

**AYURVEDIC MANAGEMENT IN HEPATITIS A W.S.R TO YAKRUTSHOTHA - A CASE STUDY****Sowmiya.V¹, Yadav Pooja shivshankar², Rukhsar Parveen³, O.P. Singh⁴,**¹MD scholar, Department of Kayachikitsa, FoAy, IMS, BHU, Varanasi -221005²PhD scholar, Department of Kayachikitsa, FoAy, IMS, BHU, Varanasi -221005³MD scholar, Department of Kayachikitsa, FoAy, IMS, BHU, Varanasi -221005⁴Department of Kayachikitsa, FoAy, IMS BHU Varanasi-221005**Corresponding Author:** sowmiya.9796@gmail.com<https://doi.org/10.46607/iamj13p8052024>**(Published Online: July 2024)****Open Access**

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Article Received: 11/04/2024 - **Peer Reviewed:** 29/04/2024 - **Accepted for Publication:** 13/05/2024.**ABSTRACT**

Hepatitis is a life-threatening liver infection caused by a viral infection or non-infectious causes like continuous alcohol intake, toxicity, overdose of NSAIDs, and several metabolic disorders. Based on clinical features, hepatitis A can be correlated to *Yakrutshotha* caused by the vitiation of *Raktadhātu* (blood tissue) along with *Kapha dosa*. Ayurvedic treatment regimens were given in the management of hepatitis A (*Yakrut shotha*) for 30 days. In this case, significant improvements were monitored based on signs and symptoms and the value of objective parameters.

Keywords: *Hepatitis A, Yakrut shotha, Phalatrikathi kashayam, Patolakaturohinyathi kashayam, Aryogyavardhini vati, Mahasudarshana vati.***INTRODUCTION**

Hepatitis is a life-threatening liver infection caused by a viral infection or non-infectious causes like continuous alcohol intake, toxicity, overdose of

NSAIDs, and several metabolic disorders. Almost all cases of acute viral hepatitis are caused by one of five viral agents: hepatitis A, B, C, D, and E. The

incubation period for hepatitis A is around 30 days, and recovery occurs in 3 to 6 weeks.

Incidence: HAV infection occurs worldwide but is most common in developing countries due to improper sanitation, limited access to clean water, and poor hygienic conditions (especially in Africa, Asia, Central and South America, the Middle East, and the Western Pacific). The WHO estimates more than 100 million HAV infections, causing approximately 1.5 million clinical cases of hepatitis A each year^[1]

Signs and Symptoms: Many are asymptomatic. When the clinical features are present, symptoms like Fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, and loose stools are present. In extrahepatic disease, the most common features are joint pain, muscle ache, and rashes. After 1 to 2 weeks, some patients develop dark urine.

Causes Hepatitis A is caused by HAV and belongs to the picorna virus group of enteroviruses. It is

transmitted by faecal-oral route by either ingestion of contaminated food or water or direct contact with an infectious person.

Pathophysiology liver injury in hepatitis A is caused by immune-mediated mechanisms involving both natural and acquired immune responses to the virus. It indicates possible roles for T cells, cytokines, and chemokines in liver injury during hepatitis A. A recent study described CD8+ T-cell responses targeting multiple epitopes of HAV and observed an activated phenotype of HAV-specific CD8+ T cells in the blood of patients with acute HAV infection.

Ayurvedic Review

According to Ayurveda, signs and symptoms of hepatitis A are similar to *Yakrutshotha*. *Laghutrayees and Yakrit roga mention Yakrutshotha* explained as a separate roga in *Bhavaprakasha (Madyama khanda in Pleeha yakrit vikaara adhyaya)*,

One who consumes irritating and spicy food and the food that obstructs the *Raktavaha srotas*.



Raktadhātu (blood tissue) and *Kapha dosa* are excessively vitiated.



Leads to enlargement of the liver(*Yakritvridhi*) takes place in the right side (right hypochondriac area)



The Dosis signs and symptoms of *Kapha* and *Pitta* are observed here, like loss of weight, suffering from low-grade fever, loss of appetite, loss of immunity and physical strength and anaemia.

