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Review Article

CONVENTIONAL TAXONOMY AND TREATMENT ETIQUETTE OF KAMALA W.S.R. TO MODE OF ACTION OF NAVAYAS LAUHA CHURNA ON SHAKHASHRIT KAMALA (HEPATO-CELLULAR JAUNDICE)

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ABSTRACT

The scientific taxonomy of disease make easy to study, recognition of etiology, diagnosis and planning of treatment of any ailment. The traditional cataloging of diseases have been described in traditional system of medicine is very scientific as well as practical also. Like classification of other ailment, *Kamala* has been classified basically in various groups like *Koshthashrita* (haemolytic jaundice) & *Shakhashrita* (hepato-cellular jaundice), *Swatantra* (independent) and *Partantra* (manifest as a complication of another disease), *Bahu-pitta* (due to excess generation of bilirubin) and *Alp-pitta* (due to retention of bilirubin). But in this article, the elaborated taxonomy of *Kamala* is described on the behalf of four types of *Samprapti* i.e. *Vidhi*, *Vikalpa*, *Pradhanya* and *Bala* which have great importance in diagnosis and management of *Kamala* ailment.

Everyone knows that abolition of etiology and cleavage of pathological chain of ailment is the steady and complete healing of disease. The treatment protocol of *Kamala* is entirely based on this theory. There are two segment of treatment of *kamala*, first is nonspecific which is common and applicable for all kinds of *Kamala* and second is specific treatment which is explicit for definite types of *Kamala*. In *Ayurvedic* pharmacology, the mode action of drugs and how to cleavage the pathogenesis of ailment is not described but here it is illustrated very clearly and in a mannered way. The *Navayas lauha churna* has three groups of herbal drugs i.e. *Trimada*, *Trikatu* and *Triphala* and one group of *Lauha bhasma*. Each groups of drugs of this medicine; where (at which step of pathogenesis) and how to act and cleavage the pathogenesis of *Shakhashrita kamal* (hepato-cellular jaundice) are narrated with scientific, logical and evidence based discussion and as well as institution of liaison with contemporary science.

KEYWORDS: *Koshtha* and *Shakhashrit kamala*, *Bhenkvarna*, *Bahu-pitta* and *Alp-pitta*, *Vidhi* and *Vikalp samprapti*.

INTRODUCTION

There is a physiological equilibrium established in body in between production & excretion of *mala* to maintain the healthy life. Like above, if any physiological & pathological conditions arise, to either enhance the production of abnormal *Pitta* or reduced the excretion of abnormal *Pitta* from the body to turn out a *kamala* disease. Hence *kamala* is a result of amassing of abnormal *Pitta* (bilirubin) in the body and characterized by *Bhekvarna* (yellowish

discoloration) of skin and others. The word *Kama* in *Kamala* has a special meaning i.e. 'loss of appetite' in the place of general meaning. Hence who is suffered from anorexia is known as *Kamala*.

Most clinical features of jaundice are much more analogous to *Kamala* ailment of traditional system of medicine in diverse aspects. The textual and pathological classification of *Kamala* has a vast significance in diagnosis and healing of

disease. On the whole, there are two types of *Kamala*; *Koshthashrit* and *Shakhshrit*. *Koshthashrita kamala* arises due to excess break down of erythrocytes, it is also called *Bahupitta kamala* because it increase the production of *Pitta*. Second *Shakhshrita kamala* arises due to obstruction in *Pittavaha srotas* (intrahepatic cholestasis), here the cause kamala is only reduced the excretion of bilirubin, so called *Alp-pitta kamala*. Both types of jaundice are very much close to the haemolytic and hepato-cellular jaundice of contemporary science.

AIMS AND OBJECTIVES

The accessible scientific and inherent essential review is done with following objectives:

- 1) To make available a scientific and conventional taxonomy of *Kamala* disease.
- 2) To ascertain the healing principle of *Kamala* ailment.
- 3) To endeavor to establish the breakdown of pathogenesis of *Shakhshrit kamala* by *Navayas lauha churna*
- 4) To advocate a liaison in ancient and modern view about facts of the article.

