



MANAGEMENT OF HEV INFECTION THROUGH AYURVEDA- A CASE REPORT

SARMA S AMRITHA¹, BHAGAT VIJAY^{2*}, K S MANUPRASAD³

1: Postgraduate Scholar, Department of Ayurveda Samhita and Siddhanta, Parul Institute of Ayurveda, Parul University

2: Associate Professor, Department of Ayurveda Samhita and Siddhanta, Parul Institute of Ayurveda, Parul University

3: Associate Professor, Department of Agadatantra and Vidhivaidyaka, Parul Institute of Ayurveda & Research, Parul University

*Corresponding Author: Dr. Vijay Bhagat: E Mail: vijay.bhagat260001@paruluniversity.ac.in

Received 3rd Oct. 2021; Revised 11th Nov. 2021; Accepted 20th Dec. 2021; Available online 25th Jan. 2022

<https://doi.org/10.31032/ijbpas/2022/11.1.2060>

ABSTRACT

WHO estimates that hepatitis E caused approximately 44000 deaths in 2015 (accounting for 3.3% of the mortality due to viral hepatitis). The virus is transmitted via the fecal-oral route, principally via contaminated water. Even though HEV infection is self-limiting condition, in immunosuppressed patients it can be fatal due to the liver damage. An alternate solution for management of HEV infection is much needed. In this case study an HEV patient was given *Kamala* treatment and it is observed that elevated levels of HEV IgM, Bilirubin, SGOT, SGPT, and ALP were reduced after the 28 days.

Keywords: *Hepatitis E, HEV IgM, Ayurvedic management, SGOT, ALP, Kamala*

INTRODUCTION

Hepatitis E is an inflammation of the liver caused by infection with the hepatitis E virus (HEV). Every year there is an estimated 20 million HEV infections worldwide, leading to an estimated 3.3 million symptomatic cases of hepatitis E.

WHO estimates that hepatitis E caused approximately 44000 deaths in 2015 (accounting for 3.3% of the mortality due to viral hepatitis). The virus is transmitted via the fecal-oral route, principally via contaminated water¹. Hepatitis E is found

worldwide, but the disease is most common in East and South Asia. The incubation period following exposure to HEV ranges from 2 to 10 weeks, with an average of 5 to 6 weeks. Hepatitis E virus (HEV) most commonly causes an acute illness that is typically indistinguishable from other forms of acute hepatitis. A vast majority of patients are asymptomatic or have mild clinical disease. When clinical signs and symptoms develop, they are similar to those seen with other forms of acute viral hepatitis such as malaise, anorexia, nausea, vomiting, jaundice, and abdominal pain. Clinical examination is nonspecific. Patients may appear acutely ill with jaundice. Right upper quadrant abdominal tenderness and hepatomegaly may be present². *Ayurvedic* management of liver diseases is unique and very efficient in the rapid reduction of elevated liver enzymes. *Ayurveda* believes in *Tridosha* theory and medicaments are also prescribed to the patient in such a way that they will pacify the respective vitiated *dosha*. Viral diseases are taken as *Agantuja Rogas* and treated accordingly by using antiviral herbs which are already proven. In hepatitis E infection, the patient may suffer from symptoms like *Kamala* (Jaundice), Anorexia, weakness, pain in the left quadrant. Clinical research in this century has confirmed the efficacy of several plants in the treatment of liver

disease, so the fact that the patients with chronic liver disease seek primary or adjunctive herbal treatment is not surprising. Herbal products are often used to improve well-being and quality of life and to ameliorate side effects in patients on antiviral treatment, like fatigue, irritability, and depression: lessening of these symptoms might permit higher compliance and avoid the need to limit the dose and finally withdraw interferon. It has been clearly shown that herbal products can protect the liver from oxidative injury, promote virus elimination, block fibrogenesis, or inhibit tumour growth³.

CASE REPORT

A 33-year-old male patient came to OPD, complaining about pain in the right side of the abdomen, fever, nausea and vomiting associated with brownish coloured urine and weakness. The patient was well before 4 days gradually he had developed the above-said symptoms. The patient was not affected with hepatitis before and there was no history of intake of alcohol.

