

ORIGINAL RESEARCH

Study of clinical profile of patients of hepatitis c presented to tertiary care hospital

Shiva Prasad Chatla¹, A. Praveen Naik²

¹Assistant Professor, Department of General Medicine, Kamineni Institute of Medical Sciences, Narketpally, Nalgonda(dist), Telagana, India.

²Associate Professor, Department of General Medicine, Kamineni Institute of Medical Sciences, Narketpally, Nalgonda(dist), Telagana, India.

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ABSTRACT

Background: Hepatitis C virus (HCV) is a blood borne virus that was first identified in 1989. HCV affects the liver, with some infected individuals developing cirrhosis of the liver and liver cancer. HCV is spread primarily by blood-to-blood contact associated with injection drug use, poorly sterilized medical equipment, needle stick injuries in healthcare, and transfusions. **Methods:** cross-sectional study, **Study setting:** Medicine department of Tertiary care center. **Study population:** The study population included all the cases of hepatitis C virus infection admitted in tertiary care center. **Sample size:** 30. **Results:** majority of cases were found in 31-45 years age group e.g. 16 cases (53.33%) followed by 46-60 years age group 9 cases (30%), >60 years age group 3 cases (10%) and 2 cases found in 12-30 years age group. majority of cases were males e.g. 21 cases (70%) and 9 cases were females (30%). majority of cases had a history of injectable drug users e.g. 9 cases (30%) followed by 8 cases reported history of multiple sex partners (26.66%), 5 cases on dialysis required regular blood transfusion (16.67%), thalassemia found in 5 cases required regular blood transfusion (13.33%) and sickle cell anemia reported by 3 cases. There is statistically significant association between age and hepatitis C virus infection mortality. **Conclusions:** majority of cases were found in 31-45 years age group, most common in males, There is statistically significant association between age and hepatitis C virus infection mortality.

Keywords: Hepatitis C virus, Mode of transmission, Risk factors

Corresponding Author: Dr. A. Praveen Naik, Associate Professor, Department of General Medicine, Kamineni Institute of Medical Sciences, Narketpally, Nalgonda(dist), Telagana, India.

Email: praveendr1986@gmail.com

INTRODUCTION

Hepatitis C virus (HCV) is a blood borne virus that was first identified in 1989. HCV affects the liver, with some infected individuals developing cirrhosis of the liver and liver cancer. HCV is spread primarily by blood-to-blood contact associated with injection drug use, poorly sterilized medical equipment, needle stick injuries in healthcare, and transfusions.[1,2]

In 2015 there were an estimated 71 million people infected with HCV, globally.[3] with 1.75 million incident infections occurring annually[4] In 2016 the World Health Organization (WHO) developed targets to eliminate HCV as a public health concern by 2030. These

targets include reducing the number of incident infections by 80% and HCV-related mortality by 65% from the 2015 levels.[5]

HCV is an enveloped, single-stranded RNA virus from the Flaviviridae family of the hepacivirus genus.[6].The initial stage of HCV infection is the acute stage, which can then either progress to lifelong chronic disease or, in an estimated 26% of infections, can clear spontaneously.[7] The virus is genetically variable, with there being seven major HCV genotypes that can be divided further into sixty-seven subtypes.[8]

All infected individuals develop an HCV antibody response. However, diagnosis of active HCV infection is done through testing for HCV RNA, for which a positive result indicates a current, acute or chronic HCV infection.[9] Upon becoming infected with HCV, individuals are in the acute phase of hepatitis C disease.

Around 15% of individuals exhibit symptoms in this acute phase.[10] Spontaneous clearance of acute infection can depend on various factors including gender, age, genotype, and HIV co-infection status.[11].HCV antibody tests, such as the enzyme-linked immunosorbent assay (ELISA), can determine whether an individual has ever had acute infection.

HCV RNA tests, such as the nucleic acid test (NAT), or an HCV core antigen test, for example the chemiluminescence immunoassay (CLIA), are required to ascertain whether an active infection is present. A negative result for an HCV RNA or HCV core antigen test indicates there is no current HCV infection in that individual.[12]

Aim and Objectives:

Primary objective:

To Study Clinical Presentation of Hepatitis c in patients with Hepatitis C Presented to tertiary care hospital

Secondary objective:

To study correlation of hepatitis C virus with mortality

MATERIAL AND METHODS

Study design: cross-sectional study,

Study setting: Medicine Department of Tertiary care center.

Study population: The study population included all the cases with hepatitis C virus infection admitted in tertiary care center.

Sample size: 30

Sampling techniques:

All the participants were selected using convenient sampling method.

