

AYURVEDIC MANAGEMENT IN HEPATITIS - A CASE STUDY

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ABSTRACT

Introduction- Hepatitis is an inflammation of the liver most caused by a viral infection which is characterized by fever, body ache, nausea, poor appetite, dark urine, yellow discoloration of the skin, mucosa, sclera and other tissue fluids etc. **Methodology** - A previously diagnosed case of Acute Hepatitis, 61year old male patient, approached our OP department in SJSACH. Based on the symptoms, Ayurvedic parameters like *Ashtavidha pariksha* supported by blood investigation reports, the condition was diagnosed as *kumbha kamala*. Internal medications like *Aryogyavardhini vatika*, *Vasa guduchyadhi kashaya*, *Bhoomiamalaki kalka* and *Avipatti choornam* along with *pathya apathy Ahara vihara* were prescribed. **Results-** There was gradual but steady decrease in all the symptoms. The effect of treatment was monitored during the follow-ups with routine blood examination. The bilirubin level decreased from initial level of 32 mg/dl to 0.1 mg/dl. **Discussion-** This article is a discussion about an Acute Hepatitis case study which was successfully treated by Ayurvedic line of treatment. The signs and symptoms, causes, patho-physiology of Hepatitis, along with its co-relation in Ayurveda as *kumbha kamala*, its line of treatment and possible the mode of action of drugs were the main points of consideration. **Conclusion-** Use of internal medicines such as *Aryogyavardhini vatika*, *Vasa guduchyadhi kashaya*, *Bhoomiamalki kalka*, *avipatti choornam* along with *pathya apathy ahara vihara* showed good result without any complication in the present study.

Keywords: *Hepatitis, Kumbha Kamala, Astavidha Pariksha Aryogyavardhini Vatika, Vasa Guduchyadhi Kashaya, Bhoomiamalaki Kalka, Avipatti Choornam*

INTRODUCTION

Hepatitis is an inflammation of the liver most caused by a viral infection. There are 5 main hepatitis viruses, referred to as types of A, B, C, D and E. Hepatitis B is considered acute when it lasts less than 6 months, and chronic when it persists longer.

Incidence¹It is estimated that about 200 crores of the world's populations have been exposed to the hepatitis B virus, of which 35 crores harbor it chronically. India falls in the intermediate endemicity zone, the preva-

lence is 2-7% and the average is 4%. Hepatitis B is a common disease all over the world, and countries have been divided into 3 groups High, Intermediate and Low according to its endemicity.

Signs and Symptoms²-When the patient is first infected the warning signs include: -Flu like symptoms initially along with malice, muscle and joint ache, Fever, Fatigue, Loss of appetite, Nausea and vomiting, Abdominal pain, Diarrhea. More specific symptoms

include dark colored urine and yellow discoloration of the skin, mucosa, sclera and other tissue fluids.

Causes³Hepatitis B is caused by Hepatitis B Virus. It is transmitted from person to person through blood, semen and other body fluids. Common routes of transmission include sexual contact, sharing of needles, accidental needle sticks and placental transmission (3rd trimester of pregnancy).

Pathophysiology⁴The hepatitis B virus is constructed of an outer capsule containing HBsAg (Hepatitis B virus surface antigen), an inner core containing HBcAg (Hepatitis B Virus core antigen), and HBeAg (Hepatitis B Virus e antigen). Exposure to HBV, results in a cell mediated immune response by sending cytotoxic T cells and natural killer cells to the virus and releasing inflammatory cytokines. The greater the immune response, the greater will be the chance of

fighting the virus. As the cytoplasm of hepatocytes are infiltrated by the HBV, they appear to have a 'ground glass' appearance under histological exam. This is unique for HBV and thus different from other forms of hepatitis. Because hepatocytes are continually proliferating, the virus is constantly being shed into the blood, which contributes to chronic infections.