GENERAL EXAMINATION

In the General examination of the patient, there was a rise in temperature to 101⁰ F and also tenderness in the right upper quadrant of the abdomen was felt. Clinical examination revealed yellow sclera and nail bed. On assessing the digestive fire (*Agni*)

of the patient, it was found reduced (*Manda*).

INVESTIGATIONS

Hepatitis E virus IgM- reactive- 7.819

Liver function test:

Total bilirubin- 4.7 mg/dl

Direct bilirubin-3.1 mg/dl

SGPT: 1847

SGOT: 662

ALP: 300

USG Abdomen: Mild hepatomegaly

Urine analysis- bile salts and bile pigments-
+++

DIAGNOSIS

This case was diagnosed after assessing *Dashavidha pareeksha*, *Ashtasthana pareeksha*, *Panchanidana* and possible laboratory investigations. It is observed that HEVIgm was positive and levels of ALP, SGOT, SGPT, Serum bilirubin etc. were elevated. Based on the investigations, the patient was diagnosed with acute hepatitis E infection in general and *Kamala* as per Ayurveda.

ASSESSMENT CRITERIA

This case was clinically assessed based on the reduction of brownish-yellow colour in the urine and yellowish discolouration of the sclera as well as the reduction in SGOT, SGPT, Bilirubin, ALP etc... Liver function tests were performed in 1, 7, 14, 28 days and results were noted.

TREATMENT PLAN

1. *Agnideepana* and *Amapachana* -To Increase the *Agni*- For that *Agnideepana* drugs are administered, *Agnitundi Vati* B D is given for 30 days⁴.
2. *Shodhana*: *Mridu Virechana* is given: *Avipattikarachurna* with lukewarm water – 1 Teaspoon daily at night for 30 days⁵.
3. *Pittahara* treatment: *Patolakaturohinyadikashaya*- 30 ml -0- 30ml with luke warm water for 30 days⁶.

OBSERVATIONS AND RESULTS

Fever, nausea and vomiting were completely relieved during the first 3 days of treatment. The colour of urine changed from brownish to yellow after one week of treatment. Weakness and pain in the right side of the abdomen were reduced after 14 days of treatment and was almost not present on the 28th day of treatment. On the 28th day, there was no tenderness on palpating the abdomen, sclera was normal and colour of urine was normal.

DISCUSSION

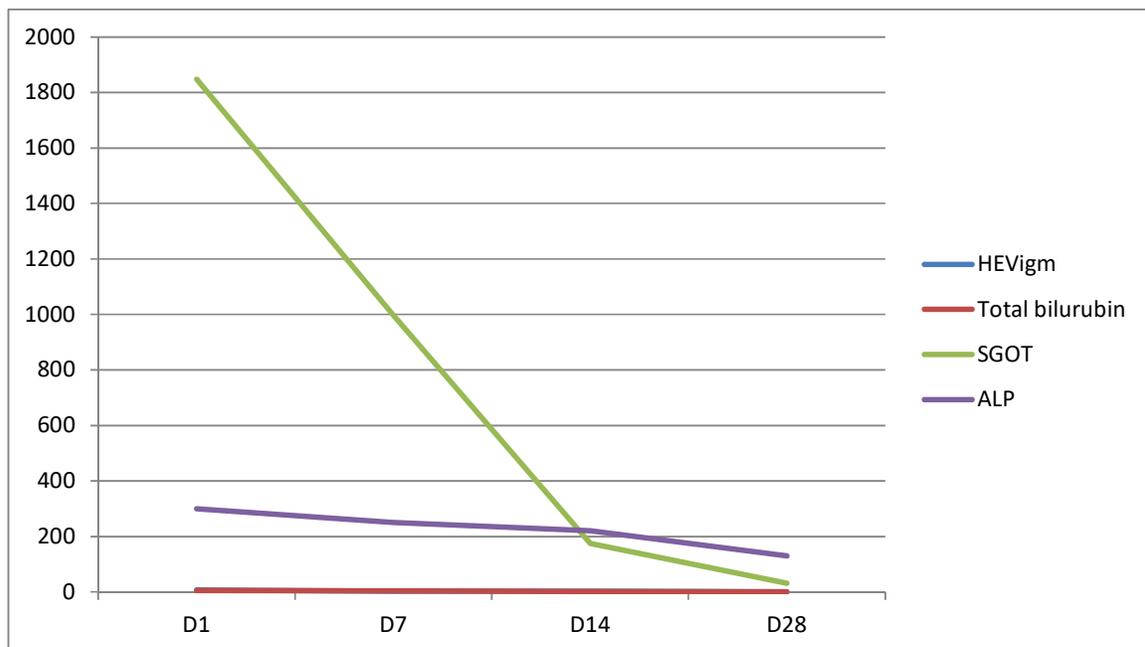
In Ayurveda, anti-viral drugs are being used to treat different types of viral diseases like Hepatitis E. Here, the treatment plan given to the patient was firstly *Agnideepana*, *Shodhana* followed by *Pittaharachikitsa*. This was the treatment protocol explained in *Kamala chikitsa*.

