

ROLE OF AYURVEDA IN THE MANAGEMENT OF VIRAL HEPATITIS

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ABSTRACT

Internationally viral hepatitis is now recognized as a major public health challenge that requires an urgent response. In India also it is progressively recognized as a public health problem. Infective hepatitis is an inflammation of the liver, mainly caused by a viral infection. There are five main hepatitis viruses that are A, B, C, D and E, but it can also be caused due to toxin, other infections and autoimmune diseases. HAV and HEV are important causes of acute viral hepatitis and Acute Liver Failure (ALF). This viral hepatitis has no specific treatment in modern medicine. So, there is a need of hour to explore other ways of clinically proven prophylaxis and therapeutic strategy. However, there are multiple accounts in Ayurveda, which shows how viral hepatitis can be successfully cured by traditional *Ayurvedic* medicine. This article is aimed to study the role of Ayurveda in management of viral hepatitis. Though Ayurveda has a lot to offer in terms of control of hepatitis, there is a mass awareness of this potential of Ayurveda medicine is desired to achieve a larger impact on the society.

KEYWORDS: Viral Hepatitis, Treatment, Ayurveda.

INTRODUCTION

Infective hepatitis is a major health hazard of India with a large population and improper sanitation adding it.^[1] There is no specific treatment available for infective hepatitis

inbiomedicine. Since this condition is self-limiting, most physicians advocate rest to their patients. *Ayurveda* is traditionally skilful and treating liver diseases since centuries, proved its safety and efficacy. Though these drugs have less toxicity as compared to modern medicine and currently available medical therapies for liver disorders have more systemic toxicity therefore physicians hesitate to prescribe allopathic medicine for long term use. So, it is the need of hour to bring light on ways to manage viral hepatitis through *Ayurveda*.

Infective Hepatitis is an inflammation of the liver, primarily caused by a viral infection. There are five main hepatitis viruses, referred to as types A, B, C, D and E, but it can also be caused due to toxins and autoimmune diseases. Hepatitis is acute when it lasts less than six months and chronic when it persists longer. Some types of hepatitis will pass without causing permanent damage to the liver. Other types can persist for many years and leading to liver cirrhosis & in the most serious cases, liver failure may develop which can be fatal. In particular, types B and C lead to chronic disease in hundreds of millions of people & together they are the most common cause of liver cirrhosis & cancer.

Causes of hepatitis

Infection- Infection from viruses (hepatitis A, B, or C), bacteria, parasites. Autoimmunity- Immune cells in the body attacking the liver Alcohol, Medications, such as an overdose of acetaminophen, Heridity, Wilson's disease.

Sources, route of transmission

	A	B	C	D	E
Source of virus	feces	blood/ blood-derived body fluids	blood/ blood-derived body fluids	blood/ blood-derived body fluids	feces
Route of transmission	fecal-oral	percutaneous permucosal	percutaneous permucosal	percutaneous permucosal	fecal-oral
Chronic infection	no	yes	yes	yes	no

Initial features are of nonspecific flu-like symptoms & may include malaise, fever, nausea, vomiting, diarrhea etc.

Acute viral hepatitis is more likely to be asymptomatic. In some cases more specific symptoms can be present that are:

- Profound loss of appetite
- Dark Yellow urine
- Yellowing of the eyes and skin (i.e. jaundice)
- Aversion to smoking among smokers,

Physical findings apart from jaundice are tender Hepatomegaly, lymphadenopathy and splenomegaly.

Chronic hepatitis may present symptoms such as, malaise, tiredness & weakness and often leads to no symptoms at all.

Phases of hepatitis

● Phase 1 (Viral replication phase)

Patients are asymptomatic during this phase; laboratory studies demonstrate serologic & enzyme markers of hepatitis.

● Phase 2 (Prodromal phase)

- Patients experience anorexia, nausea, vomiting, alterations in taste, arthralgia's, malaise, fatigue, urticaria & some develop an aversion to cigarette smoke;
- On examination, patients are often diagnosed as having gastroenteritis or a viral syndrome.

● Phase 3 (Icteric phase)

- Patients may note dark urine, followed by pale-colored stools;
- In addition to the predominant gastrointestinal symptoms & malaise, patients become icteric & may develop tender hepatomegaly.