CASE REPORT

A female patient 22-year-old presented with High-grade fever, vomiting, severe abdominal pain, poor appetite and yellow discolouration of eyes & urine ten days had visited *Kayachikitsa* OPD of SSH(Ayurveda) IMS BHU, Varanasi. The patient was

diagnosed with acute hepatitis A as per her abdominal USG and Blood investigation reports. The patient's condition was assessed through General examination, *Ashtavidha pariksha* and routine blood and urine investigations. *Samprapti Ghataka* determined the *Ayurvedic* treatment protocol.

Table 1: showing the Ashtavidha pariksha(eight types of examination)(Date:12/08/2023)

1	Nadi(pulse rate)	112/min
2	Mutra	Vikruta varna(yellow urination)
3	Mala	Vikruta varna(dark stool)
4	Jihwa(tongue)	Coated
5	Sabdha(voice)	Normal
6	Sparsha(touch sensation)	Ushna(Temperature was 102 degree)
7	Drik(color of sclera)	Yellowish sclera
8	Akruti(built)	Madhyama

Table 2: showing General physical examination (Date:12/08/2023)

Blood pressure	118/84 mm/Hg
Pulse rate	112/min
Respiratory rate	18/min
General condition	Poor
pallor	Present
icterus	Present
cyanosis	Absent
clubbing	Absent
Lymph nodes	Not palpable
Edema	Pedal edema present

Table 3: Observations of the study parameters

Blood Test	Values B/T (12/8/2023)	Values on (16/8/2023)	Values on (15/9/2024)
Total bilirubin (mg%)	2.03	1.9	1.5
Direct bilirubin(mg%)	0.98	0.9	0.5
Indirect bilirubin(mg%)	1.05	1.0	1.0
SGOT(AST) (IU/L)	1500	68.0	52.0
SGPT(ALT) (IU/L)	1150	188.0	60.0
Alkaline phosphate (IU/L)	1162	177.0	156.0
HAV(Hepatitis A virus)	Positive		Negative

USG(whole abdomen) on 13/08/2023 shows
Impression : Fatty hepatomegaly(Grade 1) with
oedematous GB wall

Samprapthi

- Dosh – tridosha
- Dushya- rasa, raktha, mamsa,
- Srotas – annavaha, rasavaha, rakthavaha, mamsavaha, mutra vaha, purishavaha.
- Srotodusti -atipravriti, sanga, vimargagamana
- Ama (signs of indigestion) -sama (present)
- Agni -bandhani (poor digestive fire)

- Samuthana (site of origin) -amashaya
 - Adhistana (site of manifestation): Netra
- Diagnosis: From clinical features, physical examination and investigations, the patient was diagnosed as having *Khumbha Kamala* (Hepatitis A)
Ayurvedic Management Protocol
In the beginning (Date: 14/08/2023), *Shamana Chikitsa* with the following internal medicines along with suitable *anupana* (liquid medium) for one month was given:

Table 4: Therapeutic interventions

Sr.no	Oral Medication	Dose	Duration/Time	Anupana
1	<i>Phalatrikathi kashayam</i>	50ml	1Month/ before food BD	warmwater
2	<i>Patolakaturohinyathi kashayam</i>	50ml	1 month /after food BD	warmwater
3	<i>Aryogyavardhini vati 250mg</i>	250mg BD	1 month/ after food BD	warmwater
4	<i>Mahasudarshana vati 125mg</i>	125mg BD	1 month/ after food BD	warmwater

Pathya ahara was advised.

- Food consists of rice with buttermilk, *Kanchi* (porridge) of *yava*, etc.

-Vegetables like the broad bean, *chichinda* (snake gourd) with moong dal, *punarnava*, and leaves of *Shigeru*.

- Fruits like *Amalaki*, pomegranate, grapes, papaya, orange, lemon etc.