MATERIAL AND METHODS

Taxonomy of the *Kamala*

Kamala ailment can be classified on account of the following points-

A. On the basis of Ayurvedic texts-

1. According to *Charaka samhita*^[1]

- 1) *Koshthashrita kamala*
- 2) *Shakhshrita kamala*

2. According to *Sushruta samhita*

- 1) *Kamala*
- 2) *Kumbhasahva (kumbhakamala)*
- 3) *Halimaka*
- 4) *Lagharaka or Alasa*

3. According to *Acharya Vagbhata & Madhukosha*^[2]

- 1) *Swatantra* (independent) *Kamala*
- 2) *Partantra* (as a complication) *Kamala*

B. On the basis of *Samprapti* (Pathogenesis)

1. *Vidhi samprapti*:

- 1) *Koshthashrita kamala*
- 2) *Shakhshrita kamala*

2. *Vikalpa samprapti*:

- 1) *Bahu-pitta kamala*
- 2) *Alpa-pitta kamala*

3. *Pradhanya samprapti*

- 1) *Swatantra kamala*
- 2) *Partantra kamala*

4. *Bala samprapti*

- 1) *Mridu* (easily curable)- *Koshtha & Shakhshrita kamala*.
- 2) *Daruna* (chronic and non-easy curable form of jaundice)- *Kumbha kamala, Halimaka and Panaki*.

C. On the basis of *Nanatmaja* and *Samanyaja* ailments

- 1) *Nanatmaj (bahu-pitta) kamala*.
- 2) *Samanyaja (alp-pitta) kamala*.

The pathological and traditional textual classification of kamala is not different, if they have difference though only in the account of classification because every type of *Kamala* can be grouped into textual classification of *Kamala*.

Treatment Protocol

In the treatment protocol of *Kamala* ailment, the following points should be kept in mind before write the prescription:

1) General treatment

a) Prevention and removal of etiology

This is the first and most important treatment part of any disease. Because, the origin of diseases are not possible without causative factors.^[3]

b) *Mridu virechan with Tikta dravya*

Just like above explanation, normally *Pitta* come in G.I.T. and some moiety of it reabsorb into circulation and some part of it passes out through stool. If the patient take the *Virechaka medicine* and go for one or two fresh motion, then the maximum *Pitta* remove through stool because fecal matter does not stay in G.I.T. for longer period and reduce the re-absorption of *Pitta*.^[4]

2) Specific treatment

a) *Koshthashrita kamala* (haemolytic jaundice)

In this type of kamala disease only *Pitta shamaka* treatment should be given because this disease arose due to the vitiation and excess break

down of *Rakta & Mansa dhatus* by abnormal *Pitta*. Hence *Ghrita* (medicated *Ghrita*) is the great *Pitta shamaka* remedy so that should be given in this type of *Kamala roga*.^[5]

In modern medical science, the cause of destruction of R.B.Cs. is mainly due to dyserythropoiesis and hypersplenism. The probable clarification may be that, due to excess break down of erythrocytes, deficiency of R.B.C. takes place and body required to increase the production and maturation of erythrocytes for maintaining the crisis of erythrocytes. For production & maturation of R.B.C, the essential component likes cyanocobalamin, folic acid & thiamin etc. are present in *Ghrita* in rich amount therefore advise the *Ghrita* preparation in this type of *Kamala roga*.

b) *Shakhashrita kamala (Samanyaja pittaja kamala)*

1. *Deepana & Pachana*

Improve the *Agnimandya* by utilization of *Deepana & Pachana* medicines.

2. Removal of obstruction

The origin of this type of *kamala* due to the obstruction of *Pittavaha srotasa* within the liver by abnormal *Kapha* and then aggravating *Vata* spread the abnormal *Pitta* into the *Shakha* & provide the *Haridravarana*. Therefore our treatment plan should be focused on the removal of obstruction of *Kapha & shamana* of *Vata dosha*.^[6]

There are five factors responsible for returning the *Dosha* from *Shakha* to *Koshtha* which are illustrated as; 1- *Vridhya* (Increase the aggressiveness and motility of *Doshas* by utilizing the *Teekshna, Ushna & Katu drugs*), 2- *Vishyndnata* (increase the fluidity of *Doshas* by lyses of *Doshas*), 3-*Pakata* (*Ama dosha* is sticky in nature, so it does not pass in *Srotasa* easily after converting into *Pakva dosha*, they become *Laghu* and unstuck and therefore readily come into *Mahasrotasa*), 4-*Srotomukha vishodhanata* (removal of obstructions), 5-*Vayoshch-nigrahata* (reducing the aggressiveness of *Vata dosha*).^[7]

On the basis of this pathogenesis and above principle, *Katu, Teekshna, Ushna, & Lavana* should be given until the stool comes to normal color & aggravating *Vata* is reduced.

