

THE PREVALENCE OF CHRONIC HEPATITIS C IN PATIENTS PRESENTING WITH VAGUE RHEUMATIC SYMPTOMS IN A LOCAL COMMUNITY IN DISTRICT PUNJAB, PAKISTAN

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ABSTRACT

Objective: This study was aimed to determine the prevalence of chronic hepatitis C in patients presenting with vague rheumatic symptoms in a local community in district Punjab, Pakistan.

Materials and methods: A cross-sectional study was conducted in Tehsil Headquarter Hospital Sharaqpur Sharif, Sheikhpura, Pakistan. During a period of two and a half months, 751 patients presenting to general outdoor department with vague symptoms were selected through random sampling. People who presented with symptoms related to rheumatic diseases including, arthralgia, myalgia and lassitude without being explained on any other organic diseases, were labelled as vague symptoms. They were tested for Anti Hepatitis C Virus Antibodies, Hepatitis B Surface Antigen, and Anti Human Immunodeficiency Virus Antibodies with Rapid Immunochromatographic Test Kits. Statistical analysis was performed using IBM SPSS Statistics version 23.

Results: Of the 751 randomly selected patients, 28 were eliminated from results due to missing data and another 156 were removed on the basis of exclusion criteria. Out of 564 included participants, 37.8% were male and 62.2% were female with a mean age of 53.11 ± 11.2 years. Twenty-seven percent of people screened with vague symptoms were found to be positive for Hepatitis C (N=152), 2.3% were Hepatitis B (N=13), whereas only one was HIV positive.

Conclusion: This study suggests that Chronic Hepatitis C often present with vague rheumatic symptoms like arthralgia, myalgia and lassitude. Patients presenting with such symptoms and without underlying rheumatic diseases should be screened for hepatitis C virus infection.

Keywords: Chronic Hepatitis C, vague symptoms.

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INTRODUCTION

Hepatitis C infection is a global threat to health. Its prevalence is believed to be 2-5% of the total world population (177-5 million), with the highest being in Central Asia and Central Africa (>3-5%), moderate in the East, South and Southeast Asia, West and East Africa, North Africa and Middle East, Southern and Tropical Latin America, Caribbean, Australasia, and Eastern Europe (1-5%-3-5%) and relatively low (<1-5%) in Southern Africa, North America, Andean and Central Latin America, Pacific Asia and Western and Central Europe¹. However, in Pakistan there is great variability of prevalence with limited data available. According to the data currently available that includes

both published and unpublished papers, prevalence in Pakistan among the general population is 6-8%².

HCV has been a culprit of millions of deaths globally every year (1-3 million)³. Chronic hepatitis C has served as a major distress for families by significantly reducing the quality of life⁴. However, not all patients suffer severe complications.⁵ In fact, the initial stage HCV infection is usually asymptomatic or mild. According to published studies, fatigue is the most common symptom of HCV infection followed by rheumatic symptoms like myalgia, arthralgia, lassitude, and depression⁶⁻¹². The initial mild nature results in a number of people to stay undiagnosed and remain chronic carriers. They are diagnosed when they develop signs and symptoms of liver failure¹³.

Despite being aware of these facts, educating people about the disease and performing screening tests still remains a challenge in Pakistan¹⁴. With overburdened hospitals and deficient investigative facilities, a large number of people are neglected. There are limited resources and lack of health facilities in the peripheral areas and that corresponds to the very high prevalence rates in rural areas¹⁵. Illiteracy and poor economic status add to this

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miser and people do not focus on their health until they become very sick.

This study was focused on highlighting the prevalence of HCV infection in patients presenting with vague rheumatic symptoms such as lassitude, myalgia and arthralgia in the periphery of district Sheikhpura, Punjab, Pakistan.

