CONCEPTUAL STUDY OF KAMALA (JAUNDICE)

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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, Shakhshrita, 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 metabolism. 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 paitik rog caused by Rakta dushti due to vitiated pitta and vise-versa.

Classification of Kamala:
Kamala has been classified as:
- Koshthashrita
- Shakhshrita

In modern science jaundice is classified in three types:
- Haemolytic
- Obstructive
- Hepatocellular

Koshthasrita 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.

Shakhshrita Kamala is produced due to the obstruction of normal pittavaha srtotas 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 shakhashrita 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:**

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

### Table 1: Nidana of Kamala

<table>
<thead>
<tr>
<th>Aharaj nidana</th>
<th>Vihara nidana</th>
<th>Mansika nidana</th>
<th>Nidanarthkar roga</th>
<th>Other nidana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive intake of amla, katu, kshar ushna, tikshna (intake of hot, spicy and junk food)</td>
<td>Ati vyayam (excessive exercise)</td>
<td>Kama</td>
<td>Pardu Roga (anaemia)</td>
<td>Garvisha (slow poison)</td>
</tr>
<tr>
<td>Til, sarshap, alsi tail</td>
<td>Atimaithun (excessive coitus)</td>
<td>Krodha (anger)</td>
<td>Some types of fever i.e. pittaj javar, visham javar, Rakta dhatugat jawar</td>
<td>Intake of sneha in contrary period</td>
</tr>
<tr>
<td>Pinyak</td>
<td>Diwasvapana (sleeping at day time)</td>
<td>Chhinta (stress)</td>
<td>paittik gulaam</td>
<td>Prakramritvaavishmya</td>
</tr>
<tr>
<td>Nishpav</td>
<td>Vega vidharan (stoppage of natural urge)</td>
<td>Bhay (fear)</td>
<td>Paittik visarp</td>
<td></td>
</tr>
<tr>
<td>Mans</td>
<td>Irshya (jealousy)</td>
<td>Plihodar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vidagdha anna</td>
<td>Shoka (sorrow)</td>
<td>Yakritodar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Virudha anna</td>
<td></td>
<td></td>
<td>Hridrog</td>
<td></td>
</tr>
<tr>
<td>Madya</td>
<td></td>
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<tr>
<td>Kulath etc.</td>
<td></td>
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</tbody>
</table>

**Nidana of shakhastita Kamala:**

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

### Table 2: Rupa of Kamala (symptoms)

<table>
<thead>
<tr>
<th>Kamala Rog</th>
<th>Jaundice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haridra netra</td>
<td>Yellowness of conjunctiva</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Haridra twak</th>
<th>Yellowness of Skin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haridra nakh</td>
<td>Yellowness of nails</td>
</tr>
<tr>
<td>Haridra anan</td>
<td>Yellowness of buccal cavity</td>
</tr>
<tr>
<td>Peet sakratri</td>
<td>Yellow stool and urine</td>
</tr>
<tr>
<td>Bhenk varna</td>
<td>Greenish yellow tinge of body</td>
</tr>
<tr>
<td>Daha</td>
<td>Burning sensation of the body</td>
</tr>
<tr>
<td>Avipak</td>
<td>Indigestion</td>
</tr>
</tbody>
</table>
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 koshthashrīta Kamala, the excessive pitta vridhi due to all the above mentioned nidana, produces abnormality in the Raktavaha srotas and Raktvaha srotamula, 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 shakhsrīta Kamala, due to excessive intake of shkhashrīta 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.

Sadhyā-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 krichyasadhyata on the appearance of Shotha (oedema) and parvabhedha (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 sukhasadhyata in the beginning and becomes krichyasadhyata 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
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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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