The Pharma Innovation Journal 2018; 7(8): 480-482

www.ThePharmaJournal.com

The Pharma Innovation

ISSN (E): 2277- 7695
ISSN (P): 2349-8242
NAAS Rating: 5.03
TPI 2018; 7(8): 480-482

www.thepharmajournal.com
Received: 25-06-2018
Accepted: 30-07-2018

Namrata Modi
BAMS, Junior Resident, Department of Kayachikitsa, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India

Om Prakash Singh
Ph.D., Professor, Department of Kayachikitsa, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India

Jai Prakash Singh
Ph.D., Associate professor, Department of Kayachikitsa, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India

Ashutosh Chaturvedi
MD (Ayu.), Ph.D Scholar, Department of Kayachikitsa, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India

Correspondence
Namrata Modi
BAMS, Junior Resident, Department of Kayachikitsa, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India

Role of Ayurveda in the conservative management of hepatitis B: A case report

Namrata Modi, Om Prakash Singh, Jai Prakash Singh and Ashutosh Chaturvedi

Abstract
Ayurveda is the one of the country traditional health care system, in *Ayurvedic* classical literature many formulations have been given to manage *Kamala* roga and in the current study *Phalatrikadi ghan vati* which is used to treat the Hepatitis B contains drugs which are hepatoprotective and antiviral in nature. A young male patient of age 22 years presented in S.S. Hospital B.H.U. with positive hepatitis B surface antigen (HBsAg) and HBeAg along with high HBV-DNA reports. He was treated with ayurvedic drug *Phalatrikadi ghan* vati for period of 3 months and investigations HBV-DNA and HBsAg, HBeAg were repeated, HBV-DNA was not detected and HBeAg is below the normal range of assay. There were no side effect of drugs was observed and it was concluded that drug is safe with special reference hepato and renal aspects.

Keywords: hepatitis B, Ayurveda, *Phalatrikadi ghan* vati, kamala, HBV-DNA

Introduction
Hepatitis refers to an inflammatory condition of the liver, which can be caused by viral infection, non viral infection, metabolic disease, drugs, toxin and ischemia. Infective hepatitis is one of the chief culprits of Liver related morbidity and mortality. It is emerging as a tough challenge in the series of global health problems after HIV. It is the leading killer among all infectious agents. It is estimated that approximately 2 billion people are infected with HBV, among which approximately 350 million people [1] are chronic carriers worldwide, and of these more than 250,000 die from liver related disease each year. It is estimated that the seriouseness of this infection is evidenced by the fact that "…about twenty-five percent of adults who become chronically infected during childhood later die from liver cancer or cirrhosis caused by the chronic infection." According to WHO this virus is fifty to one-hundred times more infectious than the HIV or AIDS virus. It is also known to be a serious. One among Every Three on the Earth has been exposed to either or both (HBV and HIV) viruses; (http://www.hiv and hepatitis.com/ 2010 conference) [2]. Infective hepatitis is the 10th leading cause of death and HCC (Hepatocellular Carcinoma) is the 5th most common cancer in the world and is responsible for 500,000 to 1.2 million deaths globally every year. Occult or silent HBV infection is a common culprit/cofactor/ innocent bystander in patients of Hepatocellular carcinoma (HCC) and occupational hazard for many health workers in regions where this disease is prevalent.

Hepatitis may be of viral or non-viral in origin. Viral Hepatitis may be manifested as acute or chronic form. In majority of cases HBV HCV HDV responsible for chronic form of disease and HAV, HAE are manifested as acute form of disease [3]. Ayurvedic formulations are widely use for hepatitis, hepatitis commonly manifested as yellow discoloration of urine, sclera, mucous membrane and skin is known as jaundice. In ayurvedic literature same clinical features are mentioned in context of *Kamala*. So on the basis of clinical feature Kamala can be correlated with jaundice. Ayurveda has explained epidemic and contagious diseases in the context of Janapadodhwamsa and Upasargika Roga (Infectious diseases), where infection occur and microbes are responsible for the pathogenesis of the disease, All the infections are coined under term "Sankramika Rogas". Sushruta has mentioned that diseases (Upasargika Rogas) like kushta (skin disorder), Jwara (fever), Sosha (tuberculosis), Netrabhishyanda (conjunctivitis) etc. are the infectious disorders which spread from one person to the another [4]. The exposure or contact can be a simple association, touch, inhalation of other's expired air, eating together,

