

## Ayurveda management of *Koshthashrita Kamala* (Hepato-cellular Jaundice): A case report

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### Abstract:

*Kamala* is a condition characterised by yellowish discoloration of skin, eye, and mucous membrane. *Kamala* is mainly cause due to excessive intake of *ushna* (hot), *tikshna* i.e. *pitta prakopaka* (aggravating) diet and regimen. Due to this the increased *pitta dosha* with vitiation of *rakta* (blood), *mansa* (muscles) *dhatu* results in *kamala roga*. Here in, we report a case of young 26-year-old female who had complains of *chhardi* (vomiting), *ajirna* (indigestion), *dourbalya* (weakness) with increased liver function test value i.e. S.G.P.T-2490U/L. On physical examination and as per the liver functional test this case was diagnosed as *Koshthaashrita Kamala* which is very similar to Hepatocellular jaundice due to its resemblance. In Ayurveda, *virechana* is the first line of treatment of *Kamala* followed by *virechaka* (purgative), *Rasayana* (Rejuvenator) and *Dhatuwardhaka* (nourishes body tissues) treatment for treating *Kamala roga*. The treatment protocol included internal administration of herbomineral formulations i.e. *Arogyavardhini rasa*, *Tapyadi lauha* and *Phalatrikadi kwath* with *Pathya palana* for twenty days. Further subsiding of symptoms was observed after sixteen days of treatment. Liver function test was improved by 27 U/L as compared to before (2490 U/L).

**Key words:** Ayurveda, Hepatocellular Jaundice, *Kamala*, *Virechana*

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**Introduction:**

According to Acharya Charaka, *Kamala* is considered as an advanced stage of *panduroga* (anaemia). It is classified as a *pittaja nanatmaja vyadhi* and a *rakta pradosaja vyadhi*.<sup>[1]</sup> It occurs due to unhygienic food, road side food, contaminated drink etc. *Kamla* can be correlated with jaundice because of similarities in their causes, symptoms, pathophysiology etc. Jaundice is defined as a condition in which yellowish staining of skin, mucous membranes and sclera occurs due to the deposition of bilirubin.<sup>[2]</sup> Also stool and urine become red or yellow in colour. Patient develops complexion like that of frog (*bhekvarna*).<sup>[3]</sup> Patient gets emaciated and suffers from burning sensation, indigestion, weakness, anorexia and senses get impaired. Modern medical science only has symptomatic treatment for *kamla* and no specific treatment. Ayurvedic texts describe *chikitsa sutra* of *kamala* as “*kamali tu virechane*”.<sup>[4]</sup> The basic concept behind this is that *rakta* and *pitta dusti* are responsible for *Kamala* and regular *virechana* and timely intervals helps to get rid of vitiated *rakta* and *pitta*.

**Case history:**

A 26-year-old female patient came to OPD on 9/3/2019 with complaints of *chardi* (vomiting), *ajirna* (indigestion), *dourbalya* (weakness) since last 3 days. Patient had *ajirna* (indigestion) since last 10 days.

There was found yellowish discoloration of sclera, nails and skin.

Patient complained of dark yellow coloured urination 4-5 times in a day. Patient did not have any kind of addiction. She was not suffering from hypertension, diabetes, anaemia and any other major illness.

For this case patient was advised laboratory investigations and USG abdomen, Routine blood and urine investigation for CBC, RBS, HBsAG, and URINE R-M were within normal limit except increased SGPT and Serum Bilirubin. Based on clinical findings, examination and laboratory investigation this patient was diagnosed as *koshthaashrita kamala* (Hepatocellular jaundice).

**Table no.1: Lab Investigations at Baseline (9/3/2019)**

<b>Hemogram</b>			
Hb	11.4 g/dl	DLC	
Total RBC count	5.02 mill/cmm	Polymorphs	59 %
P.C.V	35.9 %	Lymphocyte	36 %
M.C.V	72.0 femtolitre	Eosinophils	03 %
M.C.H.	22.8 pg	Monocytes	02 %
M.C.H.C.	31.6 g/dl	Basophils	00 %
R.D.W.	17.4 %	Platelet count	3,36,000 /cmm
Total WBC count	5500 /cmm	Polymorphs	59 %
<b>Blood sugar</b>			
RBS		72.0 mg/dl	
<b>Urine analysis</b>			
Physical examination		Microscopic examination	
Colour	Deep yellow	Red cells	Absent/H.P.F
Appearance	Clear	Pus cells	Occasional/ H.P.F
Chemical examination		Epithelial cells	Occasional/ H.P.F
Reaction	Acidic	Casts	Absent/H.P.F.
Sp.gravity	Q.I.	Crystals	Absent
Protein	Trace	Trichomonas vag.	Absent
Glucose	Absent		
<b>S. Bilirubin</b>			
S.Bilirubin (Total)		5.4 mg/dl	
S.Bilirubin (Direct)		4.7 mg/dl	
S.Bilirubin (Indirect)		0.7 mg/dl	
<b>S.G.P.T(ALT)</b>			
S.G.P. T		2490 U/L	

**Table no.2: USG Abdomen (9/3/2019);**

Liver, Gall bladder, Pancreas, Spleen, Kidneys, Urinary bladder were found normal.
Impression: Pericholecystic & peri portal cuffing & few enlarged peri portal lymph nodes.

