg), countries are classified as having high (>8%), intermediate (2-7%) or low (<2%). Areas of high endemicity (where >8% of the population is HbsAg positive) include South-East Asia, China, most of Africa, most of Pacific Islands, the Amazon basin and parts of the Middle East. The areas of intermediate endemicity (2-7%) include South Asia, Eastern and Southern Europe, Russia and Central and South America. On the other hand areas with low endemicity (<2%) include United States, Western Europe and Australia. The South Asian countries, a contiguous block of countries which have been classified together as global burden of disease regions include Afghanistan, Bangladesh, Bhutan, India, Nepal and Pakistan.[5] Both HBV and HCV are

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Date Submitted: 31-05-2017
Date Revised: 09-07-2017
Date Accepted: 28-10-2017

the blood born viruses. Both HCV and HBV can be diagnosed by test, ELISA (Enzyme Linked Immune Sorbent Assay) and PCR (Polymerase Chain Reaction). Screening provides an opportunity to detect the virus in its asymptomatic phase and helps early diagnosis and management. Screening programs are now widely used to diagnosis the virus in people with prior infection of hepatitis B and C and helps to prevent complications.[6] Treatment does not usually cure the hepatitis B, but it can turn an 'aggressive' hepatitis B infection into a mild infection. This can stop the liver from being damaged. Hepatitis B can be treated with pegylated interferon alpha or with pills called nucleoside or nucleotide analogues. First-line oral antiviral medications have been changed to tenofovir or entecavir, and adefovir has been moved to second-line oral antiviral medication. Interferon remains one of the first-line options for patients who do not have cirrhosis.[7] Hepatitis C treatment consist of ribavirin and interferon, generally in the pegylated, longer-lasting form, which boosts the body's own immune system, most of the new drugs work differently, attacking the virus itself.[8] Chronic hepatitis B and C can lead to serious complications like scarring of liver (cirrhosis), liver cancer, liver failure, inflammation of blood vessels and anemia.

In Pakistan, over 20 million people are infected with hepatitis B (HBV) and C (HCV) including around 15 million with hepatitis C and 5 million with hepatitis B. Globally around 350 million people are affected with hepatitis B and 170 million with hepatitis C every year. Almost 3.66 and 5.63 lac deaths occur due to hepatitis B and hepatitis C per year respectively. Azad Jammu and Kashmir carries one of the world's highest burdens of chronic hepatitis and mortality due to hepatocellular carcinoma and liver failure. There is relative lack of prevalence data of hepatitis B and C patients in Rawalakot, Azad Jammu and Kashmir. Therefore, a study was conducted to assess the prevalence of hepatitis B and C in Rawalakot, Azad Kashmir. The risk factor for hepatitis B and C are unsafe and unnecessary use of needles, blood transfusion, injection drug users (IDUs) and unprotected sex. Many professions like healthcare workers, sex workers, and barbers may be at increased risk of getting HBV and HCV.

The objective of the study was to determine the frequency of Hepatitis B and C in OPD patients.

MATERIAL AND METHODS

This record based, descriptive cross-sectional study was conducted in different hospitals of tehsil Rawalakot, district Poonch, Azad Jammu and Kashmir, Pakistan. The data of previous 3 years was retrieved from these hospitals with the approval of hospital ethical committee from May 2014 to May 2017. Sample size was 6041 selected through convenient sampling technique. Demographic variables was gender whereas research variables were presence of HB and presence of HC. All the data being categorical were analyzed descriptively using SPSS version 16.

RESULTS

Out of 6041 patients the frequency of hepatitis B was 29 (1%) and hepatitis C was 148 (2%)respectively. Out of 29 HBV positive patients, 21 (72%) were male while 8 (28%) were female. Out of 148 HCV positive patients, 74 (50%) were male while 74 (50%) were female. Figures 1 and 2 show male and female percentage of hepatitis B and C respectively.

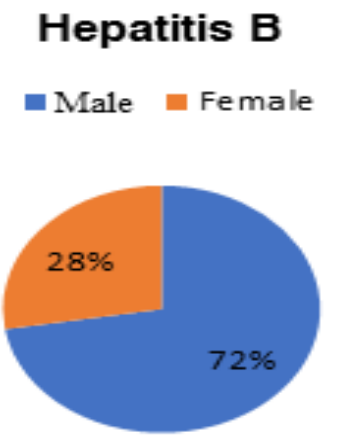

Fig 1: Gender-wise distribution of HBV in Rawalakot, Pakistan.

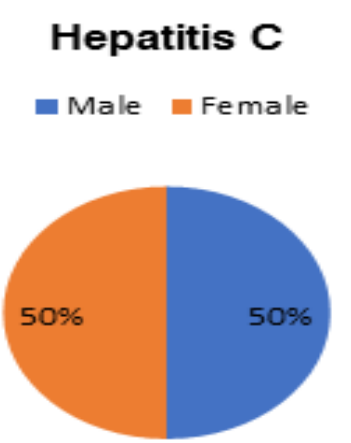

Fig 2: Gender-wise distribution of HCV in Rawalakot, Pakistan.

DISCUSSION

Population based studies suggest that the prevalence of HCV infection in western Europe and North America is below 2.5%, lower than in many other parts of the world. Studies of low risk groups in the UK suggest that the prevalence of anti-HCV in the general population is below 1%. In Scotland, studies of IDUs have found prevalence of anti-HCV

between 77% and 90%. In Pakistan HCV prevalence was 4.8%, the Punjab province had significant higher prevalence (6.7%) relative to Sindh (5.0%), which in turn had significantly higher anti-HCV prevalence when compared to Balochistan (1.5%) and Khyber Pakhtunkhwa (1.1%). Prevalence of HbsAg in Pakistan was (2.5%) and Baluchistan had the highest prevalence (4.3%) relative to Sindh (2.5%) and Punjab (2.4%) which in turn had significantly higher prevalence in comparison with Khyber Pakhtunkhwa (1.3%).[9-12] The HCV prevalence in Rawalakot Azad Kashmir (2%) was lower than Punjab (6.7%) and Sindh (5.0%), while higher as compared to Balochistan (1.5%) and Khyber Pakhtunkhwa (1.1%). Prevalence of HbsAg in Rawalakot Azad Kashmir (1%) is lower than Balochistan (4.3%), Sindh (2.5%), Punjab (2.4%) and Khyber Pakhtunkhwa (1.3%). In a study out of 520 individuals, 39 (7.5%) were found positive against HCV antibody test and only 5 (0.96%) were positive for HBV surface antigen.[13] The prevalence of HBV and HCV among blood donors was found to be 0.485% and 0.169% respectively in Srinagar Jammu Kashmir.[14] In a study, the prevalence of hepatitis B virus (HBV) infection was 4.1% in health workers at CMH Muzafrabad Azad Kashmir.[15]

CONCLUSION

The frequency of hepatitis B and C was 1% and 2% respectively in Rawalakot, Pakistan, with male preponderance in hepatitis B.

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CONFLICT OF INTEREST
Authors declare no conflict of interest.
GRANT SUPPORT AND FINANCIAL DISCLOSURE
None declared.

AUTHORS' CONTRIBUTION

Conception and Design:	FS, MA, MR
Data collection, analysis & interpretation:	FS, AS, SUR, SBM, MA
Manuscript writing:	FS, MA, MR, AH