sleeping & lying together and wearing other's clothes, using cosmetics of others etc. things. Even sexual contact with an infected person can give rise so many sexual transmitted diseases, therefore etiology, signs and symptoms of Hepatitis B can be compared with Upasargika Rogas. Hepatitis caused by Viruses is one of the most important causes of liver related morbidity and mortality. In modern literature there is no specific treatment necessary for acute viral hepatitis and the care is aimed at maintaining comfort and adequate nutritional balance and plenty of fluids. Under the complementary system of medicine ayurveda stand first in providing the complete, reliable and successful outcome among the patient of Hepatitis B with or without symptoms or complications like persistent jaundice, cirrhosis, ascites and liver cancer. In modern medicine, treatment of Hepatitis B is aimed to suppressing viral load and boosting the patient's immune response with immunotherapeutic interventions are required for better prognosis. The management of Hepatitis B depends upon a number of important factors viz- HBsAg status, HBV viral load, ALT level, liver biopsy results and a person's readiness to take medication exactly as prescribed which is based on American Association for the study of Liver diseases. The dual immunomodulatory and antiviral agent interferon (IFN)-alpha has been a mainstay in the treatment of chronic hepatitis since it was licensed for this indication in the early 1990s. These are short and long acting interferon which boost up the immune system and improves the level of inflammation, but these drugs do not cure the disease. IFN were first recognized in 1957 for their ability to interfere with viral activity, these are naturally occurring cytokines with immunomodulatory, antiproliferative antiviral properties. Unfortunately, complete eradication of HBV is scarcely achieved with the currently available treatment option for chronic hepatitis B and treatment with PEG-IFN is expensive and is associated with considerable side effects, so biomedical researchers are inclined towards alternative resources to solve this dread of disese [5]. In Ayurveda, treatment is of two types: Bio-purificatory methods (Samshodhana) and Internal Medicine (Samshamana) indicated for the complete eradication of doshas and eliminate the disease. Hence Ayurveda plays an important role in the management liver disorders.

A young male aged 22 yrs reported Kayachikitsa OPD of S.S. Hospital B.H.U. diagnosed as hepatitis B since 1year. Along with complaints of indigestion and incomplete bowel evacuation since one month and based on previous investigations he was diagnosed as a case of chronic Hepatitis B. On examination he was presented with no abnormality over general functions. On Physical examination as Blood pressure -110/70mmHg and Pulse Rate as 78/minute with regular in nature. Pallor, Icterus, Clubbing, Cynosis and Odema was absent, Temperature was afebrile, appetite was reduced, bowel was Incomplete bowel evacuation once per day however micturition were 4 to 5 times/day and sleep was Adequate On examination of Systemic Examination per abdomen no abnormality detected was found and body weight was 65 kilograms