Probable mode of action of *Navayas churna* on *Shakhashrita kamala*

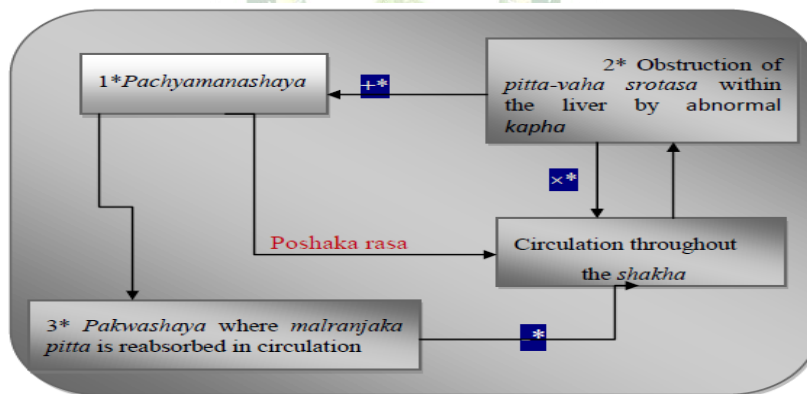


Illustration of mode of action of *Navayas lauha churna*

1. *Trimada (Musta, Vidanga & Chitraka)*

Musta is the *Katu* in *Rasa*, *Laghu* in *Guna* and *Sheeta* in *Virya* while *Vidanga & Chitraka* are *katu* in *rasa* and *Ushna* in *Virya* and used in *Agnimandya* due to their properties of *Deepana & Pachana*. Now it is clear that all these drugs are improve the *Mandagni* and *Ama* condition of *Kamala roga*.

2. *Trikatu (Shunthi, Maricha & Pippali)*

Trikatu is the *Katu* in *Rasa* and *Vipaka*, *Ushna* in *Virya* and *Vata-kapha shamaka*. All these drugs act as mucolytic agent so they lyses and

clear the accumulated *Ama kapha* in lumen of *Pittavaha srotasa* and facilitate the excretion of *Pitta* in *Annvaha srotasa*.

3. *Triphala (Amalaki, Haritaki & Vibhitaka)*

Individual drug has the broad spectrum of functions like *Deepana, Vatanulomana & Bhedana* etc. But commonly *Triphala* is used as a *Mridu virechaka* like mentioned in *Bhavaprakash nighantu*. Due to *Rechaka* property of *Triphala*, reduce the chance of re-absorption of *Malaranjaka pitta* in the circulation and improves the disease.

4. *Lauha bhasma*

According to *Rastarangani*, *Lauha bhasma* is a great medicine for *Shakha & Koshtha-ashrita*

increased *Pitta*. How to reduced *Pitta of Shakha*, it is not readily explained in texts. But indirectly it is mentioned by *Acharya Charaka* i.e. the procedure to bring the *Doshas from Shakha to Koshttha* as mentioned above.

RESULT AND DISCUSSION

The literary meaning of *Koshthashrita* is something dwelling in *Koshtha*, who is something i.e. *Pitta* (Bilirubin). So, in this type of kamala ailment; secretion of bilirubin via liver into *Kostha* (gastro-intestinal tract) does not impede. That is why it is called *Koshthashrit kamal*. It is also known as *Bahupitta kamala* because here increase the total quantity of *Pitta* in the body tissues and fluids due to the excess production of abnormal *Pitta* by increased break down of *Rakta dhatu* (Erythrocytes) and *Mansa dhatus* (Myoglobin & catalase etc.) by excess intake of *Pitta-prakopak* diets. In this case, *kamala* arises after the *pandu* as a secondary disease, so *Koshthashrita kamala* is also called *Partantra kamala*. In this *kamala*, only *Pitta dosha* is responsible for manifestation of kamala therefore it may be grouped under the *Pittaja nonatmaja kamala*.^[9]

From the above evidences, it may be strongly correlated with the haemolytic jaundice which is a most common cause of predominantly unconjugated hyperbilirubinemia. This form of jaundice can result from haemolysis), decreased hepatic uptake and reduced conjugation of bilirubin.