● Phase 4 (Convalescent phase)

Symptoms and icterus resolve & liver enzymes return to normal

Diagnosis of hepatitis

- Abdominal ultrasound
- Autoimmune blood markers
- Hepatitis virus Serologic assays
- Liver function tests
- Liver biopsy to check for liver damage
- Paracentesis

Treatment in modern medicine

There are no specific antiviral drugs are available for infective hepatitis in modern medicine.^[2] Since this condition is self-limiting, most physicians advocate rest to their patients.

Ayurvedic understanding of hepatitis

The description of liver was found in Veda, Susruta Samhita, Charaka Samhita and Astang Hrudaya. In Vedas, Liver is named as “Takima” or “Yakna”. Other synonyms are *Kalakhanda*, *Jyotisthana*, *Yakritkhanda*, *Yakritpinda*, *Raktadhara* and *Raktashaya* are found in the ancient literature for liver. Sushruta explains that foetal nutrition usually depends on *Ahara Rasa*, categorized under maternal factors and Vayu present in *Jyotisthana*, responsible for cell division. The *Ahara Rasa* is first received by *Jyotisthana*, which further nourishes the whole body. Therefore, *Jyotisthana* is perceived as “liver”. Acharya Vagbhata has used the word *Yakritkhanda* with regards to the description of diseases which is indication for the lobes of liver In Ashtanga Hridaya, The main function of Yakrit is to change Rasa Dhatu to Rakta dhatu, i.e. Ranjana of Rasa Dhatu. Yakrit is developed or generated from *Matrijabhava* (Mother Part). Excessive bile production or a blockage in the flow of bile usually indicates high *pitta*, which in turn affects the *agni* or enzyme activities responsible for absorption, digestion & metabolism. *Kamala* is the term mentioned in *Ayurveda* to describe the wide range of liver diseases including hepatitis. *Kaamala* is a disease of the *Raktavaha srotas* (a system which includes liver, spleen, blood vessels, and reticuloendothelial tissue). It is caused due to impairment of *pitta dosha* and *rakta dhatu*.

Ayurveda describes various types of *kamala* (hepatitis or jaundice) based on the stage or depth of the symptoms. They are:

- **Shakhasrita / Ruddhapatha kamala**

It occurs due to blockage in pittavahana nalika, so there is redirection of the aggravated pitta dosha.

- **Koshta shakhsrita /Bahupitta kamala**

Correlation - jaundice / infective Hepatitis which is difficult to cure.

- **Kumbha kamala**

It is neglected or untreated stage of kaamala. Become incurable if not attended immediately.

Correlation-Cirrhosis of liver.

- **Haleemaka**

Advanced / neglected stage of pandu.

Become incurable if not attended immediately.

Management of hepatitis through *ayurved* perspective ayurved prajyana

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Ayurvedic shastra aim at keeping people healthy & managing or curing mind and body disorder. *Swasthya rakshana* can be attained by following ways as described in *samhita* such as *dinacharya*, *rutucharya*, *yog*, *pathya* *apathya* and *marma chikitsa*.

In *aatura* (Person having disease), mainly two types of treatment modalities are described i.e. *shodhana* and *shamana*.

Shodhana- It is advised in *bahudosha avastha* in *uttama bala rugna* having *sama agni*. In Hepatitis there is pitta *dushti* and as *virechananam* *pittaharanam* because *virechana karma* is advocated in pitta *pradhana vyadhis*, *virechana* can be given in hepatitis. It is also suitable in *vata & sanshrusta rakta* and disorders of *kapha*.

Shamana - It is indicated in Heen bala rugna having manda agni and alpa bala vyadhi. It can be given as single drugs or compound drugs. The actions of the samshamana drugs were Pitta hara, *Pitta rechana* (Choleratic), *Yakrut uttejaka* (Liver stimulant), *Dipana* (Appetiser), *Rechana* (Purgative), Shothahara (Anti- inflammatory), *Jwarahara* (Anti-pyretic), *Rakta shodhana* (Blood purifier), *Rasayana* (rejuvenative), *Sroto shodhana* (Channel purifier).

Single drugs

Kalamegha (*Andrographis paniculata*)

❖ *Ayurved* point of view

Kaalamegha is *Kapha-pittahashamak*, *Yakrut uttejaka* (stimulates liver), *Pittasarak*, *Rechaka*, *Krimighna* & *Jwaraghna*.

