

CONCEPTUAL STUDY OF KAMALA (JAUNDICE)Singh Madhu¹ Sharma Neelema² Sharma Umesh Chander¹¹Bundelkhand Government Ayurvedic College, Jhansi, Uttar Pradesh, India²Research Officer Incharge, N. V. A. R. I., Jhansi, Uttar Pradesh, India**ABSTRACT**

This review article deals with the liver disease *Kamala* (jaundice). Liver has been clinically implicated in the pathogenesis of this disease and liver cell dysfunction is accountable for the various constitutional symptoms. *Nidana* (cause), *Rupa* (symptoms), *Samprapti* (pathogenesis) and *sadhya-asadhyata* (prognosis) has been illustrated in accordance with Ayurvedic classics. Yellow discoloration of eye, skin etc. signals the onset of this disease *Kamala* which in parlance is correlated with disease of biliary system in general and jaundice in particular. Unconjugated and conjugated hyperbilirubinaemia is just compatible with *koshthashrita* and *shakhashrita Kamala* respectively.

Keywords: *Kamala, Haridra, Shakhashrita, Koshthashrita, Liver*

INTRODUCTION

In *Ayurveda*, the renowned Ayurvedic physician and surgeon Acharya Charak and Acharya Sushruta obviously recognized the condition like *Kamala* which has great resemblance with the jaundice of modern medical sciences. Disease *Kamala* is related to Liver. The liver plays a major role in the maintenance of metabolic homeostasis. The development of clinically important liver disease is accompanied by diverse manifestation of disordered metabolism⁶. One of such disorders that is characterized by yellow staining of all the tissues due to increased level of bile pigment in circulation. *Kamala* is considered a purely *paittik rog* caused by *Rakta dushti* due to vitiated *pitta* and vice-versa¹.

Classification of *Kamala*:

Kamala has been classified as:

- *Koshthashrita*
- *Shakhashrita*

In modern science jaundice is classified in three types:⁷

- Haemolytic
- Obstructive
- Hepatocellular

Koshthashrita Kamala which occurs as a result of *pitta vridhi* in *Rakta dhatu* after the use of its aggravating causes has similarity with the mechanism of pre hepatic jaundice or Haemolytic jaundice in which more bilirubin is found in blood due to excessive destruction of R.B.C and is not excreted. Adequately by liver resulting in hyperbilirubinaemia responsible for various symptoms like yellow discoloration of eye, skin etc.

Shakhashrita Kamala is produced due to the obstruction of normal *pittavaha srotas* by *kapha* and *vata*, resulting in *pitta vridhi* in the *rakta dhatu*. In obstructive jaundice, there is same mechanism in which the bile ducts are obstructed by gall stone or

other causes and bile is accumulated in liver, resulting in elevation of blood bilirubin level responsible for yellowness of eye, skin, mucous membrane and stool become clay colored due to lack of bile in the intestine.

In Hepatocellular jaundice, when there is complete obstruction of all the bile canaliculi due to their compression by oedematous hepatocytes, jaundice is produced just like *shakhasrita Kamala*. When there is incomplete obstruction or when all the bile canaliculi are not obstructed then it is produced like that of

koshthashrita Kamala. Therefore the mechanism of Hepatocellular jaundice can be compared to *koshthashrita Kamala* or *shakhashrita Kamala* in different individuals depending upon the severity of the disease.

Nidana (causes) of *Kamala*:

Nidana of *koshthashrita Kamala*:^{1,2,4,5}

1. *Aharaj nidana* (unwholesome diet)
2. *Viharaaj nidana* (unwholesome regimen)
3. *Mansika nidana* (psychological factor)
4. *Nidanarthakar Rog* (Disease causing diseases)
5. Other *nidana* (miscellaneous)

Table 1: Nidana of Kamala

<i>Aharaj nidana</i>	<i>Vihara nidana</i>	<i>Mansika nidana</i>	<i>Nidanarthkar roga</i>	<i>Other nidana</i>
Excessive intake of <i>amla lavan, katu, kshar ushna, tikshna</i> (intake of hot, spicy and junk food)	<i>Ati vyayam</i> (excessive exercise)	<i>Kama</i>	<i>Pandu Roga</i> (anaemia)	<i>Garvisha</i> (slow poison)
<i>Til, sarshap, alsii tail</i>	<i>Atimaitihun</i> (excessive coitus)	<i>Krodha</i> (anger)	Some types of fever i.e. <i>pitttaj javar, visham javar, Rakta dhatugat javar</i>	Intake of <i>sneha</i> in contrary period
<i>Pinyak</i>	<i>Diwasvapana</i> (sleeping at day time)	<i>Chinta</i> (stress)	<i>paittik gulam</i>	<i>Prtikaramritu vaishmya</i>
<i>Nishpav</i>	<i>Vega vidharan</i> (stoppage of natural urge)	<i>Bhay</i> (fear)	<i>paittik visarp</i>	<i>Prakrit pitta prakop kala</i>
<i>Mans</i>		<i>Irshya</i> (jealousy)	<i>Plihodar</i>	
<i>Vidagdha anna</i>		<i>Shoka</i> (sorrow)	<i>Yakritodar</i>	
<i>Virudha anna</i>			<i>Hridrog</i>	
<i>Madya</i>				
<i>Kulath etc.</i>				

