

FREQUENCY OF CHRONIC HEPATITIS C PATIENTS IN DIFFERENT SOCIOECONOMIC GROUPS

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ABSTRACT

Objective: This study was designed to determine the frequency of Hepatitis C patients in different socioeconomic groups in Pathology department, Hayatabad Medical Complex (HMC) Peshawar.

Methodology: In this descriptive cross sectional study a total of 138 patients were observed. All Hepatitis C patients referred from other units of HMC were included in the study. The duration of study was six months from 27/10/2016 to 27/04/2017. Written informed consent was obtained from each of the study subject, after explaining them the study protocol. Clinical data and different demographic variables of the patients, age, gender, occupation, residence, monthly income and HCV status were recorded and entered in a predesigned proforma. The diagnosis of the HCV status was done on ECLISA (Cobas 601) and confirmed on PCR.

Results: Our study shows that frequency of HCV positivity in poor patients was 52%, in middle class the frequency was 36% and in rich class it was recorded as 12%.

Conclusion: Our study concludes that the frequency of HCV positivity was 4 times greater in lower socioeconomic groups.

Key words: Chronic HCV Patients, ECLISA, PCR.

INTRODUCTION

Hepatitis C, the infective disease which generally affects liver and the hepatitis C virus (HCV) is the causative organism responsible for that. The total estimate of people infected worldwide by hepatitis C is 270-300 million.¹ The prevalence of HCV globally is 3.1% (which is lesser in Europe 1.03% and Americas 1.7%) but it is greater in Africa 5.3%, according to the WHO data.

Chronic Hepatitis C infection is a grave health setback in Pakistan with prevalence of 4-6%. HCV infection has become a global health and socioeconomic problem as 60-85% of infected persons develop chronic liver disease.² According to an estimate about 3-4 million people got infected with HCV each year, and of those seventy percent progress to chronic hepatitis. Hepatitis C Virus is also the cause for liver cancer cases (50-76%) and about 2/3rd cases of liver transplant in the developed countries.³ When we see at the prevalence of the disease, it is decreased (< 1%) in Australia, northern Europe and Canada, it is found to be almost 1% in medium endemic countries, like most of the Europe and USA, and the HCV prevalence is found to be

high (>2%) in most of the regions of Central and South Eastern Asia, Latin America and Africa.⁴ The prevalence in America in general population is estimated to be 1.8%.^{5,6} In Peshawar city a prevalence of 4.27% has been reported, while in Islamabad, 5.31% prevalence was found.^{7,8} It is found to be difficult to effectively treat and develop a vaccine against Hepatitis C, that should give protection against all HCV stains, due to its diverse quasi-species, subtypes and genotypes. Genotype 3 is the most common HCV virus in Pakistan.⁹ The transmission is predominantly parenteral (blood, infected blood products, shared drug injection equipment). Different practices and habits such as, skin and ear piercing, tattooing, sharp injuries and unsterile skin penetration are means and tools for spreading this bug across the masses.¹⁰ Studies have also been done on different sections of the society. It is difficult to predict the frequency of HCV positivity in certain group due to many factors involved. Numerous causes are responsible and have been recognized that can affect the frequency of HCV positivity; however other aspects not yet identified. Socioeconomic status is one of the most important factors affecting the frequency of HCV positivity.

This study was intended to find out the clinical and demographic data of chronic HCV patients that can affect the frequency of hepatitis C positivity in different socioeconomic groups of the population of Peshawar.

MATERIAL AND METHOD

This is a descriptive cross sectional study of total of 138 chronic HCV positive patients were obtained by consecutive non-probability sampling technique and studied in Pathology department of Hayatabad Medical

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Complex Peshawar referred from other clinical units. The duration of study was six months from 27/10/2016 to 27/04/2017. Written informed consent was taken after explaining the study to the subjects. Patient's clinical data and demographics, age, gender, occupation, residence, monthly income and HCV status were recorded and entered in a predesigned proforma. The diagnosis of the HCV status was done on ECLISA (Cobas 601) and confirmed on PCR.

Inclusion and exclusion criteria

Age 20-60 years, both gender and all HCV positive patients on ELISA and confirmed on PCR were included in the study while excluded cases were chronic active hepatitis C patients with coexisting hepatocellular carcinoma or other malignancies, autoimmune disorders, alcoholism, Wilson's disease and alpha, antitrypsin deficiency.

