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A single case study of punarnavadi kashay and nirocil in hepatitis c viral load

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ABSTRACT

Hepatitis C virus infection is the most common blood borne infection, its prevalence reaching upto 170 million worldwide. Most HCV infection persist and about 30% of the individuals with persistent infection develop chronic liver disease, including liver cirrhosis and hepatocellular carcinoma. Although HCV is curable, and antiviral HCV treatment leading to viral eradication reduces liver related morbidity and mortality ,treatment with pegylated interferone plus ribavarin is burdensome ,toxic, expensive, and ineffective for half of those who attempt the therapy. Clinical presentation of HCV shows jaundice, stomach pain, loss of appetite, Nausea, fatigue, myalgia, etc. To counter these entities, drugs having anti-viral and hepatoprotective activity should be administered .In present study 57 yrs old male was enrolled who was infected by HCV prior to our consulting. He was administered *Punarnavadi kashay* with *gomutra* in a dose of 80ml into 2 divided doses with warm water after food and Tab Nirocil in a dose of 3 tablets thrice a day before food. Biochemical parameters like Hepatitis C Virus RNA Quantitative analysis was done before and at the end of the trial. Observed results were graded on 4 grade scale and were analyzed before and after the follow-up of 1 month interval for 5 months. Study drug was found to be effective in alleviating most of the symptoms along with desired changes in biochemical markers. To conclude it more firmly, specific targeted study has to be conducted with required modulations

KEYWORDS: *Punarnavadi kashay,Tab Nirocil*, Hepatitis C.

INTRODUCTION:

Hepatitis C is a contagious liver disease caused by a virus. It is the most common blood-borne disease in the United States, and most people who have it do not know it. Hepatitis C is spread by blood-to-blood contact, primarily through injectable drug use. There are immunizations against hepatitis A and B, but not for C. In order to prevent becoming infected with the hepatitis C virus it is necessary to prevent exposure. If after being infected

a person did not naturally clear the virus in six months, the infection would become chronic and only curable with medication. The current therapy including a combination of pegylated IFN-α (pegIFN-α) and ribavirin with either telaprevir or boceprevir has significantly increased the sustained viral response (SVR) in genotype 1 infected patients. However, this therapy suffers some additional limitations. In particular, slow decline of viral load during triple therapy has high risk for the selection of resistance associated with variants[3]. Therefore, the development of more potent, safe, immune-boosting and well tolerated medications is the need of the hour.In order to adapt to environmental insults, plants produce a vast number of natural products that have antimicrobial and immunomodulating potential.In addition, there are a number of parallels between plant immunological activity and the immune systems of mammals, including adaptive mechanisms for viral resistance. Both the attribute of reciprocal natural co-evolution and the concept of shared chemistry among species are characteristics that allow humans to use plants as antiviral and immunomodulating medicines. In an age of emerging new viruses with stunning virulence, natural antiviral and immunomodulating substances could play a significant role in human disease prevention and treatment.

CASE REPORT:

A 57 year male individual approached in O.P.D no 1 of Kayachikitsa department at YMT Ayurvedic Medical College with chief complaints like fever, fatigue, pain in abdomen ,myalgia,with history since 2 months . Seven years before the patient was diagnosed as HCV .He was a known case of Hypertension for which he was on Tab Telma H. Despite of the best of allopathic treatment, somehow his symptoms were alleviated and so was his viral load. At his first OPD visit,screening was done along with routine blood investigations which included CBC ESR,RBS,Lipid profile,LFT,Hepatitis C Virus RNA Quantitative analysis. Hepatitis C Virus RNA Quantitative analysis was markedly raised ,result of which the individual was subjected for the present study.

MATERIALS AND METHODS:

The patient was prescribed with

Drug	Dose	Kaal
1. *Punarnavadi kashaya* with one tsp of *Gomutra*	80 ml into two divided doses	After food
2.Tab Nirocil	Three tablets thrice a day	Before food

Reports were evaluated before and after the study

INVESTIGATIONS	BEFORE 12/03/2015	AFTER 12/08/2015
Hepatitis C Viral load report	6,60,69,345	<30
CBC- WBC Platelet	 3100 $76*10^3$	 3000 $90*10^3$
ESR	76	20
RBS	166.57 mg/dl	105.5mg/dl

ASSESSMENT CRITERIA

Sr.no	SYMPTOM	GRADE 0	GRADE 1	GRADE 2	GRADE 3
1.	fever,	No	Once in a day	Twice in a day	Fever does not subside
2.	fatigue,	No fatigue	Relieves after Natural remedies e.g.	Not relieved after natural remedies	Not relieved even after Health drinks
3.	pain in abdomen	No pain	Relieves after natural remedies	Subsides after analgesic	Does not subside Even after analgesics
4.	Myalgia	Nil	Relieves after natural remedies	Subsides after analgesic	Does not subsides even after analgesics