❑ Modern point of view

- Active compound- Andrographolide
- It is Hepatoprotective. It repair the hepatic injury & restore the cellular permeability and reduces the toxic effect of ethanol induced liver toxicity. It is also effective in chronic hepatitis B viral infection.^[4]

Kutaki (*Picrorhiza kurroa*)

❖ *Ayurveda* point of view – It is *Kapha-Pittashamak*, *Deepan*, *Bhedani*, *Rechani-Pittarechaka*, *Asrajit* (Useful in bleeding disorders) *Jwaraghna* & *aruchi nashaka* (Improves taste).

❑ Modern point of view

- Active compound- Apocynin

It is Anti-inflammatory. It improves hepatic glycogenesis. A recent research shows that it is effective in hepatitis B infection. It promotes liver regeneration by restoring cytochrome. *Kutaki* has Cytotoxic activities against carcinoma cell line of liver.^[5]

Guduchi (*Tinospora cordifolia*)

❖ *Ayurved* point of view – *Guduchi* has *tridosha-shamak* effect. It is *Ama doshahara*, *raktapittaghna* (Used in bleeding disorders), *Sangrahani* (Useful in malabsorption syndrome), *Jwaraghna* & has *rasayana* (Ejuvenative) property.

❑ Modern point of view

- Active compound-Tinocordiside, syringing, heptacosanol.
- Its hepatoprotective activity is shown because of its modulation of kuffer cell activities. It prevents fibrous changes in liver & promotes regeneration of parenchymal tissue. By these effects it has anti-inflammatory effect.^[6]

- **Bhringraj (Eclipta Alba)**

- ❖ **Ayurved point of view-** It is *kapha-vata shamak, deepana-pachana, krimighna, vishaghna, shothahara, raktaprasadaka, pitta-rechaka, rasayana*.

- ❑ **Modern point of view**

- Active compounds- Wedel lactone, Luteolin & Apigenin.
- It Protect liver against hepato-toxic action of paracetamol.^[7] Recent study shows its Inhibitory effect on HCV replication.^[8]

- **Bhumi aamlaki (Phyllanthus niruri)**

- ❖ **Ayurved point of view** –It is *Kaphapittahara, deepana, rochana, asra hara-* (Useful in bleeding disorders) and *vishaghna*.

- ❑ **Modern point of view**

- Active compound- Phyllanthin
- It has hepatoprotective activity by suppression of HBsAg- mRNA activity It Inhibits polymerase activity of hepatitis B virus.^[9]

- **Pippali (Piper longum)**

- ❖ **Ayurved point of view** It is *kapha vatahara, Pitta avirodhini* (Does not increases pitta), *Deepani, Rasayani, Rechani*.

- ❑ **Modern point of view**

- Piperine, an active alkaloid constituent, has been shown to exert a significant protection against liver toxicity induced by tert-butyl hydro peroxide and carbon tetrachloride by reducing both in vitro and in vivo lipid peroxidation by decreasing the reduction of GSH.^{4,13}
- It is effective in various diseases, such as hepatotoxicity, inflammation, diabetes, obesity, depression and cancer. It has been demonstrated as capable of modulating liver function by enhancing antioxidant activities.^[10,11]

- **Kalpa Chikitsa (Polyherbomineral Combinations)**

- 1) *Choorna – Yakrut pleehantaka choorna, Svarnakshiryadi yoga*
- 2) *Gutika - Arogyavardhini Vati, Mandura vataka, Shilajatu vataka*
- 3) *Bhashma – Tamra bhasma, Abhraka bhasma, Mandura bhasma*
- 4) *Swarasa - Guduchi, Nimba patra svarasa*

- 5) *Kvatha - Phala trikadi kvatha, Vishaladi phanta*
- 6) *Aristha- Bijakaristha, Dhatryaristha*
- 7) *Avaleha - Darvyadi leha, Dhatrayavaleha*
- 8) *Lauha – Yakrut pleehari loha, Sarveshwara loha, Dhatri lauha, Vidangadi lauha, Navayasalauha*
- 9) *Rasa- Navajeevana rasa, Bruhat lokanatha rasa, Kamalanta rasa*

- ***Arogyavardhini vati***

It is a classical polyherbo-mineral formulation mentioned in *Ayurvedic* formulary. It has been used for centuries with excellent efficacy and safety in treatment of jaundice, liver disorders, and various skin disorders. It has properties like *deepani*, *pachani*, *medohara*, *malashuddhikara*, *sarvarogaprashamani*. The drug contain ingredients like *Haritaki* (*Terminalia chebula*), *Bibhitaki*, *Amalaki*, *Kutaki*, *Chitraka*, *Guggulu*, which are effective in various liver disorders. It is effective in liver damage caused by chemicals such as carbon tetrachloride, paracetamol and even alcohol.