After the treatment, on the 28th day, it was noted that HEVigm was reduced from 7.819(reactive) to 0.3(non-reactive), total bilirubin was reduced from 4.7mg/dl to 0.7mg/dl, direct bilirubin from 3.1mg/dl to

0.2mg/dl, SGOT from 1847 U/L to 32 U/L, SGPT from 662 U/L to 41 U/L, ALP from 300 to 130 and absence of bile salts and bile pigments (**Graph 1**).

Table 1: Shows the laboratory results during the treatment

Tests	D1	D7	D14	D28	Normal Values
Hepatitis E virus IGM	Reactive- 7.819	Reactive 2.176	Reactive 1.987	0.3Non Reactive	<0.9
Total Bilirubin	4.7 mg/dl	3.9 mg/dl	1.7 mg/dl	0.7 mg/dl	0.3 to 1.2 mg/dl
Direct Bilirubin	3.1 mg/dl	2.4 mg/dl	1.3 mg/dl	0.2 mg/dl	0.0 to 0.4 mg/dl
SGOT	1847 U/L	998U/L	165 U/L	32 U/L	0.0 to 40 U/L
SGPT	662 U/L	356 U/L	156 U/L	41 U/L	0.0 to 49 U/L
ALP	300	250	220	130	0.0 to 270 U/L
Urine analysis- Bile pigments and bile salts	+++	++	Nil	Nil	-



Graph 1: Shows effect of Ayurvedic treatment in the reduction of liver enzymes levels

CONCLUSION

Ayurveda believes in *Tridosha* theory where all types of diseases are manifested due to disequilibrium of *Tridoshas*. The basic principle of treatment is that make these *Tridoshas* in an equilibrium state. HEV infection is a self-limiting condition but in immunosuppressed patients, it can be fatal due to liver damage. Hence in the current scenario, it is the need of the hour to discuss the management of Hepatitis E through Ayurveda.

REFERENCES

- [1] <https://www.who.int/news-room/fact-sheets/detail/hepatitis-e>
- [2] Sana Waqar; SUNY Upstate University Hospital CBI Bookshelf. A service of the National Library of Medicine, National Institutes of Health. StatPearls [Internet]. Treasure Island (FL): Stat. Pearls Publishing; 2021 Jan
- [3] Ashok Kumar Panda. *et al.* / Asian Journal of Phytomedicine and Clinical Research. 3(1), 2015, 1 - 5.
- [4] Tripathi B. Sarangadhara-Samhita. Acharya subharati Prakashan, Varanasi. 3rd ed 1998; 311p.
- [5] The Ayurvedic Formulation of India, part I, second revised English edition, Govt of India, Bhaishjyaratnavali, Amlapittadhikara, 106.
- [6] Acharya Vagbhata: Ashtangahridaya Tika; chowkhamba surbharati

prakashan Vranasi; 2016; Chapter 15: P No; 235; PP No 956.