Nidana of *shakhasrita Kamala*:^{4,5}

1. Excessive intake of *Ruksha, Shita, Guru and Madhur Ahar*. (unwholesome diet)
2. *Ati vyayam* (excessive exercise)
3. *Vega nigras* (stoppage of natural urges)

Table 2: Rupa of Kamala (symptoms)

<i>Kamala Rog</i>	Jaundice
<i>Haridra netra</i>	Yellowness of conjunctiva

<i>Haridra twak</i>	Yellowness of Skin
<i>Haridra nakh</i>	Yellowness of nails
<i>Haridra anan</i>	Yellowness of buccal cavity
<i>Peet sakrita, urine</i>	Yellow stool and urine
<i>Bhenk varna</i>	Greenish yellow tinge of body
<i>Daha</i>	Burning sensation of the body
<i>Avipak</i>	Indigestion

<i>Daurbalya</i>	Weakness
<i>Hrillas</i>	Nausea
<i>Chardi</i>	Vomitting
<i>Shotha</i>	Edema
<i>Jawar</i>	Fever
<i>Bhinna varcha</i>	Diarrhoea
<i>Tilpishta varcha</i>	Clay coloured stool
<i>Hikka and shwas</i>	Hiccough And Bodyache
<i>Angmarda</i>	Bodyache

Samprapti of *Kamala*: (pathophysiology of *Kamala*): Here the factors which are taking part in the pathophysiology of *Kamala* are *Agni, Ama, Dosha, Dushya, Srotas*.

In *koshthashrita Kamala*, the excessive *pitta vridhi* due to all the above mentioned *nidana*, produces abnormality in the *Raktavaha srotas* and *Raktvaha srotomula*, liver in which *dosh dushya sammurchana* also occurs. Then *ati pravriti* (excessive flow) of *pitta* occurs through *pitta vaha srotas* into the *koshtha*, resulting in the dark yellow colouration of urine and stool. Vitiated *vata* also causes *ati-pravriti* of *pitta* in *Rasa-Rakta* etc. *Dhatus*^{4,5}. So when this *vridha pitta* reaches the sites of the clinical manifestation of *Kamala* disease via *Rasa-Rakta Dhatus*, it produces yellow coloration just like that of *Haridra* in these sites i.e. in eyes skin, face nail, urine etc. which is the cardinal signs of *Kamala*.^{1,3}

In *shakhasrita Kamala*, due to excessive intake of *shkhashrita nidana srotas sangha* of *pittavaha srotas* occurs. Therefore *pitta* cannot reach into the *koshtha* through its normal pathway and the stool is not colored there due to absence of *pitta*, so the patient excretes *tilpishtha* (clay) colored stool. Due to obstruction of *srotas*, *pitta* begins to accumulate in liver, from where it is sent to the eyes, skin, nails and buccal cavity etc. for yellow discoloration of these sites.

Sadhya-Asadhyata of *Kamala* (prognosis of the disease)^{1,4,5}

When *Kamala* becomes chronic and their appearance of *ruksha* (dryness) in *sharir dhatu*, it is called another stage of *Kamala kumbha kamala*. This stage is *krichyasadhya* on the appearance of *Shotha* (oedema) and *parvabheda* (joint pain) due to negligence in the treatment of *Kamala*.

When there is too much vitiation of the *doshas* in *kumbha Kamala*, the patient suffers from yellowish black coloured of his stool and urine, oedema, red colouration of eyes, mouth, vomited matter, drowsiness, loss of appetite, unconsciousness. A patient of *Kamala* who develops these symptoms becomes *asadhya* in treatment.

Thus it is obvious from the above description that *Kamala Roga* is *sukhasadhya* in the beginning and becomes *krichyasadhya* with the appearance of some other symptoms like oedema, joint pain etc.

DISCUSSION AND CONCLUSION

Kamala is a condition where the skin, eye and mucous membrane take yellow discoloration. In modern science jaundice is considered as symptom of liver disorder whereas in *Ayurveda Kamala* is taken as disease. In *Ayurveda*, increased intake of oily, spicy, hot and alkaline food, are depicted for aggravation of *pitta dosha*. The aggravated *Pitta* then impairs the blood and the muscle tissue of the liver, causing blockage in the channels of the liver and thus *Pitta* is thrown back into the blood leading to discoloration of the eyes and skin. Sleeping in the daytime, excessive physical work, overindulgence in sexual activity, suppressing the natural urges of the body, and psychological factors like fear, anger, and stress can also be causative factors for

Kamala. This disease is *pitta dosha* dominating disease so persons those are having *pitta prakriti* are more prone for getting this disease. So we can escape ourselves from many diseases by taking *pathya* (wholesome) *ahar vihar* according our *prakriti*. Types of *Kamala* and jaundice have great resemblance.

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