While, the *Shakhshrita kamala* is a result of retention of *Pitta* into the *Shakha (dhatus)* due to obstruction of *Pittvaha srotasa* by abnormal *Shleshma* rather than excess production of abnormal *Pitta* (bilirubin). So it is termed as *Alp-pitta kamala* and this type of *kamala* originate independently so also called *Svatantra kamala*. This kind of kamala can be grouped into *Pittaja samanyaja Kamala roga* because other factors like *Shleshma and Vata doshas* are also responsible rather than *Pitta dosha*.^[10]

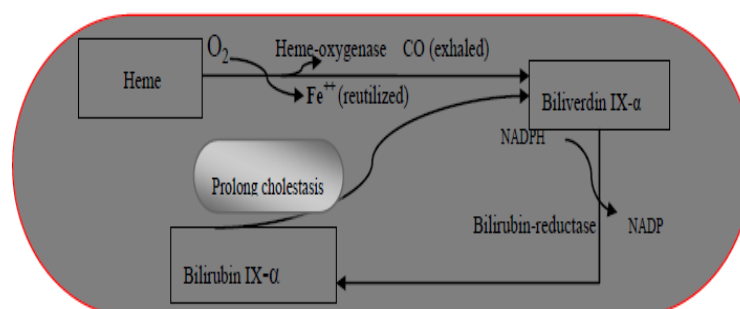
Shakhshrita kamala may be resembled with the intra-hepatic cholestasis (hepato-cellular jaundice) because today we know that intrahepatic cholestasis only cure by medicine not by surgery rather surgery may worse the condition. In other hand, the post hepatic cholestasis or post hepatic obstructive jaundice only cures by surgery not by medicine. In *Ayurvedic* text, extremely honest physician *Acharya Charaka*, in the treatment of *Shakhshrita kamala*, has given the indication of medicine not the surgery, if he understands the requirement of surgery in this disease, though he writes that this patient referred to the *Dhanvantari Sampradaya* (surgery department) like other diseases i.e. *Shotha, Raktaja gulma* and *Ashmari*. On the above evidence we can say that *Shakhshrita kamala* is the intrahepatic jaundice not the post hepatic obstructive jaundice.^{[11] [12]}

The *Halimak* ailment is a advance stage of *kamala* and caused by *Vata* and *pita Doshas*, which is characterized by discoloration of green and blackish yellow and suffers with diminution of strength & enthusiasm, drowsiness, loss of appetite and lack of libido etc. But there is a big query, how to green color develop in this disease.^[14]

When the abnormal *Pitta* gets accumulated in the body due to improper excretion, then the color of skin and whole body becomes greenish yellow. According to text, *Pitta* has all color except *Aruna & Shukla* (black & white), it explain that why the *Kamal* ailment has greenish yellow discoloration.^[15]

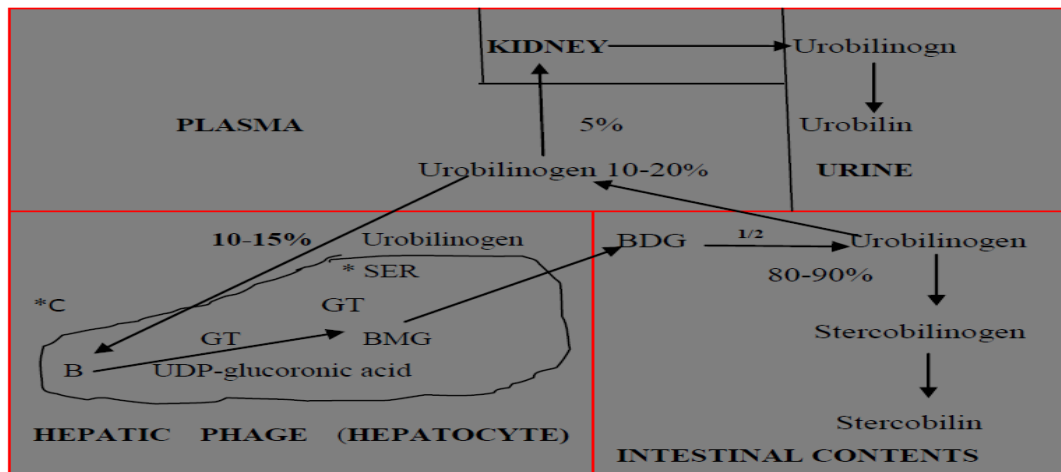
The color of body and skin in patient of jaundice depends upon the ratio of bilirubin & biliverdin in the blood which are yellowish & greenish in colour respectively, but after prolonged cholestasis, the bilirubin is oxidized into biliverdin and manifest as a greenish yellow discoloration of body.