Ayurveda Review

Kumbha kamala reference in Ayurveda is available from *Brihatrayees. Kamala* (jaundice) refers to condition resulting from aggravation of *pitta* (bile) in a *pandu rogi* (anemia patient) who indulge in excessive intake of *amla* (sour), *madhyapana* (alcohol), *ahita* (unwholesome), *pitta vardhaka aharavihara* (aggravating food & activities). Improper treatment of *Kamala* leads to its chronicity and deep seated of *tridosha* known as *kumbha kamala⁵* (hepatitis)

Table 1: showing the *samprapthi ghataka of kamala* (elements of patho-physiology)⁶

Dosas (humeral factors)	<i>Pitta prakopa</i> (aggravation) resulting into vitiation of <i>Shamana & vyana vayu</i> , which in turn it vitiates the <i>pachaka, alochaka, bhrajaka pitta, and keldaka kapha</i>
Dhatus (body tissues)	<i>Rasa, Raktha, Mamsa, Meda.</i>
Malas (excretory products)	<i>Mutra</i> (urine) and <i>purisha</i> (stool).
Agni (digestive fire)	<i>haragni</i> (digestive juices) and <i>Dhatvagni</i> (tissue metabolism)
Srotas (channels)	<i>Rasavaha</i> (plasma carrying channels), <i>Rakthavaha</i> (vascular channels) and <i>Annavaha</i> (food carrying channels)
<i>Srota dusti lakshanas</i> (symptoms of vitiation of channels)	<i>Sanga</i> (obstruction) and <i>vimargagamana</i> (abnormal/ deviated pathway)
<i>Udbhavasthan</i> alimentary canal (seat of origin)	<i>Amashaya</i> (esophagus and stomach), <i>koshta</i> (thoracic and abdominal cavity) and <i>Mahasotas</i> (alimentary canal)
<i>Sancharasthan</i> (pathway)	<i>Koshta</i>
<i>Vyakthasthan</i> (site of manifestation)	<i>twak</i> (skin), <i>nakha</i> (nail bed), <i>Netra</i> (sclera of eyes), <i>Aanana</i> (face), <i>Koshta</i> and <i>Sakha</i> (extremities).
<i>Svabhava</i> (nature)	<i>Cirakari</i> (chronic)
Type	<i>Koshtasrita</i> (based in thoracic and abdominal cavity) and <i>Sakhasrita</i> (based in deeper tissue).

Sakhasrita kamala⁷: *Vatha kapha pradhana* (predominant)-Aggravation of *vatha* with *kapha* expels the *pitta* from its own site and gets seated in *sakha* and manifest symptoms like yellowish discoloration of eyes, urine, and skin associated with whitish stools, gurgling sound in abdomen, constipation and heavi-

ness in cardiac region. *Koshtasrita kamala⁸* – *pitta pradhana*-Manifest due to excessive aggravation of *pitta* which gets lodged in *koshta*, and it is characterized by deep yellowish discoloration of skin, eyes, nails, and oral cavity, reddish yellowish discoloration of stool and urine, appearance of whole body resem-

bles like frog, impaired sensory functions associated with burning sensation, indigestion, debility, malaise and anorexia. The term *kumbha* refers to *koshta*, hence this is considered as *kumbha kamala*.

Kumbha kamala: Acharya Charaka⁹ explains in *Chikitsa sthana* about *kumbha kamala*, which is due to improper management of *kamala*, resulting in aggravated *dosa* becoming deep seated, and difficult to cure. The general signs and symptoms include: the urine and stool of the *kumbha kamala* affected person is black or yellow in color, edema of the body, reddish color of the face eyes and vomitus, urine, stool are mixed with blood, suffering from severe burning sensation and morbid thirst, constipation, drowsiness, loss of *agni*, in more severe conditions, the patient develops tremors, leading to fainting and loss of consciousness. According to Acharya Susruta¹⁰ in *uttara tantra*, a type of *kamala* is known as *kumbha*, which is characterized by *maha sopham* (extensive edema) and *parvabhedam* (small joint pain). If it is not treated properly, the conditions referred to as *lagharaka* or *alasaka* occurs, with following symptoms: *-jwara* (fever), *angamarda* (body pain), *bhrama* (giddiness), *sada* (debility), *tantra* (stupor), *mamsaadi dhatu kshaya* (depletion of body tissue). Similar to Acharya Susruta, Acharya Vagbhata¹¹ mentions *kumbha kamala* as *adhyadhika sopham uktha* (excessive edema) and considered as *krichrasadhyam* (difficult to treat).