Follow-up and outcomes:

The patient is in follow-up with significant improvement in symptoms and no adverse effects of the prescribed medicine. The use of an Ayurvedic treatment regimen for Hepatitis B resulted in a positive outcome.

DISCUSSION

The liver is the main organ that participates in the digestion of fat, carbohydrates, lipids, proteins, vitamins and minerals^[8]. The rejuvenation of hepatocytes can be done using the *Rasayana* properties drugs. The Hepatitis A virus mainly causes hepatitis A and can be correlated with *Yakrut shotha*. So, for the management of this disease, drugs that contain properties like *Pittahara*, *pitta rechana*, *raktashodhaka*, *srotoshodhaka*, *shothahara* and *rasayana* were used.

Probable Mode of action of medicines

Phalatrikadi kwatha^[3] is an herbal formulation that contains *Amalaki* (*Emblica officinalis*), *Haritaki* (*Terminalia chebula*), *Vibhitaki* (*Terminalia belerica*), the stem of *Daruharidra* (*Berberis aristata*), the root of *Indrayan* (*Citrullus colocynthis*) and *Mustaka* (*Cyperus rotundus*). All these drugs have *Pitta-Kapha Shamaka*, *Yakriduttejaka*, *Shothahara* (anti-inflammatory), *Rechana* and *Dipana* properties; hence, it is indicated in *Kamala* and *Pandu*. Being *Shothahara* may relieve the *Shotha* at the cellular

level of the liver, and *Rechaka* properties act as *Nitya virechaka*. *Yakruttejak* and *rasayana* properties help to restore the liver cells.

Patolakaturohinyathi kashayam is a combination of drugs like *patola*, *katuki*, *chandana*, *patha* have *kapha pitta shamaka* property. *Murva* and *Guduchi* mainly act as *Pitta shamaka*. So, this drug used in *Yakrut shotha* and *kamala*^[4]

Arogyawardhini Vati is *Rasaushadhi*, mainly indicated in the treatment of jaundice, liver disorders, and various skin disorders. It consists of *Haritaki* (*Terminalia chebula*), *Bibhitaka* (*Terminalia bellirica*), *Amalaki* (*Emblica officinalis*), *Silajatu Suddha* (*Asphaltum*), *Guggulu Shuddha* (*Commiphora wightii*), *Eranda* (*Ricinus communis*), *Katuka* (*Picrorrhiza kurroa* Royle), leaf juice of *Nimba* (*Azadirachta indica*) and minerals like *Shuddha Rasa* (purified mercury), *Shuddha Gandhaka* (purified sulfur), *Lauha Bhasma* (iron compound in ash form), *Abhraka Bhasma* (mica in ash form), and *Tamra Bhasma* (copper compounds in ash form). It enhances antioxidant enzymes, superoxide dismutase, glutathione, and catalase amylase activity in the body^[6]

Mahasudarshana vati consists of *Chirayata* and *Kutaj* as the main ingredients of the classical formulation. The pharmacological data provide evidence for sustaining the folklore claim of *Swertia chirata* as an antipyretic agent. *Swertiamarin* has also been tested for its anti-hepatitis properties. *Mangiferin* is testified to have antiviral, antioxidant, and anti-inflammatory activities. *Swerchirin* is well-known for its antimalarial, hepatoprotective, pro-hematopoietic, and blood glucose-lowering activities^[4].

In this case study, Hepatitis B virus viral load was not performed; liver ultrasound and blood investigation reports can assess patients with HBV.

In this case, improvement was monitored based on reduced clinical features and the value of LFT. All these drugs showed considerable improvement; hence, they help improve the condition of patients suffering from Hepatitis B.

CONCLUSION

Hepatitis B is the leading cause of further progressing liver diseases like cirrhosis & cancer. Formulations used in this single case study help improve symptoms and cause a reduction in the values of liver function tests. So, it can be concluded that Hepatitis B can be successfully treated with the formulations described in Ayurveda. They mainly contain drugs which act on the liver and help restore liver function. This single case study, hence, to prove the efficacy of these drugs, further study on a large sample size will be required to confirm this impact.

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