MATERIALS AND METHODS

This cross-sectional study was conducted in Tehsil Headquarter Hospital Sharaqpur Sharif, a Secondary Level Hospital under Primary and Secondary Health Care Department, Government of Punjab. It is located in Tehsil Sharaqpur Sharif, a small town in District Sheikhpura of Punjab, Pakistan having a population of about 40,000 people. Minimum sample size calculated using OpenEpi Version 3 was 287 at 95% confidence level. However, 751 participants were randomly selected from routine outdoor patients, who presented with vague rheumatic symptoms. For the purposes of the study "Vague symptoms" included myalgia, arthralgia, malaise and lassitude. Inclusion criteria for the study included, age above 40 years for both genders and rheumatic symptoms without organic explanation for those. Exclusion criteria included, overt jaundice and anemias, uncontrolled Diabetes Mellitus, Hypertension, Rheumatological disorders, and Hypothyroidism were ruled out on the basis of medical history and general physical examination. Those who met the inclusion criteria were briefed regarding the procedure of the study and informed consent was obtained. They were then screened for Hepatitis C Virus, Hepatitis B Virus and Human Immunodeficiency Virus with Rapid Immunochromatographic Test Kits, following manufacturer's instructions. Kits were manufactured by Vaxper Inc. Miami, FL, USA. For statistical analysis, SPSS version 23 was used.

RESULTS

Among a total 751 subjects, 28 were eliminated from results due to missing data and another 156 were removed due to exclusion criteria. Out of 564 included participants, 37.8% were males (N=213). Remaining 62.2% were females (N=351). The mean age of subjects is shown in Table 1. Hepatitis C Virus was detected in 26.95% subjects (N=152) out of which, 41.44% are males (N=63) and 58.55% are females (N=89). Gender-wise prevalence of Hepatitis C is shown in Figure 1. HBsAg was detected only in 2.3% people (N=13) out of which, 8 were female and 5 were male. Only one patient was positive for HIV antibodies. Comparison of prevalence of Hepatitis C and other viral infections is shown in Figure 2.

DISCUSSION

This study highlights a high prevalence of hepatitis C in the peripheral areas of Pakistan. Although internation-

Table 1: Mean Ages of the study participants

	Mean	N	Standard deviation
Male	55.40	213	21.12
Female	52.12	351	87.10
Total	36.53	564	49.11