Ayurvedic Line of Treatment

As per the *Brihatrayees*, *kumbha kamala* condition can be treated by doing *Pitta Shodhana* (purification therapy) and *Shamana* (pacification therapy). Acharya Charaka¹² mentions *koshta sodhana* with either *va-*

mana or *viechana* treatment for *pandu*, *kamala* and *kumbha kamala rogi*, followed by *pathya ahara vihara* (wholesome food and activities). Acharya Susruta¹³, mentions that for both *pandu* and *Kamala rogi* the best treatment approach is by administration of *Snehapana* (intake of medicated oil) here done using any *vairechanika ghrita* (ghee medicated with drugs with purgative action) and followed by *pitta Shodhana* (elimination)- through *Virechana* (purgation) procedure. Acharya Vagbhata¹⁴ also states the same as Acharya Susruta in his work *Astanga Hridaya* text. *Pathya bhojana*¹⁵ (wholesome diet)- includes *Yusa* (soup) prepared from *purana Sali* (Red rice), *Yava* (Barley) *godhuma* (wheat), *mugdha* (green gram), *masoor* (masoor dal), *jangal mamsa rasa* (soup of animals of desert region), *patola* (snake gourd), *vridha kushmanda* (ash gourd), *taruna kadaliphala* (small banana).

Case Report

A male patient 61 years of age presented with fever, nausea, severe body pain, poor appetite and yellow discoloration of eye, visited our OPD of SJS Ayurveda hospital, Chennai. The condition was diagnosed as acute hepatitis as per his abdominal USG scan and blood investigation reports. The patient was following allopathic treatment for a period of 2 months prior to coming for Ayurvedic management. The assessment of the patient's conditions was done by the *Ashtavidha pariksha*, general examination and routine blood urine investigations. And the following *Samprapti ghata* was determining for the deciding Ayurvedic treatment protocol.

Table 2: showing the *ashtavidha pariksha* (eight types of examination) (Date: 20/1/2019)

1. <i>Nadi</i> (Radial pulse)	- 80 /minute
2. <i>Mutra</i>	- <i>vikrutha varna</i> (ab color)
3. <i>Mala</i>	- <i>vikrutha varna</i>
4. <i>Jihwa</i> (tongue)	- coated
5. <i>Sabdha</i> (voice)	- normal
6. <i>Sparsha</i> (touch sensation)	- <i>Ushna</i>
7. <i>Drik</i> (color of sclera)	- <i>pitta</i> (yellow)
8. <i>Aakriti</i> (built)	- <i>Madhya</i> (proportionate)

Table 3: showing General physical examination results (Date: 18/1/2019)

Blood pressure:	120/80 mm/Hg
Pulse rate:	80 /min
Respiratory rate:	18/ min
General condition	poor
Pallor:	present
Icterus:	present
Cyanosis:	absent
Clubbing:	absent
Lymph nodes	not palpable
Edema:	absent

Table 4: showing Blood investigation report (Date: 18-1-2019)

Bio-chemical test	Values	Normal range values
Bilirubin total	32.43 mg/dl	2 to 1.2 mg/dl
Bilirubin direct	23.51 mg/dl	≤0.30 mg/dl
Bilirubin indirect	89.2 mg/dl	to 1.0 mg/dl
S.G.O.T	899.7 u/l	> 35
S.G.P.T	831.4 u/l	> 45
Alkaline phosphate	169	to 130