FINAL ASSESSMENT

Symptoms	V1	V2	V3	V4
Fever	Grade 2	Grade 0	---	---
Fatigue	Grade 2	Grade 1	---	---
Pain In Abdomen	Grade 2	Grade 1	Grade 0	---
Myalgia	Grade 3	Grade 1	Grade 0	---

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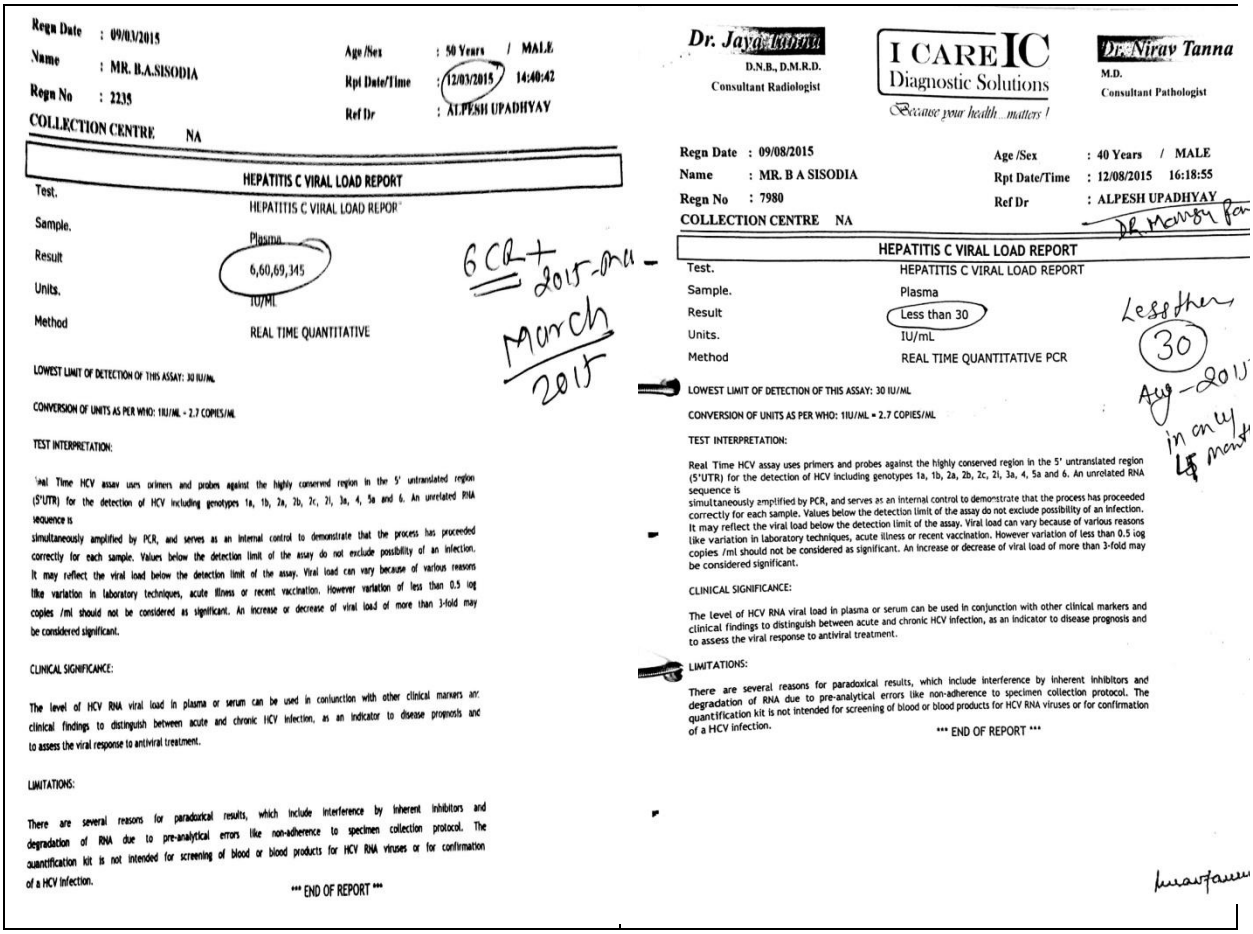
Reports of HCV viral load -

BEFORE -12/03/2015 **AFTER-12/08/2015**



Regn Date : 09/03/2015
Name : MR. B.A.SISODIA
Regn No : 2235
COLLECTION CENTRE NA
Age /Sex : 50 Years / MALE
Rpt Date/Time : 12/03/2015 14:40:42
Ref Dr : ALPESH UPADHYAY

HEPATITIS C VIRAL LOAD REPORT

Test.	HEPATITIS C VIRAL LOAD REPORT
Sample.	Plasma
Result	6,60,69,345
Units.	IU/ML
Method	REAL TIME QUANTITATIVE

6 CR+ 2015-Dec - March 2015

LOWEST LIMIT OF DETECTION OF THIS ASSAY: 30 IU/ML

CONVERSION OF UNITS AS PER WHO: 1IU/ML = 2.7 COPIES/ML

TEST INTERPRETATION:

Real Time HCV assay uses primers and probes against the highly conserved region in the 5' untranslated region (5'UTR) for the detection of HCV including genotypes 1a, 1b, 2a, 2b, 2c, 2i, 3a, 4, 5a and 6. An unrelated RNA sequence is simultaneously amplified by PCR, and serves as an internal control to demonstrate that the process has proceeded correctly for each sample. Values below the detection limit of the assay do not exclude possibility of an infection. It may reflect the viral load below the detection limit of the assay. Viral load can vary because of various reasons like variation in laboratory techniques, acute illness or recent vaccination. However variation of less than 0.5 log copies /ml should not be considered as significant. An increase or decrease of viral load of more than 3-fold may be considered significant.

CLINICAL SIGNIFICANCE:

The level of HCV RNA viral load in plasma or serum can be used in conjunction with other clinical markers and clinical findings to distinguish between acute and chronic HCV infection, as an indicator to disease prognosis and to assess the viral response to antiviral treatment.

LIMITATIONS:

There are several reasons for paradoxical results, which include interference by inherent inhibitors and degradation of RNA due to pre-analytical errors like non-adherence to specimen collection protocol. The quantification kit is not intended for screening of blood or blood products for HCV RNA viruses or for confirmation of a HCV infection.

*** END OF REPORT ***

Dr. Jaya Luthra
D.N.B., D.M.R.D.
Consultant Radiologist

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Dr. Nirav Tanna
M.D.
Consultant Pathologist

Regn Date : 09/08/2015
Name : MR. B A SISODIA
Regn No : 7980
COLLECTION CENTRE NA
Age /Sex : 40 Years / MALE
Rpt Date/Time : 12/08/2015 16:18:55
Ref Dr : ALPESH UPADHYAY

HEPATITIS C VIRAL LOAD REPORT

Test.	HEPATITIS C VIRAL LOAD REPORT
Sample.	Plasma
Result	Less than 30
Units.	IU/mL
Method	REAL TIME QUANTITATIVE PCR

Less then 30 Aug-2015 in only 1 month

LOWEST LIMIT OF DETECTION OF THIS ASSAY: 30 IU/ML

CONVERSION OF UNITS AS PER WHO: 1IU/ML = 2.7 COPIES/ML

TEST INTERPRETATION:

Real Time HCV assay uses primers and probes against the highly conserved region in the 5' untranslated region (5'UTR) for the detection of HCV including genotypes 1a, 1b, 2a, 2b, 2c, 2i, 3a, 4, 5a and 6. An unrelated RNA sequence is simultaneously amplified by PCR, and serves as an internal control to demonstrate that the process has proceeded correctly for each sample. Values below the detection limit of the assay do not exclude possibility of an infection. It may reflect the viral load below the detection limit of the assay. Viral load can vary because of various reasons like variation in laboratory techniques, acute illness or recent vaccination. However variation of less than 0.5 log copies /ml should not be considered as significant. An increase or decrease of viral load of more than 3-fold may be considered significant.

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*** END OF REPORT ***

OBSERVATION AND RESULT

Study drug showed significant result in all subjective parameters. Symptoms like myalgia and fever showed a steep declined graph. Other variables fatigue,pain in abdomen were also improved remarkably. Further significant reversal in Hepatitis C viral load was also observed which reflects the potency of study drug.

DISCUSSION: On account of the pathophysiology of Hepatitis C, probable qualities of the drugs can be summarized as following:

- Capacity of Hepatocellular regeneration
- Cholagogues and choleretic activity
- Hampering the Entero-Hepatic Circulation
- Excess flow of Stercobilinogen and Urobilinogen with stool and urine
- Membrane stabilizing effect
- Anti viral and anti oxidant effect
- Enzymatic and metabolic correction

The established drug sofosbuvir is highly expensive and hence is not affording to all the diseased.The study drug contains

Phyllantus amanis,possessing a similar action as sofosbuvir (an established drug in Hepatitis C).Moreover,it contains a wide variety of active phytochemicals, including the flavonoids, terpenoids, organosulfur compounds, limonoids, lignans, sulphides, polyphenolics, coumarins, saponins, chlorophyllins, furyl compounds, alkaloids, polyines, thiophenes, proteins and peptides which have profound therapeutic applications against different genetically and functionally diverse viruses. The antiviral mechanism of these agents may be explained on basis of their antioxidant activities, scavenging capacities, inhibiting DNA, RNA synthesis, inhibition of the viral entry, or inhibiting the viral reproduction etc.

CONCLUSION

Punarnavadi kashay with tab Nirocil are found to be promising in dealing the condition of Hepatitis C without any untoward effect. A single case study precludes the definite conclusion. To achieve greater success in treating Hepatitis C one should appeal to a global strategy taking into account various components on its pathogenesis.

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