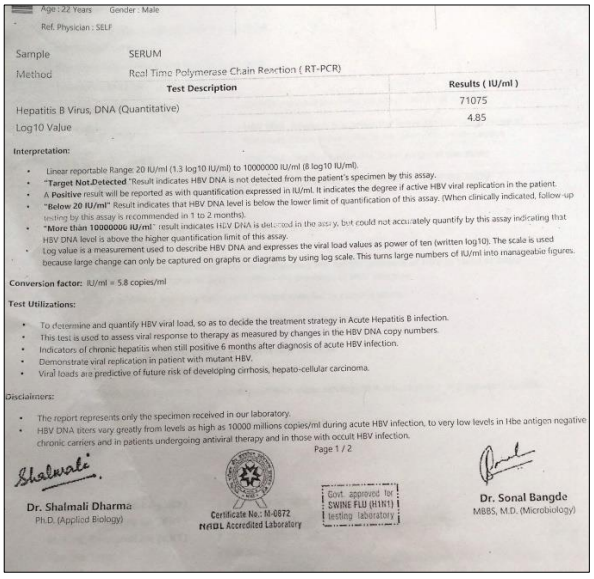
Investigations reports

1. HBsAg positive with titre – 6430
2. HBeAg – Postive
3. HBV DNA (Quantitative)- 71075 IU/ml (16 march 2017)
4. LFT, RFT- Within normal limit

Hence treatment was planned with Phalatrikadi ghanvati was advised with dosage of two gm/day. 1 tablet = 250 mg and 4 tab BD after meal with luke worm water for a period of 1 month.

Patient came to S.S. Hospital regularly after 1 months for consecutive 3 months and medications were continued for 3months.Routine investigations were repeated, like LFT, RFT, CBC after every 1 months interval and no significant abnormality was detected in LFT,RFT and CBC these are within normal range. During whole period of treatment patient was put on strict vegetarian diet with less spicy and oily food, with adequate amount of sleep 8-10 hours per day, and less physical exercise for better recovery. After a period of 3-1/2 months HBV- DNA and HBsAg were repeated and HBV- DNA was not detected (25/8/17) HBeAg was less than detection limit. HBsAg positive but titre was less than before. Measuring range was 50-1.0*10 8 IU/ml, with these treatment c/o indigestion and incomplete bowel evacuation was also relieved and appetite of patient were also improved. Clinical observation revealed no toxic effects.

Before treatment


Age : 22 Years Gender : Male
Ref. Physician : SELF

Sample SERUM
Method Real Time Polymerase Chain Reaction (RT-PCR)

Test Description	Results (IU/ml)
Hepatitis B Virus, DNA (Quantitative)	71075
Log10 Value	4.85

Interpretation:
- Linear reportable Range: 20 IU/ml (1.3 log10 IU/ml) to 10000000 IU/ml (8 log10 IU/ml).
- "Target Not Detected" Result indicates HBV DNA is not detected from the patient's specimen by this assay.
- A "Positive result will be reported as with quantification expressed in IU/ml. It indicates the degree if active HBV viral replication in the patient.
- "Below 20 IU/ml" Result indicates that HBV DNA level is below the lower limit of quantification of this assay. (When clinically indicated, follow-up testing by this assay is recommended in 1 to 2 months).
- "More than 10000000 IU/ml" result indicates HLV DNA is detected in the assay, but could not accurately quantify by this assay indicating that HBV DNA level is above the higher quantification limit of this assay.
- Log value is a measurement used to describe HBV DNA and expresses the viral load values as power of ten (written log10). The scale is used because large change can only be captured on graphs or diagrams by using log scale. This turns large numbers of IU/ml into manageable figures.

Conversion factor: IU/ml = 5.8 copies/ml

Test Utilizations:
- To determine and quantify HBV viral load, so as to decide the treatment strategy in Acute Hepatitis B infection.
- This test is used to assess viral response to therapy as measured by changes in the HBV DNA copy numbers.
- Indicators of chronic hepatitis when still positive 6 months after diagnosis of acute HBV infection.
- Demonstrate viral replication in patient with mutant HBV.
- Viral loads are predictive of future risk of developing cirrhosis, hepato-cellular carcinoma.

Disclaimers:
- The report represents only the specimen received in our laboratory.
- HBV DNA titers vary greatly from levels as high as 10000 millions copies/ml during acute HBV infection, to very low levels in Hbe antigen negative chronic carriers and in patients undergoing antiviral therapy and in those with occult HBV infection.

