

PREVALENCE OF HEPATITIS C AT A TERTIARY CARE CENTRE, KANPUR.

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ABSTRACT

Hepatitis is one of the major health problems in Asia. Hepatitis C virus (HCV) can cause asymptomatic infection and chronic infection with HCV is one of the major causes of liver cirrhosis and hepatocellular carcinoma. According to World Health Organization (WHO) there are 180 million people affected with HCV worldwide and about 12.5 million carriers in India. The present study was undertaken to determine the prevalence of hepatitis C virus among hospital based general population in Kanpur . Seroprevalence of hepatitis C virus was determined using a third generation ELISA. The study population comprised of six hundred individuals attending a tertiary care center in Kanpur. The overall seroprevalence was found to be 2.07%. Out of 80 seropositive patients, 62 were males and 38 were females. Investigating seroprevalence of hepatitis C virus in the community provides an opportunity to investigate risk factors for transmission, the natural history of infection and effectiveness of preventive methodologies.

INTRODUCTION

Hepatitis C was first detected in 1989 using molecular biology techniques after extensive testing of serum from experimentally infected animals [1]. It was later characterized to be an RNA virus that belongs to the Flaviviridae family and genus Hepacivirus. Ever since its

discovery it became clear that this virus was the major cause of acute hepatitis after a blood transfusion that was neither related to hepatitis A nor to hepatitis B (hence the early name for this disease, non-A, non-B hepatitis). It has been estimated that the global prevalence of Hepatitis C virus (HCV) infection is around 2%, with 170 million persons chronically infected with the virus and 3 to 4 million persons newly infected each year [2].

The worldwide prevalence of hepatitis C (HCV) is 150-170 million. The prevalence of HCV infection in India is estimated to be around 1%.

Prevalence of HCV infection is variable according to geographical distribution, routes of transmission and other factors. Higher prevalence is found in developing countries where limited resources and facilities are available, Central and east Asia as well as Africa are the most affected region in the world (Preeti et al., 2015 [3] Faraget al., 2015 [4] Who hepatitis C, 2016 [5]).

According to the World Health Organization (WHO) the prevalence of HCV infection is up to 3% of the world's population. In India reported prevalence rates vary widely in range of 0.09%–2.02% (Mukhopadhyaya, 2008) [6]. In India about 20 million people are known to have Hepatitis C virus (HCV) infection and a quarter of them expected to develop chronic liver disease in the next 10-15 years (Khaja et al., 2006) [7].

It is now widely recognized as one of the common aetiological agents for cirrhosis of the liver. It is the leading cause of liver transplantation and the most common chronic blood borne infection in developed countries like the USA. The impact of this infection is just emerging in India. India's blood-banking system has serious shortcomings. Professional blood donation continues to flourish despite a law condoning this. Another malaise in our health system is the reuse of improperly sterilized needles. Both these factors are potential sources for the spread of hepatitis C in India. This study aims to give an overview of this emerging infection in Kanpur,

MATERIALS AND METHODS

A prospective study was carried out from January 2018 to December 2018 on patients attending OPD & IPD at a tertiary care hospital. Blood samples of all patients for HCV testing were collected that were referred to the Microbiology laboratory. The serum was separated for the qualitative detection of HCV antibody by third generation(ErbaELISA). The test procedure and interpretation of result was done according to standard protocol and manufacturer's instructions. The test result of patients were noted and analyzed.

RESULTS

In the present study the prevalence of HCV was 2.07%. The percentage of male was 62%, whereas the percentage of female was 38%.

Total no. of sample received	Total no. of positive sample	Percentage of total no. of positive sample
3854	80	2.07%

DISCUSSION

Hepatitis C infection is found worldwide, prevalence rates are also different e.g. 5.5% in Africa, 4.6% in the Eastern Mediterranean region, 4% in the Western Pacific region, 2% in South East Asia, 1.7% in the United States of America (USA), 1% in Europe14 and 28% in Egypt were noted in past(Syet al.,2006) [8].

The seroprevalence of HCV among general population of India has been reported between 0.22-1.8 per cent (Gowri et al.,2012;[9] Jaiswal et al., 1996) [10].

In the present study the prevalence of HCV was 2.07%. The percentage of male was 62%, whereas the percentage of female was 38%, which was similar to our study where study done by

Preeti Mindolii *et al.*, [11] showed the prevalence of (2.6%) and Mishra *et al.*,[12] (1.57%) Showed the prevalence similar to our study.

Differences in prevalence rates may be due to differences in health resources and educational levels awareness of the disease in different regions. The prevalence of HCV in both genders is controversial. While some studies showed higher HCV incidence among men, other population based surveys showed similar rates in both sexes.

In the developing countries, unsafe therapeutic injections and transfusions are likely to be the major modes of transmission, especially in countries where age-specific seroprevalence rates suggest ongoing increased risk of HCV infection (Shepard *et al.*, 2005) [13].

CONCLUSION

Hepatitis C is an emerging infection in India whose long term implications will be felt in the decades to come. It is a pathogen that is already responsible for a significant proportion of liver disease in various regions of India. The advent of the HIV epidemic may further add to the existing load of HCV infection in the country. Stringent blood banking laws need to be introduced and sterilization and reuse of needles discouraged. All this is not possible without increased public awareness of the magnitude and implications of this chronic infection and its mode of spread. Health authorities have to include hepatitis C on their radar as a disease which can result in significant morbidity and mortality in the years to come.

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