



ANCIENT NOTION ON YAKRIT VIKARA (LIVER DISORDERS IN AYURVEDA)

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ABSTRACT

For a science, whatever branch it may be, to make it a correct and complete science, the intelligent brains should be prepared in the practical field based on the indistinguishable theories. By a chain of experiments/practical and their results, one science can be evaluated. There is no exception for this rule in the case of Ayurveda specially, for the case of Yakrit roga. So it is evident to have a thorough knowledge of liver disease is necessary along with ancient theory. In consort with knowledge of contemporary field there is also need to bring out the unique novel concepts mentioned in ancient traditional system. Hence an attempt is made in this brief review to cover different aspects of liver disorders, which are categorized under what are known as Yakrit rogas in different ancient literature. The review may stand with scope of research in multidimensional aspects highlighted in the ancient notion of Yakrit vikara.

KEYWORDS : Ayurveda, Liver, Yakrit Vikara, Traditional, Pliha Roga.

INTRODUCTION

In Ayurveda *Yakrit* is considered as one of the organ situated in *kostha*. The popular Sanskrit – English dictionary by sir Monier Williams describes the origin of the word “*yakrit*” is from the root “*Yakan*” which mean the liver. *Yakrit* is constitution of two words “*Ya*” means “activity”, “*Krit*” means “breakdown”. *Yakrit* is also used as synonym to the work “restoration” (A.S. Sa. 5/34). The word *Yakrit* is defined as- “*Yam Samyaman karoti iti yakriti*” by *sabdastomahanidhi* which means “to have a control over”. As per this definition *Yakrit* is an organ which can control some physiological processes in the body. The word *samanya* does not merely means to control but it has meanings such as to restrain, to hold on, govern, guide etc. indicating the specific capacity to accumulate something. It means *Yakrit* is the organ that controls all the functions. *Yakrit* is one of the *Koshtanga* and considered as the seat of *Ranjaka pitta*. It is situated in the right side of *Udara* (abdomen) below the *Hridaya* (heart). Below *Yakrit* is in relation with the part of small and large intestines (*Unduka*) where *Maldharakala* is situated. Sushruta considered *Yakrit* as originated from the *Rakta* and is maternal in origin.^[1-10]

SIGNIFICANCE OF YAKRIT AS AN ORGAN:

Yakrit and *Pliha* are considered to be the *mula* of *raktavahasrotas* by Caraka. Susruta included *raktavahadhamani* also. Susruta indicated that in addition to *Yakrit* and *Pliha* there are other seats of *raktadhatu*. Caraka has clearly stated that *Hrdaya* is to be considered as *raktasthana*.

Susruta has mentioned seven type of *kala* out of which *Raktadharakala* is specially found in *sira*, *Yakrit* and *Pliha*. Samgadhara in addition of *raktadharakala* has described *Yakrit* and *Plihadharakala*.^[1-5]

Out of the sixty six *Pesi* (muscles) found in the abdomen, six are situated in relation to the *Yakrit*, *Pliha* and *Unduka*. Susruta has described forty main *sira* out of which ten are *raktavaha*, which are bound to *Yakrit* and *Pliha*. If vitiated *rakta* flows through these *sira* it causes various blood born disease. These *siras* are called *rohini* and are not too much hot or cold. *Yakrit* and *Pliha* are the sites of *ranjakapitta*. It is also known as *ranjakagni* and it colors the *annarasa* produced after digestion, *Raktadhatu nirmana*, *Yakrit* is considered as site of *bhuthgnivyapara*, *Malapitta nirmana*. (Ca. Su. 20/3; Ca.

Ni. 4; Su.Su. 21/33)

Ranjaka pitta and Yakrit: Even though *Yakrit* has not been mentioned in the chapter dealing with *Kamala*, there are several statements that support and establish a link between them. According to Ayurveda *Yakrit* is mentioned as root of *Raktavaha srotas* and *Kamala* as a disease of *raktavahasrotas*. Moreover *Kamala* belongs to the category of *pittaja vyadhi* and *ranjakapitta* is the type of *Pitta* that is invoked in its pathogenesis. The site of *Ranjakapitta* is *Yakrit*. Thus it becomes obvious that *Kamala* is a type of liver disorder.^[1-4]

HISTORY OF YAKRIT VIKARA:

Vedic period: In Vedic literature, our ancient Acharyas have identified the organ of *Yakrit* as well as the connected disease with their treatment. In *Rigveda*, the term *Harima*, *Haritha* and *Vilohitwa* denotes the *Kamala* disease. There are references about the use of sun rays to dispel the diseases and the yellow colour of the skin. The use of milk of the red colored cows in *Yakrita rogas* is also described in the *veda*. The cure of the disease with the help of water, sun rays and with some herbs is described in Vedas.