Page 1 / 2

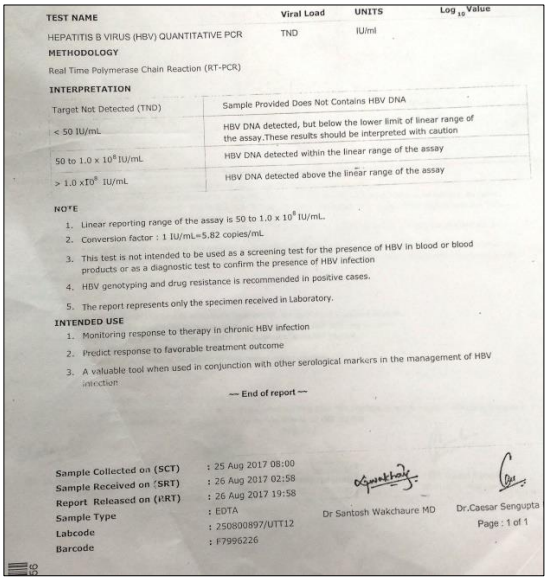
Dr. Shalmali Dharma
Ph.D. (Applied Biology)

Certificate No.: M-0872
NABL Accredited Laboratory

Govt. approved for SWINE FLU (H1N1) testing laboratory

Dr. Sonal Bangde
MBBS, M.D. (Microbiology)

After Treatment


TEST NAME	Viral Load	UNITS	Log $_{10}$ Value
HEPATITIS B VIRUS (HBV) QUANTITATIVE PCR	TND	IU/ml	

METHODOLOGY
Real Time Polymerase Chain Reaction (RT-PCR)

INTERPRETATION

Target Not Detected (TND)	Sample Provided Does Not Contains HBV DNA
< 50 IU/mL	HBV DNA detected, but below the lower limit of linear range of the assay.These results should be interpreted with caution
50 to 1.0 x 10^8 IU/mL	HBV DNA detected within the linear range of the assay
> 1.0 x 10^8 IU/mL	HBV DNA detected above the linear range of the assay

NOTE
1. Linear reporting range of the assay is 50 to 1.0 x 10^8 IU/mL.
2. Conversion factor : 1 IU/mL=5.82 copies/mL
3. This test is not intended to be used as a screening test for the presence of HBV in blood or blood products or as a diagnostic test to confirm the presence of HBV infection
4. HBV genotyping and drug resistance is recommended in positive cases.
5. The report represents only the specimen received in Laboratory.

INTENDED USE
1. Monitoring response to therapy in chronic HBV infection
2. Predict response to favorable treatment outcome
3. A valuable tool when used in conjunction with other serological markers in the management of HBV infection

--- End of report ---

Sample Collected on (SCT) : 25 Aug 2017 08:00
Sample Received on (SRT) : 26 Aug 2017 02:58
Report Released on (RRT) : 26 Aug 2017 19:58
Sample Type : EDTA
Labcode : 250800897/UTT12
Barcode : F7996226

Dr Santosh Wakchaure MD
Dr.Caesar Sengupta

Page : 1 of 1

Fig 1: Demonstration the changes over the viral load before and after treatment

Discussion

Hepatitis B is chronic condition is often followed by liver carcinoma with grave prognosis of our ancient acharyas have recommended a fair no of herbal and compound preparation for the treatment of kamala. *Phalatrikadi ghan* Vati was mentioned in sharanghar samhita madhayam khand [6] for the treatment of kamla, therefore *Phalatrikadi ghan* vati appears to be useful remedy for the treatment of Hepatitis B. According to caraka samita in 16th chap of cikitsa sthana acharya clearly mentioned" kamali tu verecanama", virecanama is the best treatment for kamala roga [7]. The trial drug contains 8 herbal drugs as mentioned in Sharangadhara samhita in context of pandu kmala, drugs: Amalaki [8], Bibhitaki [9], Haritaki [10], Guduci [11], Vasa [12], Kiratika [13], Nimba [14], Kutaki [15], these drugs possess the properties like pitta- kapha shamaka, recana, dipana, yakriduttejaka. According to modern researchers above mentioned drug can be hepatoprotective on the basis of choleratic and cholegogue action, antioxidant effect, antiviral effect (Picrorhiza kurroa), immunomodulator action. If the antigen persists in the blood for then 3 months CLD is probable in such cases *Phalatrikadi ghan* vati is very useful. Measurement of HBeAg may also be used to monitor the effectiveness of the HBV treatment since successful treatment should lead to no HBeAg in the blood. The results of this case study recommend continued evaluation of this drug for further management of chronic Hepatitis B.

