

Fate of Patients of Hepatitis C on Antiviral Therapy

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Effect of Antiviral Therapy in Hepatitis C

ABSTRACT

Objective: To study the Fate of patients of Hepatitis C on antiviral therapy.

Study Design: Prospective Study.

Place and Duration of Study: This study was conducted at the Idris Teaching Hospital Sialkot from January 2016-December 2017.

Materials and Methods: One Hundred patients of hepatitis C on antiviral therapy were included in this prospective study. All the patients of hepatitis C were diagnosed by kit method and diagnoses was further confirmed by quantitative PCR before start of antiviral therapy. Liver function tests, quantitative PCR, blood picture were also measured before start of antiviral therapy. Abdominal Ultra sound examination was also conducted to see the exact liver picture. Following antiviral therapy was used in all hepatitis C patients included in the study.

1. Sofsububir 400mg (OD), 2. Daclatasvir 60mg (OD), 3. Rivavirin 400mg (TDS)

These tests were repeated after completion of the therapy. A performa was designed to record age, gender and above tests. An informed consent was also taken by the patients included in the study. Permission of ethical committee of the institute was also considered before collecting and publishing data. The results were analyzed on SPSS version 10.

Results: The frequency of hepatitis C was seen maximum 37 (37%), male 15% and female 22% at age group 31-40 years and it was minimum 04 (04%), male 01% and female 03% at the age group 61 & above years as shown in table no. 1. At the end of therapy 96 (96%), male 45% and female 51% were cured but 04 (04%) patients of hepatitis C were not cured as shown in table no.03. With regard to complications at the end of antiviral therapy it was observed that anemia was seen in 25 (25%) patients, acities were seen 13 (13%) patients, Hepatic Encephalopathy in 03 (03%) and liver cirrhosis in 02 (02%) patients of hepatitis C as shown in table no. 2.

Conclusion: It was concluded on follow up that there were complications (Anemia, Acities, Cirrhosis, Hepatic Encephalopathy etc) in patients of Hepatitis C even treated by antiviral therapy.

Key Words: Hepatitis C, Antiviral Therapy, Fate, PCR.

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INTRODUCTION

Hepatitis C is a major public health concern. With almost 4 million Americans with chronic infection, hepatitis C is the one of the leading causes of chronic liver disease and is the single most common indication for liver transplantation^{1,3}. Antiviral therapy is effective in more than half of infected patients, but the actual rate of sustained viral response depends on viral, host, and adherence factors. Viral and host factors tend to be non-modifiable, whereas interventions may increase adherence.

However, adverse effects from antiviral therapy directly affect treatment adherence and can decrease the likelihood of a sustained viral response.

These complications can severely compromise quality of life⁷.

Most patients with HCC have an underlying chronic liver disease (often cirrhosis), resulting mainly from chronic infection by hepatitis B virus (HBV), hepatitis C virus (HCV), excessive alcohol consumption, and often an association of these causes. HCC has recently gained more interest due to its increasing incidence in industrialized countries^{1,2,3}. Hepato Cellul Carcinoma (HCC) is the most rapidly increasing cause of cancer death, with HCV as the major etiology affecting generally more than half of HCC patients in developed countries such as the USA¹. These studies clearly highlight the urgent need for identification of undiagnosed HCV infection by implementing HCV screening programs targeting high-risk populations as well as improved access to new generation anti-HCV therapies with reduced costs and streamlined treatment intake and follow-up(2). Retrospective interrogation of previously treated patients mostly by interferon-based regimens revealed several post-SVR HCC-associated clinical variables, most of which are known HCC risk factors in patients with active HCV infection. More advanced liver fibrosis as well as biochemical or

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imaging surrogates of histological fibrosis (e.g., serum albumin, platelet count, fibrosis-4 index, aspartate aminotransferase-to-platelet ratio index, elastography-based liver stiffness) before and/or after antiviral treatment are the most prominent features associated with higher post-SVR HCC risk³. The goal of primary prevention is to avoid or delay the occurrence of HCC by using medical treatments⁴.

MATERIALS AND METHODS

One Hundred patients of hepatitis C on antiviral therapy were included in this prospective study. All the patients of hepatitis C were diagnosed by kit method and diagnoses was further confirmed by quantitative PCR before start of antiviral therapy. Liver function tests, quantitative PCR, blood picture were also measured before start of antiviral therapy. Abdominal Ultra sound examination was also conducted to see the exact liver picture. Following antiviral therapy was used in all hepatitis C patients included in the study.