Table 5: showing the routine urine examination report (Date: 18-1-2019)

Contents	Present/absent
Bilirubin pigment salt	present
Albumin	present
Bile salt	present
Bile pigment	present
Pus cell	present

✓ **Complete abdomen USG scan impression report (Date: 18/1/2019): Acute hepatitis.**

Samprapthi

- *Dosha – tridosha*
- *Dushya- rasa, raktha, mamsa,*
- *Srotas – annavaha, rasavaha, rakthavaha, mamsavaha, mutra vaha, purishavaha.*
- *Srotodusti -atipravriti, sanga, vimargagamana*
- *Ama (signs of indigestion) -sama (present)*
- *Agni -mandhagni (poor digestive fire)*
- *Samuthana (site of origin) -amashaya*
- *Adhistana (site of manifestation): netra*

Diagnosis: *Khumbha Kamala (Hepatitis)*

Based on the above the following Ayurvedic management was planned.

Ayurvedic Mangement Protocol

In beginning (Date: 20/1/2019) *shamana Chikitsa* with following internal medicines along with suitable *anupana* (liquid medium) for a period of one month was given:

1. *Vasa guduchyadhi kashyam:* 15ml
Anupana:-60ml of water twice daily morning and evening
2. *Bhumiamalaki kalkam:* 10 mg
Anupana:-a glass of buttermilk once a day
3. *Aryogyavardhini vati* 250mg: 2 tab twice a day.
Anupana:-warm water

Pathya ahara was advised like rice with buttermilk, idly with buttermilk, *Kanchi* (porridge) of *yava*, rice etc. Vegetables like *avarakai* (broad beans), *pooda-langai* (snake gourd) with *moong dal*, pepper and salt,

also *rasam* (soup) with less tamarind and less spicy. **Apathya:** Avoid-Spicy and oily food, non-vegetarian, curd etc.

As for *Shodhana Chikitsa, nithya virechana* (daily mild purgation) was considered after assessing the *rogibala*. *Avipathi choornam:* 10 gm along with warm water as *anupana* was prescribed at bedtime for 15 days.

Follow-up was done every 15 days with a review on the bilirubin level.

Observation:

The patient responded to treatment slowly, but gradually the bilirubin level reduced.

Table 6: showing the gradual decreasing of level of Bilirubin in blood during follow-up:

Follow-up	Date	Bilirubin level
1 st	2/2/19	30 mg/dl
2 nd	22/2/19	22 mg/dl
3 rd	15/3/19	18 mg/dl
4 th	30/3/19	11 mg/dl
5 th	15/4/19	9 mg/dl
6 th	30/4/19	2 mg/dl

Other symptoms like fever reduced within 10 days of medication. The above mentioned *Shamana* internal medications along with *pathya apathy* were advised to continue for 3 more months. Body pain, nausea, poor appetite like symptoms also gradually reduced with the next 2 months, his appetite improved, yellow discoloration of eye also started reducing slowly.

In the month of April patient developed rashes, dryness and itching all over the body, this may be due to seasonal variation resulting in *vatha prakopa*. The following medicines were given on 15/4/19 for 15 days along with previous medicine.

- *Patolakaturhini kashayam* 15ml+60ml of water twice daily,
 - *Nalpamaradi kera thilam* for external application.
- There was symptomatic relief within 5 days itself.

Result: By the end of second week of May 2019, almost 4 months after 1st visit, all symptoms like fever, weakness of body, body pain, yellow color of the eye, and dryness of the body reduced completely. The following shows the blood report on the day of final visit.

Table 7: Showing comparison between blood investigation reports before and after treatment.