References

1. Hoffmann CJ, Thio CL. Clinical implications of HIV and hepatitis B co-infection in Asia and Africa. The Lancet infectious diseases. 2007; 1; 7(6):402-9.
2. Alter MJ. Epidemiology of viral hepatitis and HIV co-infection. Journal of hepatology. 2006; 1(44):S6-9.
3. Samhita S, Sastri KA. Chaukhamba publication. Varanasi-7 th edition, 1989, 2005.
4. Hyams KC. Risks of chronicity following acute hepatitis B virus infection: A review. Clinical Infectious Diseases. 1995; 20(4):992-1000.
5. Ambikadattashastri K, Sushruta Samhita. Uttartantra of Sushrut with Ayurved Tattva Sandipika. Chaukhamba Orientalia, 2012, 64.
6. Hoofnagle JH, Mullen KD, Jones DB, Rustgi V, Di Bisceglie A, Peters M *et al*. Treatment of chronic non-A, non-B hepatitis with recombinant human alpha interferon. New England Journal of Medicine. 1986; 18; 315(25):1575-8.
7. Sharma SK, Chunekar KC, Paudal K. Plants of Sharangdhar Samhita. National Academy of Ayurveda. 1999; 1:289.
8. Sharma PV, Dash B. Caraka samhita (English translation). Chikitsa Sthana, 1994.
9. Lal VK, Amit Kumar, Prashant Kumar, Kuldeep Singh Yadav. Screening of Leaves and Roots of Eclipta alba for Hepatoprotective Activity. Arch. Appl. Sci. Res. Dhandapani R. Hypolipidemic activity of *Eclipta prostrata* (L.) L. leaf extract in, 2010; 2(1):86-94.
10. Min-Kyung Choi, Hyeong-Geug Kim, Jong-Min Han *et al*. Hepatoprotective Effect of Terminali chebula against t-BHP-Induced Acute Liver Injury in C57/BL6 Mice. Evidence-based Complementary and Alternative Medicine, 2015, 1.
11. Jaeschke H. Glutathione disulfide formation and oxidant stress duringacetaminophen-induced hepatotoxicity in mice *in vivo*: the protective effect of allopurinol. J Pharmacol Exp Ther. 1990; 255(3):935-41.
12. Bishayi B, Roychowdhury S, Ghosh S, Sengupta M. Hepatoprotective properties of a Tinospora cordifolia in CCl4 intoxicated mature albino rats. J Toxic Sci. 2002; 27:139-146.
13. Sampath Kumar KP *et al*. Indian traditional herbs Adhatoda vasica and its Medicinal application; Journal of Chemical and Pharmaceutical Research; 2010, 2(1):240-245.
14. Gomase PV, Rangari VD, Verma PR, Zhou NJ, Geng CA, Huang XY *et al*. Anti-hepatitis B virus active constituents from Swertia chirayita. Fitoterapia. 2011-2015; 100:27-34. doi: 10.1016/j.fitote.2014.11.011
15. Phytochemical evaluation and hepatoprotective activity of fresh juice of young stem (tender) bark of *Azadirachta indica* A. Juss. International Journal of Pharmacy and Pharmaceutical Sciences. 3(2):55-59.
16. Saraswat B, Vixen Patnaik Pk. Anticholestatic Effect Of Picroliv, Active Hepatoprotective Principle Of Picrorhiza Kurrooa, Against Carbon Tetrachloride Induced Cholestasis. Indian Journal of Exp. Biology. 1993 Apr; 31(4):316-8.Pmid: 8359830 [Pubmed – Indexed For Medline].