1. Sofsububir 400mg (OD)
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RESULTS

The frequency of hepatitis C was seen maximum 37 (37%), male 15% and female 22% at age group 31- 40 years and it was minimum 04 (04%), male 01% and female 03% at the age group 61 & above years as shown in table no. 01. At the end of therapy 96 (96%), male 45% and female 51% were cured but 04 (04%) patients of hepatitis C were not cured as shown in table no.3. With regard to complications at the end of antiviral therapy it was observed that anemia was seen in 25 (25%) patients, a cities were seen 13 (13%) patients, Hepatic Encephalopathy in 03 (03%) and liver cirrhosis in 02 (02%) patients of hepatitis C as shown in table no. 2.

Table No. 1: Age & Gender Distribution in Patients of Hepatitis C using antiviral treatment

S#	Age(Years)	Male(Cases)	Female(Cases)
1	20-30	10 (10%)	06 (06%)
2	31-40	15 (15%)	22 (22%)
3	41-50	10 (10%)	08 (08%)
4	51-60	12 (12%)	13 (13%)
5	61 & above	01 (01%)	03 (03%)
	Total	48 (48%)	52 (52%)

Table No. 2: Distribution of complications in patients of Hepatitis C using antiviral treatment

S#	Complications	Cases	Percentage%
1	Anemia	25	25%
2	As cities	13	13%
3	Hepatic Encephalopathy	03	03%
4	Liver Cirrhosis	02	02%
	Total	41	41%

Table No. 3: Treatment Response of Antiviral Therapy in Hepatitis

S#	Age (Years)	End Treatment Response (Cured)		Sustained Viral Response	
		Male	Female	Male	Female
1	20-30	10 (10%)	06 (06%)	10 (10%)	06 (06%)
2	31-40	14 (14%)	22 (22%)	14 (14%)	21 (21%)
3	41-50	09 (09%)	08 (08%)	09 (09%)	08 (08%)
4	51-60	11 (11%)	12 (12%)	11 (11%)	12 (12%)
5	61 & above	01 (01%)	03 (03%)	01 (01%)	03 (03%)
	Total	45 (45%)	51 (51%)	45 (45%)	50 (50%)

DISCUSSION

The treatment of HCV infection was revolutionized in mid-2011 with the addition of direct-acting antiviral agents (DAAs)—the protease inhibitors boceprevir (Vic-trelis, Merck) and telaprevir (Incivek, Vertex)—to the decade-long standard-of-care (SOC) therapy of pegylated interferon α -2a/b and ribavirin. This advance resulted in a tremendous demand for HCV therapy, leading to resource rationing and treatment triage^{5,6}. The concept of distributive justice with scarce resources suggests that patients with cirrhosis have the greatest need for treatment and thus should receive the highest priority for treatment, with asymptomatic patients with minimal fibrosis being at the other end of the spectrum^{7,8}. Our initial experience with DAA therapy reflects this urgency: Of the first 98 consecutive HCV-infected patients we started on tela-previr, almost 40% had advanced fibrosis or cirrhosis^{9,10,11}. This review will examine the data on DAAs in patients with cirrhosis and will describe the evolution of HCV therapy in this special group from the SOC therapy of the past decade into the new era of DAAs.

Hepatitis C has become a curable disease with the use of antiviral agents (>95%)^{12,13}.

Hematologic side effects are the most recurrent abnormal laboratory values that can lead to dosage reductions and premature treatment termination^{14,15,16}. Because of its myelosuppressive effect, interferon can

affect hemoglobin, white blood cell, and platelet values. However, the anemia seen during combination treatment is mostly associated with ribavirin-induced hemolytic anemia.

In our study with regard to complications at the end of antiviral therapy it was observed that anemia was seen in 25 (25%) patients, acities were seen 13 (13%) patients, Hepatic Encephalopathy in 03 (03%) and liver cirrhosis in 02 (02%) patients of hepatitis C.

CONCLUSION

It was concluded on follow up that there were complications (Anemia, Acities, Cirrhosis, Hepatic Encephalopathy etc) in patients of Hepatitis C even treated by antiviral therapy.

Author's Contribution:

Concept & Design of Study: Adnan Butt
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 Revisiting Critically: Adnan Butt, Mian Mansoor
 Final Approval of version: Adnan Butt

Conflict of Interest: The study has no conflict of interest to declare by any author.

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