Bio-chemical test	Before treatment (Date: 18-1-2019)	After treatment (Date: 10/5/2019)	Normal range values
Bilirubin total	32.43 mg/dl	0.1 mg/dl	2 to 1.2 mg/dl
Bilirubin direct	23.51 mg/dl	0.39 mg/dl	≤0.30 mg/dl
Bilirubin indirect	89.2 mg/dl	0.61 mg/dl	0.2 to 1.0 mg/dl
S.G.O.T	899.7 u/l	19 u/l	0 to 35
S.G.P.T	831.4 u/l	21u/l	0 to 45
Alkaline phosphate	169	90	40 to 130

DISCUSSION

The viral infection resulting in the inflammation of hepatocytes of liver is termed as Hepatitis. The infected patient is observed with the warning signs include-Flu like symptoms initially along with malice, muscle

and joint ache, fever, fatigue etc. More specific symptoms include dark colored urine and yellow discoloration of the skin, mucosa, sclera and other tissue fluids. When the condition is persisting for less than 6

months it is considered as Acute and Chronic when it persists longer.

According to Ayurveda, hepatitis or jaundice is acknowledged as *Kamala roga*, caused mainly due to impairment of *pitta dosha* and *rakta dhatu*. The condition occurs due to *Koshta gata Pitta*, *Pitta Rakta dushti*, and *Yakritasrita Pitta dushti*. In this condition, aggravated *pitta dosha* further vitiates *rakta* and *mamsa* producing *Kamala*. It has two types- *Koshtasrita Kamala* and *Sakhasrita Kamala*. In *kumbha kamala* the term *kumbha* refers to *koshta*, hence this is considered as *Koshtasrita Kamala* which is a chronic condition. The diagnosis criteria for hepatitis consist of examination of skin, mucous membrane, and stool color, liver function test though blood investigation. In *Kamala*, *Ashtavidha pariksha* and *Dasavidha pariksha* forms the main diagnostic index. Assessment of *Agni*, *Bala*, *Dosha vridhhi*, *Dhatu* concerned is required to decide the Ayurvedic therapeutic measures. In *Koshtasrita Kamala*, *Tikta rasa* (drugs with bitter taste) *prayoga*, *koshta Shodhana* with either *vamana* or *virechana* followed by *pathya ahara vihara* (wholesome food and activities) are recommended.

In the present case scenario, a male patient 61 years of age presented with fever, nausea, severe body pain, poor appetite and yellow discoloration of eye. Initially based on modern diagnostic criteria such as abdominal USG scan and blood investigation report- was diagnosed as acute hepatitis and was following allopathic treatment for a period of 2 months prior to coming for Ayurvedic management. Based on the assessment of the patient's conditions by the *Ashtavidha pariksha*, general examination and routine blood urine investigations – a *Samprapti ghata* was determined and diagnosed as *khumbha kamaa* and an Ayurvedic treatment protocol was designed.

Primarily as *Shamana Chikitsa*, internal medications including *Vasa guduchyadhi kashayam*¹⁶, *aryogyavardhini vati*¹⁷ and *bhoomiamlaki kalkam*¹⁸, which have *tikta rasa pradana* with mild *virechana karma*, was given. *Avipathi choornam*¹⁹ was given as *nithya virechana* (mild daily purgation) as *Shodhana Chikitsa*. These Ayurvedic formulations have already

been proved as very effective for hepatitis (*kamala*) management.

Vasa guduchyadhi kashayam include *Vasa* (*Adhatoda vasica*), *Guduchi* (*Tinospora cordifolia*), *Katuki* (*Picrorhiza kurroa*), *Boonimba* (*Andrographis paniculata*) and *Nimba Twak* (*Azadirachta indica*) which have actions such as *tridosha hara* specifically *pittahara*, *pittarechana*, anti-inflammatory, hepto-protective, *deepana*, *jwarahara*, neuroprotective, *rasayana*, *raktha shodhana*, *srotoshodhana* properties. *Aryogyavardhini vati* (contains mainly *Katuki* 50%) is anti-inflammatory and anti-viral property. This drug is extensively used in hepatic disorder. *Bhoomiamlaki kalkam* (*phyllanthus niruri paste*): It has the property of anti-viral, anticancer, anti-inflammatory, antibacterial, hepto-protective effect. *Pathya ahara* like rice with buttermilk, idly with buttermilk, *Kanchi* (porridge) of *yava*, rice etc, were advised. *Apathy* was to avoid-spicy and oily food, non-vegetarian, curd etc.