Samhita kala: In Caraka Samhita explanation regarding the disease *Yakritodara* or *Yakrit Vridhi* is given in *Udara Chikitsa Adhya*. *Yakrit Vridhi* or *Yakritodara* is mentioned along *Pleehadara* which is a type of *Udara Roga*. Description about *Jalodara* is also available but no reference regarding the disease *Yakrit Vikara* as whole. And even Susrutha explains regarding *Yakridalyudara*.^[1-3]

Sangraha kala: In Astanga Sangraha and Astanga Hrudaya there is no reference regarding the disease *Yakrit Vikara*, but an elaborate description regarding the disease *Yakritodara* is found. Cakrapani has commented on description of *Yakritodara* in Caraka Samhita along with *Pleehodara* and mentioned that there are 5 types of *Pleeha dosa- Vataja, Pittaja, Kaphaja, Sanipattaja and Raktaja Pleeha Vridhi* in *Vamparshwa* and similar characteristic found in *Yakrit* which occupies space in *Dakshina Parshwa cikitsa* of *Yakrit Vikara* is mentioned in Cakradatta. Dalhana and Indu, have commented on *Yakritodara*. In Madhava Nidana also there is no reference regarding the term *Yakrit Vikara*. The explanation of *Yakridalyudara* mentioned by *Madhavakara* in *Madhava Nidana* is similar to *Susrutha Samhita*.^[3-7]

Madhyama kala: The disease *Yakrita roga* for the first time was introduced by Bhavamishra in the text *Bhavaprakasha*, along with *Pleeha Roga* in *Pleehaykridadhikar* chapter. Here the *swaroop* of *Yakritita* is mentioned and said to be *visheshayavyavaya* and it is said to be *sthana* of *Ranjaka pitta*. Bhavamishra mentioned that all the *Hetu*, *Sampрати* and *Lakshana* of *Pleeha roga* are also same for *Yakrita Roga* only difference is that *Pleeha* lies in *vamaparshwa* while *Yakrita* occupies the *dakshina parshwa*. The classification and the treatment of *Yakrit Vikara* should be done accordingly to *Pleeharoga* as mentioned in *Chikitsa Prakana* of *Bhavaprakash*. In *Yogaratanakara* as well as in *Bhaishajya Ratnavali* reference regarding *Yakritodara* is present. In addition to this only *Chikitsa* of *Yakrit Vikara* is explained in *Bhaishajya Ratnavali*.^[4,5]

ETIOLOGICAL FACTORS OF YAKRIT ROGA/VIKARA:^[1-3] The etiological factors responsible for *yakrit Pliha rogas*, both Acharyas have narrated that the *vidahi* and *abhishyandi aahara* are the main causes. These factors play an important role in the manifestation of the disease by vitiating the *Dosha*, *dhatu*, *agni* and *srotas*. According to classification, the *Nidana* is of two types- *Sannikrasta* and *viprakrasta*. Most of the etiological factors are of *Viprakrasta* type leading to *Doshadushti* and disease gets manifested. The *Sannikrasta* causes for *Yakritrogas* are extrinsic origin like *Abhigata*. Acharyas have also mentioned that the *vyadhikrita sarira* is more prone to these disorders.

PATHOGENESIS OF YAKRIT ROGA/VIKARA:^[5-7] There are five contributory factors mainly responsible for a disease. Namely *Dosha*, *dhatu*, *agni*, *ama* and *srotovaigunya*. All the *Nidana* factors, irrespective their nature vitiates one or the other *Doshas*. The vitiated *Vata* results in *visamagni* whereas *pitta* and *Kapha* leads to *mandagni*, which further vitiates *Kapha*. The *Nidana* factors like *Vidahi Ahara* and *Abhishyandi Ahara* vitiates *pitta Dosha* and *Kapha Dosha* respectively. The *mandagni* or *vishamagni* thus produced further vitiates the *Doshas* and then lead to formation of *Ama*. *Ama* further adds to *Mandagni*, leads to *Srotorodha* at one side, *Dhatudushti* like *Rasadushti* and *Raktadushti* on other side. It produces *Srotorodha* in *Yakrit* leads to *Doshadhushya Sammurchana*. *Pittaprakopa* directly leads to *Raktadushti*. These pathological changes lead to the manifestation of diseases in *Yakrit*. Thus, the vitiation of *Doshas* generated due to any of the etiological factors either individually or in group, will lead to *Dushyavikriti* and also resulting in *Khavaigunya*. Almost all the types of *Srotodushitprakar* are seen in different *Yakrit rogas*.