Study approval was carried out from ethical committee of the hospital. Demographic and clinical data of the patient, age, gender, occupation, residence, monthly income and HCV status were recorded and entered in a predesigned proforma. The diagnosis of HCV status was done on ELISA and confirmed on PCR.

The study was analyzed using SPSS version 17 for windows. Frequency and percentages were calculated for categorical variables such as gender, socioeconomic status, occupation, education level while the numerical variables such as age, duration of disease were presented with mean \pm SD.

RESULTS

The age distribution in the current study (n=138) was evaluated as, the majority number of patients, 44(32%) were in age range 41-50 years, followed by 41(30%) patients were in age range 51-60 years. Mean age was 39 years with SD \pm 10.24. (table no 1) Gender distribution is shown in table no 2.

Duration of illness was documented as, 92 (67%) had duration of illness < 3 years, 46(33%) patients had duration of illness >3 years. Mean duration was 2 years with SD \pm 3.72. (table no 3) Occupation of the patients was, 52(38%) patients were employee (table no 4).

Socioeconomic status among 138 patients was analyzed as 72(52%) patients were poor, 50(36%) patients middle class and 16(12%) patients were rich. (table no 5) Education level of the patients were as, 80(58%) patients were illiterate (table no 6).

DISCUSSION

Chronic Hepatitis C infection is a grave health concern in Pakistan with 4-6% of prevalence rate.² The present study showed that HCV positivity was more among patients in age range of 41-50 years, which was 32%, while 51-60 years age group has 30% positivity.

Table 1: Age Distribution (n=138)

Age	Frequency	Percentage
20-30 years	25	18%
31-40 years	28	20%
41-50 years	44	32%
51-60 years	41	30%
Total	138	100%

Mean was 39 \pm 10.24 years

Table 2: Gender distribution (n=138)

Gender	Frequency	Percentage
Male	81	59%
Female	57	41%
Total	138	100%

Table 3: Duration of Illness (n=138)

Duration	Frequency	Percentage
\leq 3 years	92	67%
>3 years	46	33%
Total	138	100%

Mean duration was 2 years with SD \pm 3.72

Table 4: Occupation (n=138)

Occupation	Frequency	Percentage
Employee	52	38%
Unemployed	86	62%
Total	138	100%

Table 5: Socioeconomic Status (n=138)

Socioeconomic status	Frequency	Percentage
Poor (monthly income <25,000/Rs)	72	52%
Middle class (monthly income 25,000 50,000/Rs)	50	36%
Rich (monthly income >50,000/Rs)	16	12%
Total	138	100%

Table 6: Education Level (n=138)

Education level	Frequency	Percentage
Illiterate	80	58%
literate	58	42%
Total	138	100%

Gender distribution showed that 59% were male and 41% female. Sixty-two percent of the patients were unemployed and 58% were illiterate. In this study 52% patients were poor, belonging to a lower socio economic group.

Similar study was conducted by Farhan et al and showed increasing frequency of HCV positivity in a cross section of people in Karachi, in which majority of patients were aged 30-49 years and 53% of them were females. Socio economic status was an important factor affecting the frequency of HCV positive.¹¹

In another study conducted in NWFP Javed et al determined the relative frequency of HCV and HBS positivity and showed that HCV positivity was greater (42.68%) than HBS (25.6%) in NWFP.¹²

Noor et al also assess the frequency of Hepatitis C in different sectors in district Buner. He also found that HCV positivity was greater in certain sectors as compared to others due to difference in socio economic status of the community. HCV affected patients were found to have mean age group of 37 years and the frequency was higher among the male.¹³

Mandukhel et al in his study determined frequency of HCV positivity in Balochistan. Majority of the patients who participated in the study were from very poor socio economic group and were from lower middle class as they were getting treatment either from Zakat fund or other government schemes. This study showed that frequency of HCV positivity was 42% in which 23% were male and 19% were female.¹⁴

It is essential to assess the magnitude of the problem in different socio economic groups so as to help understand the dynamic of its transmission for control and prevention.

CONCLUSION

Our study concludes that the frequency of HCV positivity was 4 times greater in lower socio economic units.

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