

PHARMACOLOGICAL STUDY OF KUSHTHAGHNA MAHAKASAYA AGAINST DIFFERENTIAL PATHOGENICITY OF TWAK VIKAR

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ABSTRACT

According to Ayurveda the human body is constituted and developed by several microscopic factors which remains co-ordinate across its life. Among them the *doshas* specially called *vata*, *pita* and *kapha* comprises its major part as well as determined to be most important for its healthy lives. The balanced equilibria of these fundamental elements in the body is the sign of good health. However, inequity of these basic constituents causes to develop different diseases. Ancient Indian medical system drugs, remedies and its fundamental guidelines are found very effective and useful to sustain the equilibrium. *Kushthaghna Mahakashaya* of *Caraka samhita* is exclusive one and has great importance in skin disorder. *Kushthaghna Mahakashaya* is described Ayurveda by Acharya Charak for the management of *Kushtha roga* (skin disorders). *Kushthaghna Mahakashaya* contains total of ten drugs. This study is mainly focussed on different aspects of *Kushthaghna Mahakashaya*. It is well recognised in Ayurveda that most of the skin diseases run a chronic course and are difficult to treat. Most of the skin diseases have strong relation with psychological stress and stress is responsible for onset and exacerbation of different skin disorders. Most of the drugs counted in the *Kushthaghna Mahakashaya* reported to have *Rasayan* properties. Therefore, these drugs also help in reducing the negative effect of stress and thus help in coping with chronic skin diseases. Each drugs of the *Mahakashaya* was separately explored for its place in different *Mahakashaya* and *gana*.

KEYWORDS: *Kushthaghna Mahakashaya*, *Twak vikar*, *Rasayan*.

INTRODUCTION

According to the ancient literatures of our Indian medical system or so called according to the Ayurveda all types of *Kushtha* are in general caused by *tridosha*, hence its treatment protocols are described according to predominance of *dosas*. In *kushthagna Mahakashaya* almost all the drugs are *tridoshasha shamaka*. It is considered that all *Kushtha* are *Tridosaja*. After diagnose the kind of *Kushtha*, we can choose drugs from *Kushthagna mahakashaya*. Ayurvedic system of medicine is the oldest system of traditional medicine which has recognized the healing properties of plants to a great depth. Medicine has around a thousand herbs that are commonly used in this traditional system of medicine,

but overall there may be more than 2,500 that are used across India in all forms of herbal medicine.

Traditional medicine is a major part of the cultural heritage of a society and it has developed in accordance with the lifestyle and cultural practices of the society. The use of plants and plant products in medicines is getting popularized because the herbal medicines are cheap and have natural origin with higher safety margins and lesser or no side effects. Group of drugs are '*Jivaniya*' etc and '*Vidarigandhadi*' etc. while classifying drugs according to action *charak* has defined fifty groups beginning with *Jivaniya* while *Sushruta* described *thirtyseven* groups according to their

therapeutic uses. The former is named after the action concerned while the latter after the first item of the group.^[1] Secondly, the former have ten items in each group while in the number of components is not fixed uniformly. Acharya *Cakrapanidatta* says that the number ten in each group is not restrictive but suggestive and as such other drugs having similar properties and actions may also be included wherever necessary. In ancient tradition, the number ten is called 'dik' direction which thus indicates guidance.

When the vitiated *doshas* causes abnormal colour or complexion of the skin and produces the degeneration of tissue. This disease is known as *kustha* (*mahakusta*). Although all the disorders of skin are included in the word 'kustha'. The seven *dhatu*s (tissues) are *rasa* (plasma, extracellular fluids), *rakta* (blood), *mansa* (flesh), *meda* (fats), *asthi* (bones), *majja* (bone marrow) & *shukra* (sperm or ovum). The skin disease which shows more *sympioms*, more difficulty in treatment & (*dhatugatava* (involvement of tissues) & hence severe are labeled as *mahakustha*) and the other skin disorders are called as *kshudrakustha*. Even *shwitra* (*leucoderma*) which actually not a contagious disease can be included in these.^[2] *Kustha* is a chronic, contagious & severs disease.

DISCUSSION

In *Ayurvedic* system of medicine, lots of medicinal plants, traditionally used since thousands of years, have been described together as a group of herbal preparations under the category of *Rasayana* known for their interesting antioxidant activities. Most of the drugs in *Kushthaghna Mahakashaya* are reported to have *Rasayan* properties.