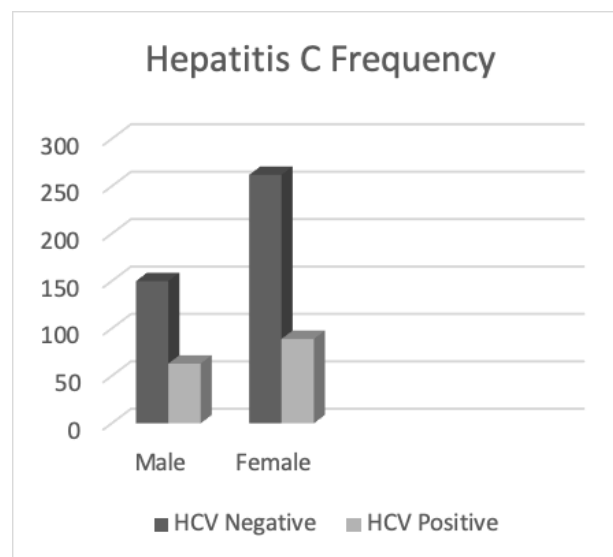


Fig 1: The frequency of HCV in males and females

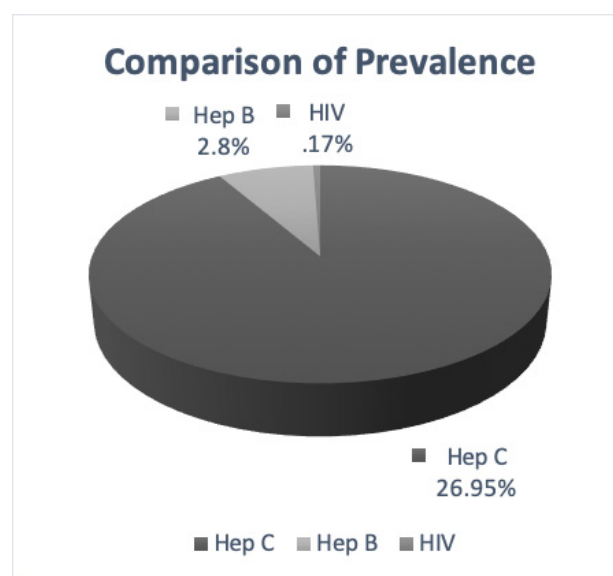


Fig 2: Comparison of prevalence of HBV and HCV in study population

al literature suggests a global decline in HCV prevalence in the past few years, this high prevalence and review of available material suggests that the incidence of HCV is still rising in Pakistan. This emphasizes the need for updating statistics. From 2010 to 2015, there are only 86 studies on prevalence of HCV that includes published papers in indexed, non-indexed journals, and unpublished studies

as well ². It is noteworthy that there is high parity in this data. The overall prevalence in general population according to this data is 6-8% whereas it is reported to be 3-8% by the global prevalence studies published in indexed journals ¹⁶.

Among the general population, Hepatitis C is presumed to be a serious disease but most people remain unaware of the symptoms and phases of the disease which is a major factor in delayed diagnosis and increased morbidity and mortality of hepatitis. Also, in overburdened healthcare setups, due to a deficiency of resources and the clinical impression of hepatitis C being a moderate to severe disease notably in young doctors, many a times these patients get neglected. From this study, it is evident that a considerable proportion of people who presented with vague and mild rheumatic symptoms in the general out-patient departments were found to be positive for HCV. So, a more vigilant approach towards such patients is necessitated. Emphasis should be paid towards augmentation of clinical picture, symptoms and clustering of symptoms to improve diagnosis and overall management of Chronic Hepatitis C ¹⁷.

The presence of vague and mild symptoms indicates a recent infection and curable stage of the disease. So, there is a dire need of expansion of hepatitis control program throughout the country, especially in peripheries, where people are relatively uninformed regarding this disease. This should include both screening and education to diagnose patients in time and stop the spread ¹⁸.

Also, amidst the ongoing hepatitis control program throughout the province, this high prevalence is alarming. This calls for a need to check the efficacy of these control programs and reassess the strategies accordingly ¹⁹. High prevalence of infection in people with a history of medical and surgical interventions along with blood transfusions is evident. That may be attributed to malpractice. There is a significant role of quacks who are involved in needle usage and unsafe use of intravenous drugs and surgical instruments ²⁰. Moreover, many hospitals also lack sufficient safety protocols and practice, including improper sterilization, lack of standard medical hygiene, careless handling, lack of proper disinfection, improper waste disposal, and untrained staff, which have been reported several times specifically in rural areas ²¹. Strict and immediate action is required to develop updated SOP's and ensure strict compliance to stop the spread of hepatitis C virus. A complete revamping of patient education system is necessary according to cultural requirements. Currently the main source of patient education for infectious diseases is print media to which a large population is unresponsive. Therefore, awareness should be given to people regarding the transmission, signs and symptoms, precautions, treatment, and complications in effective ways.

Various limitations of this study should be noted.

Firstly, we could not report prevalence of individual symptoms. Secondly, due to limitations in diagnostic facilities, we could not rule out certain other causes of fatigue and generalized body aches; such as Vitamin D3 levels and other chronic diseases ²².

CONCLUSION

This study suggests that Chronic Hepatitis C often present with vague rheumatic symptoms like arthralgia, myalgia and lassitude. Patients presenting with such symptoms and without underlying rheumatic diseases should be screened for hepatitis C virus infection.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under

Sarwar F: Concept, Design and Proof reading

Murtaza G: Acquisition and critical review

Javad S: Analysis and interpretation of data

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.