**Table no.3: Prescribed treatment with Dose and Duration;**

Medicine	Dose	Duration
<i>Phaltrikadikwath</i> <sup>[5]</sup> (GAU pharmacy)	3 Table spoon BD in decoction form	20 days
<i>Arogyavardhinivati</i> <sup>[6]</sup> (Dhutpapeshwar)	1 tablet TDS	20 days
<i>Tapyadiloha</i> no.1 (Dhutpapeshwar) <sup>[7]</sup>	1 tablet BD	20 days

**Table no.4: Liver function tests before and after treatment**

Liver function test (LFT)	Normal range value	On 9/3/2019	On 14/3/2019	On 25/3/2019
S.G.P.T.	05-45 U/L	2490 U/L	1070 U/L	27 U/L
S.bilirubin total	0.1-1.2 mg/dl	5.4 mg/dl	2.80 mg/dl	--
S.bilirubin direct	0-0.3 mg/dl	4.7 mg/dl	2.00 mg/dl	--
S.bilirubin indirect	0-0.9 mg/dl	0.7 mg/dl	0.80 mg/dl	--

### Results and Discussion:

Treatment was advised for 20 days (Table no.3). With this treatment liver function tests were repeated after six days of treatment. The patient had shown remission in vomiting and also in associated symptoms after three days of treatment. Patient has been made to follow *Pathya* (wholesome) strictly as described in classics. Further subsidence was observed in all symptoms after sixteen days of treatment (Table no.4).

In Ayurveda *virechaka* (purgative), *Rasayana* (Rejuvenator) and *Dhatuwardhak* (nourishes body tissues) treatment is a concept used in *Kamala* disease where pathological factors are expelled out of the body by *pitta virechana*<sup>[8]</sup>. The Ayurvedic formulations selected for this case were planned considering aims to improve liver

function and thereby improving digestion and metabolism. For this purpose we used formulations as presented above in Table no.3 which have actions mainly on digestive systems. Selection of formulations was based on principle of Ayurveda therapeutics involving improving the *agni* and administering *Rasayana* (Rejuvenator) drugs to offer increment in liver function and *dhatuwardhana* (nourishes body tissues).

*Arogyavardhinivati* contains *katuki* (*Picrorhiza kurroa*) as main ingredient having *tiktarasa* and *kaphapittahara dosha karma*. It has purgative property due to presence of *Katuki* (*Picrorhiza kurroa*) as *Kamala* is *pittapradhana vyadhi* and the *pitta virechana* is line of treatment for this disease. So, this formulation increases appetite and regulate the *pitta* secretion. As per its characteristics *Arogyavardhinivati* improves digestion power, clear waste

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products from body. *Tapyadiloha* have ingredients i.e. *swarnamaksika bhasma*, *shudhdha shilajatu*, *roupya bhasma*, *mandoora bhasma*, *triphala*, *chitraka*, *trikatu*, *vidangas* it is *agnideepak* (enhance digestive fire), *ojovardhaka* (increased immunity), *rasayana* (Rejuvenator) and *raktavardhaka* properties. Mainly *roupya bhasma* increases *majja* and *shukradhatu* and acts as *balya* (improved strength) and *vatashamak*. In terms of pharmacodynamic properties, the individual drugs in *Phalatrikadikwath* have maximum *katu-kashayarasa*.<sup>[9]</sup> Its *agnideepana* function increase metabolism and reduces *ama* formation by virtue of *tikta-katurasa*. Ingredients of *Phalatrikadi kwath* are individually evaluated for their hepatoprotective function. Choleric and cholegogue action of *katuki* (*Picrorhiza kurroa*), has been reported by fall in serum bilirubin due to clearance of bile passage. Antioxidant properties of formulation ingredients' i.e. *Amalaki* (*Phyllanthus emblica*), *Haritaki* (*Terminalia chebula*), *Vibhitaki* (*Terminalia bellirica*), *Nimba* (*Azadiracta indica*) they help to protect liver disease. While *Guduchi* (*Tinospora cordifolia*) is an important ingredient of this *kwath*, as established has an immune modulatory effect.<sup>[10]</sup> Patient cured with this Ayurvedic intervention without any complication in fifteen days.

Hence it proves the efficacy of Ayurveda treatment in the management of *kamala* when followed by *pathya* (wholesome) *palana*. Patient strictly avoided oil because liver function is already decreased during

*kamla* which is further hampered by intake of *snigdha* (unctuous) *guru* (heavy) diet and *pishtanna* (Flour items) due to *agnimandhya*, *katu rasa* and *ushnaviryaaahar* also evaded by patient. In *viharaatapasevan* (exposure to sun) is strictly avoided. Patient took only boiled mung, boiled rice and *murmura* which was fried in minimum amount of ghee.

### Conclusion:

On the basis of above discussion it can be concluded that *pittavirechaka*, *rasayana* and *dhatuvardhaka* drugs give excellent results in *Kamala* (Hepatocellular jaundice). This protocol should be evaluated in more number of patients to demonstrate line of treatment of *Kamala* (Hepatocellular jaundice) for its scientific validation.

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