

Examine the Effect Sofsubuvir, Daclatsvir and Ribavirin in Treatment of Hepatitis C Infected patients also examine the Complications Associated with Antiviral Therapy

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ABSTRACT

Aim: To determine the effects of antiviral medicines in hepatitis C infected patients and prevalence of complications associated to antiviral therapy.

Study Design: Prospective study.

Place and Duration: This study was conducted at Nawaz Sharif Social Security Teaching Hospital, Lahore/University College of Medicine and Dentistry, University of Lahore from 01-06-2017 to 30-05-2018.

Methods: In this study, one hundred and thirty five Hepatitis C patients of both genders were included. Patient's ages were ranging from 25 to 65 years. After taking informed consent from all the patients, detailed medical history including age, sex, and residency and education level was examined. Quantitative PCR test was obtained before start antiviral therapy, all the patients were diagnosed by Kit method. Treatment response was examined after complete of therapy.

Results: Out of all the 135 patients, 82 (60.74%) patients were males while 53 (39.26%) patients were females. 24 (17.78%) patients were ages between 25 to 34 years, 55 (40.74%) patients had ages 35 to 44 years, 39 (28.89%) patients were ages 45 to 54 years and 17 (12.60%) patients had ages >54 years. At the end of treatment, 127 (94.07%) patients treated successfully while 8 patients were not cured. Complications associated to therapy were noted as anemia, ascites, hepatic encephalopathy and liver cirrhosis in 34, 19, 8 and 5 patients.

Conclusion: In this study, we concluded that antiviral therapy of Hepatitis C infected patient's shows better results followed to cured rate. Anemia was the most frequent complication found at end of therapy.

Keywords: Hepatitis C, Antiviral drugs.

INTRODUCTION

Hepatitis C virus is the most frequent viral infection found all over the world.¹ HCV is the most important cause of chronic liver failure.²⁻³ According to the report of WHO (world health organization) about 170 million people infected with this malignant disease and the mortality rate associated with Hepatitis C is too high in the world. In America 4000000 people infected with Hepatitis C infection.⁴ In Pakistan, Hepatitis C virus is most common and mortality followed by hepatitis C is quite high as compared to western countries. The prevalence of this malignant disorder is 5 to 8%. Pakistan stands the second largest country among the world in the prevalence of HCV infection^{5,6}.

The treatment of this viral infection with antiviral drugs/therapy is very useful effective in more than half of the affected patients of Hepatitis C but the actual rate of sustained viral response depends on viral, host, and adherence factors. However, inauspicious results from antiviral therapy directly influenced treatment adherence and can reduce the rate of not cured patients. The

complications associated with antiviral therapy can affect the quality of life of infected patients.⁷ Hepatitis C infection cause resulted liver cirrhosis. It is mostly due to the alcohol consumption, dirty water and an excessive use of tobacco⁸.

Antiviral therapy is commonly performed in health care centers and the outcomes followed comprised better results. The rate of cured response is varying from 80% to 95%. However mortality depends on severity and factors^{9,10}.

This study was conducted to evaluate the efficacy of antiviral therapy and also examine the prevalence of complication associated with antiviral therapy. This study may help to provide better treatment and also useful for expertise and patients too.

MATERIALS AND METHODS

This study was conducted at Department of Medicine, Nawaz Sharif Social Security Teaching Hospital, Lahore from 1-06-2017 to 30-05-2018. One hundred and thirty five Hepatitis C patients of both genders were included. Patient's ages were ranging from 25 to 65 years. After taking informed consent from all the patients, detailed medical history including age, sex, and residency and education level was examined. Patients started therapy with antiviral drugs such as Sofsubuvir 400mg, Daclatsvir 60mg and Ribavirin 400mg. Quantitative PCR test was obtained before start of antiviral therapy. All the patients were diagnosed by Kit method. Treatment response was examined after complete of therapy. Complications associated with antiviral therapy were examined. Patients

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having other blood infections and HBV and E infected patients were excluded from the study.