BHEDA OF YAKRIT VIKARA:^[10-13] Based on *doshic* involvement, *Yakrit Vikara* is classified into 4 types by Bhavamishra

- *Vataja*
- *Pittaja*
- *Kaphaja*
- *Raktaja*

NIDANA: *Vidahi aahara* i.e. *kulaththa*, *masha*, *sarshapa shaaka* etc. *Abhishyandi aahara* like *dadhi* of *maheesh kshira*.

SAMPRAPTI: *Nidana* (*vidahi* & *abhishyandi aahara*)- Increase of *rakta* & *kapha*
Yakrit vridhi *Yakrit roga*

TYPES BHEDA LAKSHANA

1. *Vataja -Nityamanaddha koshta*, *Nityodavarta* *peedita*, *Vedanabhi pareeta*
2. *Pittaja-Jwara*, *Pipasa*, *Daha*, *Moha*, *Peetagatra*
3. *Kaphaja-Manda vyatha*, *Sthoola*, *Kathina*, *Gourava* *Yakri* *Arochaka*

4. *Raktaja-Klama*, *Bhrama*, *Vidaha*, *Vaivarnya*, *Gatra* *Gourava*, *Moha*, *Raktodara*

YAKRDALYUDARA:^[5-15]

Nidana: *Udara* is said to be caused by factors such as intake of excessive *usna*, *ksara*, *vidahi*, *amla* food, improper *samsrajana karma*, intake of ununctuous, *viruddhahara*, emaciation as a consequences of diseases like *Pliharoga*, *Arsas*, and *Grahani*, improper administration of *panchakarma* therapy, suppression of natural urges, vitiation of the channels of circulation, continued presence of *ama* in the body, intake of irritating foods and drinks, over nutrition.

Signs and Symptoms: it is one of the *Udara roga*, which is having enlargement of the *Udara*. Ayurvedic texts have described details of *plihodar*, on the basis of that *yakrdalyudara* can be said to have following general symptoms: *daurbalya*, *arochaka*, *avipaka*, *varcograha*, *mutragraha*, *pipasa*, *angamarda*, *angasada*, *kasa*, *svasa*, *mrdu jvara*, *anaha*, *karsya*, *agninasha*, *parvabheda*, *asyavairasya*, pain in the *kostha* due to *vata*, *tamahpravasha*. Caraka mentions appearing of *nila*, *harita*, *haridra* coloured lines on the abdomen, colour of abdomen may changes to *arunavarna*, generalized severe pale discolouration.

Types: *Vataja* *Yakrdalyudara* : *udavarta*, *ruja* and *anaha*.
Pittaja *Yakrdalyudara* : *jvara*, *moha*, *trishna* and *daha*
Kaphaja *Yakrdalyudara* : *gaurava*, *aruci*, *kathina*.

DISCUSSION:

For a science, whatever branch it may be, it is possible to become a complete or full-fledged within a short period. To make it a correct and complete science, the intelligent brains should be made in the practical field based on the same theories. By a chain of experiments/practical and their results, one science can be evaluated. There is no exception for this rule in the case of Ayurveda specially, for the case of *Yakrit roga*. So it is evident to have a thorough knowledge of liver disease is necessary. Hence an attempt is made in this brief review to cover different aspects of liver disorders, which are categorized under what are known as *Yakrit rogas*.^[21-30] The pathological aspects of the organ *Yakrit* are referred; one can hardly find a direct reference, except in the case of *Yakritudara*. Acharya Charaka has explained that the descriptions given for *Pliha* are to be taken for *Yakrit* also, and the difference being in the site and side of the body (*Ch.Chi.13/28*). The same description is found in all the other classics too. None of Ayurveda described the subject *yakritvikaras* separately. In *Susrutha Samhita* a similar type of description is seen as in *Charaka samhita*. In *Kashyapa Samhita*, at one place the reference of five types of *Pliha* or *Yakrit Rogas* are available, but the details are missing due to the partial loss of the text. In *Bhela Samhita*, four type of *Pliha* or *Yakrit rogas* are mentioned, viz. *vatika*, *paittika*, *Kaphaja* and *sannipatika*. There after the authors of *Bhavaprakasha*, *Yogaratanakara*, *Bhaishajyaratnavali* etc. have accepted it as of five types. The other diseases of *yakrit* mentioned in the different texts are-*Yakrit sada* (*Ma. Ni.3/85commentary*), *Yakrit sankra* (*Va. Ni.4/8 commentary*), *Yakrit vidradhi* (*Ma.Ni.40*), *Yakrit cyuti* (*Ch.Chi.13/38*), *Yakrit vridhhi* (*Ch.Su.18/28*), *Yakrit Dosha* (*Ch.Su.18/3*) and *Yakrit Roga* (*Be.Sa.*). Acharya Charaka has quoted two types of *Yakrit* or *Pliha vridhhi*. One is *Chyuta sthana vridhhi* and other is *Akaraja vridhhi*. The *chyutha sthana vridhhi* is the enlargement of the organ or appears so due to the downward displacement. The *Akarajavridhhi* is due to the diseases of its own, where the size of the organ will be increased. So, in short the *akaravridhhi* of the organ is possible only in the diseased condition of the organ.^[7-14]

As per contemporary science the liver is the heaviest gland of the body, weighing about 1.2 to 1.5 kg (about 3lb) in an

average adult, and after the skin is second largest organ of the body. It is inferior to the diaphragm and occupies most of the right hypochondriac and part of epigastric regions of the abdomino-pelvic cavity. The liver is almost completely covered by peritoneum as well as by a dense connective tissue layer that lies beneath the peritoneum. It is divided into two principles lobes- a large right lobe and a smaller left lobe separated by the falciform ligament. In the free folder of the falciform ligament is the ligamentum teres (round ligament). It extends from the liver to the umbilicus. The ligamentum teres is a fibrous cord derived from the umbilical vein of the fetus^[15-20].

LIVER DISORDERS:^[15-20,31-40] Liver takes active participation in detoxification of xenobiotics, drugs, alcohol etc. and is more prone to injuries. Similarly, infections by Hepatitis virus-A, B, C, D, and E, autoimmune and genetic disorders are also associated to liver. Hepatic disease (Liver disease) is a term for a collection of conditions, diseases and infections that affect the cellular or tissue's structures or functions of the liver. Liver disease causes various patho-physiological changes like cirrhosis, nonalcoholic hepatic steatosis, hepatitis, biliary cirrhosis, alcoholic hepatitis, liver cancer etc. The liver disorders are classified as either hepatocellular or cholestatic. In hepatocellular diseases, liver injury, inflammation and necrosis are predominating. While in cholestatic diseases, inhibition of bile flow predominates.

The hepatoprotective herbal drugs act through various mechanisms to protect against various deleterious effects. By involving through one or more mechanisms, they act on the hepatocytes/liver directly or indirectly and help in proper functioning. The mechanisms include an increase in antioxidant level/decrease in oxidants (ROS formation), inhibition of cytochrome P450s, increase and decrease level of Liver enzymes, reduced peroxidation / Lipid peroxidation (MDA), and increase in level of glutathione or reducing equivalents.

The diseases of *Yakrit* in Ayurveda are characterized by the involvement of *ranjaka pitta*, *rakta dhatvagni*, *mala pitta* and *dhamani* get up from the *Yakrit*. *Peeta/Haridra netra* is one of the communal clinical sign of *Yakrit vikaras*. This sign is described in diverse disease conditions like *Kamala* and its variants, *Pittaja pandu*, *Pittaja Jwara*, *Koshtashaksharita Kamala* can be correlated with prehepatic and hepatocellular jaundice due to viral hepatitis and hepatocellular carcinoma. There is also need of major consideration of *Dosha*, *Dhatu*, *Agni*, *Bala* etc. like to manage other any pathological ailments as per fundamentals of Ayurveda.^[41-50] Thus the review suggests that there is enough scope of research in the field of *Yakritvikara* to explore the ancient concept on this area.

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