The above-mentioned drugs along with *pathya apathy* were advised for a period of 4 months. Regular follow-up for every 15 days was done, and the bilirubin level was taken on these days to assess the respond to the management. The patient responded to treatment slowly, but gradually the total bilirubin level reduced from **32.43** mg/dl (Date: 18/1/2019) to **0.1** mg/dl (Date: 10/5/2019).

Sometime during the month of April, the patient developed rashes, dryness and itching all over the body and the following medicines such as *Patolakaturohini kashayam* instead of *Vasaguluchyadi kasayam* and *Nalpamaradi kera thilam* for external application for a period of 15 days was given. Symptomatic relief was observed within 5 days itself. This may be due to seasonal variation (*Ritu Sandhi*- seasonal junction), slight deviation from *pathya apathy ahara*, resulting in *kapha pitta prakopa* with *vata avarana* and manifestation in skin. Both *Patolakaturohini kashayam* and *Nalpamaradi kera thilam* have *kapha pitta hara* properties and helped in reducing the symptoms.

The probable mode of action of Ayurvedic treatment and medicines: - *Kumbha kamala* is *kapha pitta pradhana* disease, and there is *Sroto avarodham* (obstruction in channels) in *raktha vaha Srotas*. *Vasa*

guduchyadi kashayam mainly acting on liver cells as *pittarechana*, helping in eliminating the aggravated *drava rupa pitta* (bile secretions), at the same time it helped in *tridosha hara* in general, *deepana* and *sroto shodhana*, thereby bring about *rakta prasadana* (purification of blood). *Katu tiktha rasa* of *Bhumiamalaki* and *arogyva vardhini*, which is also *pittarechana* in property in general helped in reducing the *srotoavarodha*. *Arogyva vardhini vati* is considered as a liver tonic, and in healing the tissues. *Avipatti choornam* prepared from *trikatu*, *trijaatam*, *musta*, *vidangam amalaki*, *thrivruth* and *sitha* is useful in problems which occur due to increased *drava* (liquid) quality of *pitta* and act as purgative. The combined mode of action of *kashaya*, *kalka*, and *vati* showed mild *virechana*, *Sroto Shodhana*, *raktha prasadana* and *deepana*, which helped in eliminating the aggravated *doshas* and reducing the symptoms.

The gradual response may be due to following factors such as age, job related stress, not keen on following the prescribed *pathya apathya ahara* and mental stress due to the illness.

Other symptoms like fever reduced within 10 days of starting Ayurvedic medication. Body pain, nausea, poor appetite like symptoms also gradually reduced with the next 2 months, his appetite improved, yellow discoloration of eye also started reducing slowly.

CONCLUSION

In this case study, hepatitis was acknowledged as *kumbha kamala* and internal medications such as *Aryogyavardhini vatika*, *Vasa guduchyadi kashaya*, *Bhoomiamalki kalka*, *avipatti choornam* along with *pathya apathy ahara vihara* proved to be very effective, without any complication.

ACKNOWLEDGEMENT:

I thank Sri Chandrasekarendra, Saraswathi Viswa Maha Vidyalaya, Enathur, Kanchipuram, Tamil Nadu and Sri Jayendra saraswathy Ayurveda College and Hospital, Nazarthpet, Chennai, for providing support for Publication of this article.

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Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: Geetha Kumar: Ayurvedic Management In Hepatitis - A Case Study. International Ayurvedic Medical Journal {online} 2020 {cited March, 2020} Available from: http://www.iamj.in/posts/images/upload/3152_3159.pdf