RESULTS

There were 135 patients, 82 (60.74%) patients were males while 53 (39.26%) patients were females. 24 (17.78%) patients were ages between 25 to 34 years, 55 (40.74%) patients had ages 35 to 44 years, 39 (28.89%) patients were ages 45 to 54 years and 17 (12.60%) patients had ages >54 years. 61.5% patients had rural residency and only 33.3% patients were literate. At the end of treatment, 127 (94.07%) patients treated successfully while 8 (5.9%) patients were not cured or sustained viral response. Complications associated to therapy were noted as anemia, ascites, hepatic encephalopathy and liver cirrhosis in 34(25.9%), 19(14.1%), 8(5.9%) and 5(3.7%) patients and fibrosis in 2 patients. 3(2.2%) patients of sustained viral response was died during therapy period.

Table 1: Demographic information of all the patients

Variable	No.	%
Gender		
Male	82	60.74
Females	53	39.26
Age (years)		
25 to 34	24	17.78
35 to 44	55	40.74
45 to 54	39	28.88
> 54	17	12.6
Residence		
Urban	52	38.5
Rural	83	61.5
Education		
Literate	45	33.3
Illiterate	90	66.7

Table 2. Complications associated to antiviral therapy

Complications	No.	%
Anemia	34	25.9
Hepatic encephalopathy	8	5.9
Ascites	19	14.1
Liver Cirrhosis	5	3.7
Fibrosis	2	1.5

Table 3. Outcomes after antiviral therapy

Outcomes	No.	%
Response		
Cured	127	94.07
Sustained Antiviral response	8	5.9
Mortality		
Yes	3	2.2
No	132	97.8

DISCUSSION

Hepatitis C virus is the most frequent viral infection found all over the world. HCV is the most important cause of chronic liver failure. The treatment of Hepatitis C Virus infection was became moderate in the mid of 2011 with the addition of direct acting antiviral agents like ribavirin, boceprevir and telaprevir. These antiviral drugs contains a high rate of benefits and the rate of cured patient is high as compared to not cured patients.¹¹⁻¹² In this study we

included 135 confirmed cases of HCV infection in which number of male patients was high 60.74% as compared to females. These results shows the similarity to some other studies conducted for examine the effects of Antiviral Therapy of Hepatitis C infected patients, in which male patients population rate was high as compared to females 25 to 43%.¹³⁻¹⁴

In recent study we found 24 (17.78%) patients were ages between 25 to 34 years, 55 (40.74%) patients had ages 35 to 44 years, 39 (28.89%) patients were ages 45 to 54 years and 17(12.60%) patients had ages >54 years. 61.5% patients had rural residency and only 33.3% patients were literate. We observed that the prevalence rate was high in patients had ages 35 to 44 years and 45 to 54 years were, it may be due to the alcohol consumption and most of the patients was smoker and also unawareness of this malignant disorder. Many of studies shows the same factors associated to chronic liver failure.¹⁵⁻¹⁷ In our study we perform quantitative PCR test for the confirmed diagnosis of HCV to start the Antiviral Therapy. We found at the end of treatment, 127 (94.07%) patients treated successfully while 8 (5.9%) patients were not cured or sustained viral response. These results shows similarity to the other study in which the cured patients rate was 94%.¹⁸

In this study we observed that complications associated to therapy were noted as anemia, ascites, hepatic encephalopathy and liver cirrhosis in 34 (25.9%), 19 (14.1%), 8 (5.9%) and 5 (3.7%) patients and fibrosis in 2 patients. 3(2.2%) patients of sustained viral response was died during therapy period. We found anemia was the major complication associated with Antiviral therapy. These results shows similarity to the other studies conducted to determine the efficacy of Antiviral Therapy of HCV infected patients in which prevalence of anemia was resulted 18 to 30%.¹⁹⁻²⁰ Three patients was died during treatment it was because of non follow-up and unawareness of this life threatened disease.

Moreover, the current research was not sufficient due to small number of patients. We should have to work more for providing better treatment and to aware people of this malignant disorder.

CONCLUSION

HCV infection is most frequent cause of chronic liver failure and the mortality rate of this disease is high in all over the word. In this study, we concluded that antiviral therapy of hepatitis C infected patient's shows better results followed to cured rate. Anemia was the most frequent complication found at end of therapy.

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