Argyavardini vati along with *Bhumyamlaki* (*Phyllanthus frataruns L.*) & *Triphla churna* have a significant role to clearing of HBSAg and normalize Liver Transaminase in Hepatitis B infected patient within 45 days.

It also has good therapeutic utilities in nonalcoholic liver disorders.^[12,13]

- ***Phalatrikadi kwatha***

It contains eight drugs which are predominantly having *Pitta- Kapha shamaka*, *Yakruduttejaka*, *Shothahara*, *Pandurogahara*, *deepana* & *rechana* properties.

Kwatha of *Triphala* (*Amalaki*, *Haritaki* and *Bibhitaki*), *Amrita*, *Vasa*, *Tikta* (*Katuka*), *Bhunimba* & *Nimba tvaka* taken with Honey. This formulation used for *Kamala* and *Pandu*. It can be used in fatty liver.^[14]

- **Liv 52**

Liv 52 brought a revolution in the biomedical and clinical research in liver diseases. It has 24 clinical papers and 92 experimental studies on liver disorders. Liv 52 has significant effect on the prevention and treatment of viral hepatitis, prophylaxis of adverse effect of chemotherapy in tuberculosis, liver cirrhosis, alcoholic hepatitis.^[15]

- ***Amalaki ghrita***

Administration of medicated *ghee* in chronic diseases is the one of the treatment principle of *Ayurveda*.

Amalaki ghrita is administered to chronic liver diseases in a patient who has good appetite. It has hepatoprotective property.^[16]

- **Panchagavya ghrita**

It has wide range of application in *Ayurveda*. It is used in *Kamala*. It is hepato protective and antioxidant.^[17]

- **Taila- (External applications)**

Marichyadi Taila can be used if pruritis is present in hepatitis. Also if *daha* is present then *Chandanadi taila* can be used.

Swasthya rakshan- Prevention

- **Yogic practices**

It has positive impact on the physical and mental stability. It Improves of overall health and so liver function.^[18]

- *Pachhimamotasana*,
- *Ardhamatsyendrasana*,
- *Dhanurasana*
- *Mandukasana*
- ***Pranayama: Kapalabhati***
- ***Marma chikitsa-*** *Kurpara marma, Aani marma, Jaanu marma*
- ***Achar rasayana-*** *Sadvritta Palan*
- *Dinacharya, Rutucharya*

Pathya-Apathya

- Diet is important factor in the management of liver diseases as per *Ayurveda*. As liver is the site pitta so *pittanashamaka ahara* is advisable.
- Patients should advised to take *laghu ahara*, as their agni is low to very low.
- Consume food that is properly cooked and warm.
- Milk (Complete food of all nutrients & easily digestible)
- *Goghrita* (Cow ghee) (reduce pitta and increases agni)

- *Takra* (Buttermilk), *tandulodaka*, *Lajja Manda* can be given for *pittashaman* and to maintain hydration in body.
- *Ikashurasa* (Sugarcane juice)
- Include fruits like pomegranate, ripe mango & oranges.
- Intake of water should be limited to 800-1200ml.
- Add healthy spices into food like *dhanyak*, *Jeerak*, *Haridra*, fennel, cinnamon, cumin and *hingu*.
- Eat amlalaki to boost up immunity
- Following this kind of diet will help in detoxification of body & will maintain agni state and will improve immunity.

Apathya

- *Rakta mokshana*, *dhumapana*, *svedana*
- *Veganirodha*,
- Sexual intercourse.
- *Shimbi dhanya*, *masha*, *tambula*, *sarshapa*,
- *Madya*, *sura*. (Alcohol) as it is the one of the cause of hepatitis.
- *Divasvapana*,
- *Amla rasa*, *guru- vidahi padartha*,
- Contaminated water,
- Un-hygienic diet,
- Residing in hot climates and exposure of radiant sun,
- Anger, Excessive crying
- *Vyayama* and strenuous physical and mental activities.

CONCLUSION

- *Ayurvedic* herbs, polyherbomineral formulations, *rasayana* therapy, diet therapy, *marma* therapy and yogic therapy are the better solutions for prevention, treatment and control of hepatitis.
- However, a mass awareness of this potential of *Ayurvedic* medicine is desirable to achieve a larger impact on the society.

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