INCLUSION CRITERIA:

1. Age groups above 12 years
2. A positive test for antibodies to hepatitis c virus (anti-HCV)
3. Hepatitis c virus detection test by Nucleic acid test(NAT) for HCV RNA Positive
4. Willing to participate in study after informed written consent.

EXCLUSION CRITERIA

1. History of clinically significant illness or any other medical disorder that may interfere with individuals treatment, assessment or compliance with the protocol
2. Not willing to participate in the study
3. Loss to follow up
4. Patients below the age of 12 years

Approval for the study:

Written approval from Institutional Ethics committee was obtained beforehand. Written approval of Medicine and Related department was obtained. After obtaining informed verbal consent from all patients with the definitive diagnosis of hepatitis C virus infection admitted to Medicine ward of tertiary care centre such cases were included in the study.

Statistical analysis: The data from the collected questionnaires was added to the M.S Excel sheets and was calculated in percentage.

RESULTS AND OBSERVATIONS

Table 1: Distribution of cases according to age (N=30)

Age in years	Frequency	Percentage
12-30	2	6.66%
31-45	16	53.33%
46- 60	9	30%
>60	3	10%
Total	30	30 (100%)

Above table shows that majority of cases were found in 31-45 years age group e.g. 16 cases (53.33%) followed by 46-60 years age group 9 cases (30%), >60 years age group 3 cases (10%) and 2 cases found in 12-30 years age group.

Table 2: Distribution of cases as per sex (N=30)

Gender	Frequency	Percentage
Male	21	70%
Female	09	30%
Total	30	30 (100%)

The above table shows majority of cases were males e.g. 21 cases (70%) and 9 cases were females (30%).

Table 3: Distribution of cases according to Risk factor (N=30)

Risk factors	Frequency	Percentage
Injectable drug users	9	30%
Multiple sex partners	8	26.66%
Patients on dialysis	5	16.67%
Thalassemia	5	16.67%
Sickle cell anemia	3	10%
Total	30	30 (100%)

Above table shows that, majority of cases had a history of injectable drug users e.g. 9 cases (30%) followed by 8 cases reported history of multiple sex partners (26.66%), 5 cases on dialysis required regular blood transfusion (16.67%), thalassemia found in 5 cases required regular blood transfusion (13.33%) and sickle cell anemia reported by 3 cases.

Table 4: Association of hepatitis C virus infection mortality with age

Age (in Years)	Mortality			Percentage
	Present (%)	Absent (%)	Total	
12-30	00 (0.0%)	2 (1.57%)	02	6.67%
31-45	00 (0.0%)	16 (100%)	16	53.33%
46-60	00 (0.0%)	09 (100%)	09	30%
>60	02 (33.33%)	02 (66.67%)	03	10%
Total	2 (6.67%)	28 (93.33%)	30	30 (100%)

The result is significant at $p < .05$.

Inference: There is statistically significant association between age and hepatitis C virus infection mortality.

DISCUSSION

In current study table No. 1: Distribution of cases according to age (N=30) majority of cases were found in 31-45 years age group e.g. 16 cases (53.33%) followed by 46-60 years age group 9 cases (30%), >60 years age group 3 cases (10%) and 2 cases found in 12-30 years age group. similar finding observed in the study of Osama Mukhtar et al [13] he reported that the 154 patients included in this study, 53%, belonged to the age group 35–50 years. Another Study done by Mahajan R et al [14] he observed that Of 8,035 patients were diagnosed with HCV infection, a majority of cases found in middle aged (52.2%).

In current study table No.2: Distribution of cases as per sex (N=30) majority of cases were males e.g. 21 cases (70%) and 9 cases were females (30%). Similar report found in the study done by Gurubacharya D et al [15] shows that Out of 38 patients 34(89.5%) were male and 4(10.5%) were female.

In current study table No.3: Distribution of cases according to Risk factor (N=30) majority of cases had a history of injectable drug users e.g. 9 cases (30%) followed by 8 cases reported history of multiple sex partners (26.66%), 5 cases on dialysis required regular blood transfusion (16.67%), thalassemia found in 5 cases required regular blood transfusion (13.33%) and sickle cell anemia reported by 3 cases. Similar result found in the study conducted by Wake DJ, et al [16] he reported that the most common risk factor was injectable drug users 42% and 30% cases history of multiple sex partners and 28% cases history of regular blood transfusion.

In present study table no.11: Association of hepatitis C virus infection mortality with age. There is statistically significant association between age and hepatitis C virus infection mortality. Similar result found in the study of Osama Mukhtar et al [13] he reported that the statistically significant association between age and hepatitis C virus infection mortality.

CONCLUSION

Majority of cases found in middle age group. Most of cases were males. Most common risk factor was injectable drug addict. There is statistically significant association between age and hepatitis C virus infection mortality.

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