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EFFICACY OF SOFOSBUVIR AND DACLATASVIR IN HEPATITIS C VIRUS GENOTYPE 3, IN TREATED AND NAÏVE PATIENTS. A PROSPECTIVE STUDY.

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INTRODUCTION

More than 200 million people world wide have been infected with HCV[1]. Evolution of the virus led to a geographic distribution of genotypes, so that genotypes 1,2,and 3 are most common in North America and Europe,genotype 4 is the most common in the middle East, and genotype 6 is the most common in Southeast Asia[2].Hepatitis C virus is responsible for parenterally transmitted,acute and chronic hepatitis.Chronic infection results in chronic active hepatitis,that may lead to cirrhosis,liver failure and hepato-cellular carcinoma. Chronic hepatitis develops in 50 to 90 % of persons with acute HCV infection[3].Approximately 3 percent of the world's population is chronically infected with Hepatitis C virus and constitute a medical danger ,demanding anti-HCV vaccines and antiviral drugs.In India 12-18 million persons are infected with Hepatitis C virus and common genotype is 3.

The treatment of HCV has evolved over the years.Previously available interferon therapy posed multiple problems among others high cost, prolonged duration and potential side effects.With the availability of direct acting anti-virals, the treatment options have become wide and these drugs are orally administered,better tolerated and provide sustained virologic response in more than 90 percent of treated patients.

In this study from June 2016 to December 2016, we prospectively followed 89 genotype 3 patients (59 Male and 30 Female) who were divided into four arms.

1. Treatment naive non cirrhotic patients
2. Treatment naïve cirrhotic patients
3. Treated non cirrhotic
4. Treated cirrhotic

All the patients who were in arm 1,2 and 3 given 12 weeks of Sofosbuvir 400 mg and Daclatasvir 60 mg and patients in arm 4 received 24 weeks of Sofosbuvir and Daclatasvir

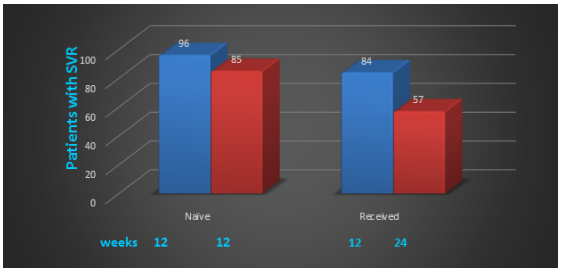
AIM:

In this study we analyse the efficacy of Sofosbuvir 400mg and Daclatasvir 60mg in treated and naïve patients of Chronic hepatitis C, Genotype 3 virus infection.

Inclusion Criteria: All patients who received no treatment and received sofosbuvir alone or Interferon and Ribavirin and CPT score A were included.

Exclusion Criteria: All decompensated with Child-Pugh Turcott score B and C,Severe heart failure, Severe Chronic kidney disease and age more than 75 were excluded from the study.

Results: Our study included 59 male and 30 female patients, suffering from chronic hepatitis C due to Genotype 3 virus. All 89 patients were assigned into one of the four arms. 19 patients into 1st arm,20 patients into second arm,36 patients into third arm and 14 patients into fourth arm . Patients in 1st,2nd and 3rd arm received 12 weeks of sofosbuvir[4] 400mg and Daclatasvir 60mg and patients in 4th arm received same drugs for 24 weeks.Sustained virologic response was noted.In arm one SVR was 96 percent, in 2 SVR was 85 percent,in three SVR was 84 percent and in 4 SVR[5] was 57. All these patients were followed with regular Liver function tests,Renal profile, Haemogram and routine Ultrasound examination. The results are shown in Table1.



Cirrhosis - + - +

Non Cirrhotic

Cirrhotic

Discussion:

Treatment of chronic hepatitis c virus infection has evolved in the last 2 decades.Direct -acting antiviral agents are highly efficient treatment options that do not reqire IFN and may not require ribavirin.IFN-alpha monotherapy was approved for the treatment of chronic hepatitis C, then known as non-A,non-B hepatitis,before HCV virus was identified. Substantial advances have been made since then with introduction of Direct acting antivirals,prolonged treatment periods, longer-acting pegylated formulations of IFN,and the oral guanosine analog ribavirin could be avoided.With the availability of IFN free regimens, there is a complete shift in the treatment paradigm of hepatitis C.As treatment evolves,the choice of agents will be increasingly highly individualized based on the availability of Direct acting antivirals,HCV genotype,and stage of liver disease. The primary goal of therpy for HCV infection is eradication of the virus and prevent progression.SVR, absence of detectable virus in the blood 12 to20 weeks after completion of therapy is an excellent surrogate marker for the resolutionof HCV infection.SVR is also associated with a reduction in hepatic inflammation and regression of fibrosis. Although SVR is considered the end point of therapy,other indicators of response are often monitored during therapy because they may help guide and refine treatment.Combinations of novel DAAs that target different steps in the HCV life have led to cure of HCV infection in vitro and in small animal models.The HCV polymerase inhibitor sofosbuvir in combination with daclatasvir[6] a HCV NS5A inhibitor, has been used in HCV Genotype 3.The best time to treat a patient with chronis hepatitis C is before the development of cirrhosis,because response rates are better and the risk of later complicationsof cirrhosis can be eliminated if treatment is effective.Before intiation of therapy, baseline liver function test,a complete blood count,renal parameters, a thyroid-stimulating hormone level and a pre-treatment HCV RNA level should be obtained.Assessment of the decline in HCV RNA level during treatment predicts the likelihood of an SVR. This response can be used to determine the duration of therapy.

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