Schematic representation of entero- hepatic cycle of bilirubin



After discussing the pathological classification, now we shall discuss about the *Samprapti vighatana* (i.e. *chikitsa*) of *kamala* under the treatment protocol on the basis of their respective pathogenesis. Treatment plan may be classified into two groups namely general and specific.

The schematic representation of entero-hepatic cycle of bilirubin



(*C- Cytoplasm of hepatocyte, *SER- Smooth endoplasmic rericulam, GT- Glucuronosyl transferase, BMG- Bilirubin monoglucuronide, BDG- Bilirubin diglucuronide, B-Bilirubin).

General treatment comprises of, first the prevention of the etiology, which is the most important part of the disease and second is the *Mridu virechana karma*. As discussed above we know that through entero-hepatic circulation some moiety of bilirubin reabsorb into the blood. If the patients takes the Virechaka medicine and go for one or two fresh motion, then the maximum *Pitta* is removed through stool by breaking the entero-hepatic circulation. Hence, this treatment should be given in both kinds of jaundice.

Second treatment is the specific treatment which is oriented with kinds of *kamala*. In *Koshthashrita kamla* (haemolytic jaundice) only *Pitta shamaka* treatment should be given because this disease arose due to the vitiation & excess break down of *Rakta & Mansa Dhatus* by abnormal *Pitta*. Hence *Ghrita* (medicated *Ghrita*) is the great *Pitta shamaka* remedy so that should be given in this type of *Kamala roga*.^[13]

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The *Shakhashrita kamala* produced basically due to the *Mandagni* and obstruction of *Pittavaha srotasa* by *Kapha doshaa*. So our treatment plan should be based of its pathogenesis. In this type of patient first give the *Deepana* and *Pachana dravya* for improving the *Mandagni* and as well as remove the obstruction of *Kapha* by using the *Tikshna, katu* drugs. ^[8]

As discussed earlier here we will also discuss about the probable mode of action of *Navayas churna* with *Madhu* as *Anupana* for the management of hepato-cellula jaundice. It consists of three groups of drugs i.e. *Trimada, Trikatu, Triphala and lauhabhasma*. Each groups having their specific site and action at which they act. *Trimarda* is the great *Deepana and Pachana*, and improves the *Mandagni and Ama* condition. *Trikatu* is the *Katu, Ushna tikshna* and *Vata kapha samaka*. All drugs of this group having the action of a mucolytic agent and they lyses and clear the accumulated *Ama kapha* in lumen of *Pittavaha srotasa* and facilitate the excretion of *Pitta* in *Annvaha srotasa*. *Triphala* is the *Mridu virechaka* and improve the bilirubin concentration in blood by interruption the entero-hepatic circulation. According to *Rasatarangni lauha bhasma* is the great medicine of *Shakha* and *Koshtha-ashrita* increased *Pitta* but how to reduce the *Pitta of shakha*, it is not readily explained in texts. But indirectly we can think that the *Lauha bhasma* follow the procedure to bring the *Doshaa* from *Shakha to Koshtha* as mentioned above.

Navayas lauha churana with *Madhu* was extremely significantly effective in improving the symptoms of *Haridra varna* (discoloration of sclera, mucous membrane and others structures) *Mutra varna* (yellowish discoloration of urine), *Shakrita varna* (discoloration of faeces), *Avipaka* (indigestion) *Avipaka* (indigestion). Highly Improvement in laboratory value likes total bilirubin including direct and indirect bilirubin, ALT and liver size, and more significant improvement was also noted in AST and ALP.^[16]

CONCLUSION

The textual and pathological taxonomy of *Kamala* is very scientific and similar to taxonomy of jaundice of contemporary science in various aspects. The treatment protocol of kamala is also awfully precise and based on etiology and pathology of ailment and the principle of treatment; break down of pathogenesis is an ideal treatment and is explained by *Navayas lauha churna* by breaking the pathogenesis of *Shakhshrit kamala* ailment.

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