Characteristics of *Kushthaghna Mahaksasaya* drugs of *Charak Samhita*

Khadira; *Acacia catechu* (Family: *Mimosoidaceae*)

This Plant is described in *Kushthaghna mahakashaya*, *Kashaya skandha*, *Agraya prakaran* of *Charak Samhita* and *Salsaradi gana* of *Shusruta samhita*. The synonyms are *Raktasara*, *Dantdhavan*, *Yagyaiya*. *Dosha karma Pitta kaphahara*. Traditionally it is also used for the management of *Medoroga*, *Prameha*, *Aruchi*, *Atisar*, *Jirnajwar* and *Kasa* etc. The main chemical constituents of *Acacia Catechu* are *catechin*, *epicatechin*, *epigallocatechin*, *epicatechin gallate*, *phloroglucin*, *protocatechuic acid*, *quarceetin*, *poriferasterol glucosides*, *lupenone*, *procyanidin*, *kaemferol*, *L-arabinose*, *D-galactose*. *D-rhamnose* and *aldobiuronic acid*, *afzelchin* gum, mineral and *taxifolin*.^[4] Heartwood is used to yield concentrated aqueous extract i.e. *Cutch* and *Katha*.^[3]

Abhya; Terminalia chebula

This Plant is described in *Prajasthapana*, *jvaraghna*, *Kushthaghna*, *Kasaghna mahakashaya* of *Charak samhita* and *Amlakyadi*, *Parushadi*, *Triphala gana* of *shusruta samhita*. The synonyms are *Vayastha*, *Jivanti*, *Rohini*. *Doshakarma* are *tridosha samaka*. *Abhya* also

called as *Haritaki* is being used traditionally in the management of different *ailments* which include *Kushtha*, *Visharpa*, *Santarpana janya roga*, *Kasa*, *Shwas*, *Pratishyaya*, *Vatrakta*, *Swetapradara*, *Prameha*, *Hikka* and *Vishamajwar* etc. *Haritaki* contain 14 components of hydrolysable tannins (*gallic acid*, *chebulic acid*, *punicalagin*, *chebulanin*, *corilagin*, *neochebulic*, *ellagic acid*, *chebulegic acid*, *chebulinic acid*, *1,2,3,4,6-penta-Ogalloyl-β D glucose*, *1,6-di-O-galloyl-D-glucose*, *casuarinin*, *3,4,6-tri-O-galloyl-D-glucose* and *terchebulin*. The tannin content varies with the geological variation. *Flavonol glycosides*, *triterpenoids*, *coumarin conjugated with gallic acid* called *chebulin*, as well as *phenolic compounds* were also isolated. In addition, *ethyl gallate* *luteolin* were isolated from the fruit of *Haritaki*.^[5] It also consists of nutrients such as *vitamin C*, *protein*, *amino acids* and *minerals*.

Amalki; Emblica officinalis

This plant is described in *Vayasthapana mahakashaya* of *Charak samhita* and *Triphala*, *Parushakadi gana* of *shusruta samhita*. The synonyms are *Vrishya*, *Dhatri*, *Tisyaphala*. *Doshakarma* are *tridosha samaka*. In *Ayurvedic* system of medicine *Amalaki* described as one of the most important *Rasayan* (*rejuvenation drug*). *Acharya Charaka* includes *Amalaki* under *Vayasthapan* & *Virechanopaga Mahakashaya* and *Acharya Sushruta* includes it under *Triphala* and *Parushakadi Gana*. Traditionally *Amalaki* used in the management of *Kushtha*, *Visharpa* *Prameha*, *Hridroga*, *Amlapita*, *Parinamshoola*, *Udavarta*, *Kasa*, *Shwas*, *Rajyaksama*, *Pittaja Roga*, etc. *Emblica officinalis* contains *phenolic constituents* like *gallic acid*, *L-malic acid 2-o-gallate*^[6], *Mucic acid 2-o-gallate*, *Corilagin* *Chebulegic acid*, *putrajivain A*, *elacocarpusin*, *mucic acid*, *1-o-galloyl-β-D-glucose*, *Mucic acid 6-methyl ester 2-o-gallate*, *Mucic acid 1,4- lactone 2-ogallate*, *Mucic acid 1-methyl ester 2-o-gallate*, *Mucic acid 2- o-gallate*, *Mucic acid 1, 4- lactone 6-methyl ester 2-o-gallate*, *mucic acid 1, 4- lactone 3-o-gallate*, *mucic acid 1,4-lactone 3,5-di-o-gallate*. It also contains higher amount of *Vitamin C* and considerably higher concentrations of most *minerals*, *protein* and *amino acids* like *Glutamic acid*, *proline*, *aspartic acid*, *alanine*, *cystine* and *lysine*.^[7]

Haridra; Curcuma longa

This plant is described in *Lekhaniya*, *Kandughna*, *Vishaghna*, *Kushthaghna mahakashaya*, *Tikta skandha* and *Haridradi*, *Mustadi gana* of *shusruta samhita*. The synonyms are *Krimighna*, *Yoshitpriya*, *Pindaharidra*. *Dosh-Karma* are *tridosha samaka*. *Turmeric* has a long history of therapeutic uses as it is credited with a variety of important beneficial properties such as its *antioxidant*, *antibacterial*, *anti-inflammatory*, *analgesic*, and *digestive* properties.^[8] *Turmeric* contains a wide variety of *phytochemicals*, including *curcumin*, *demethoxycurcumin*, *bisdemethoxycurcumin*, *zingiberene*, *curcumenol*, *curcumol*, *eugenol*, *tetrahydrocurcumin*, *triethylcurcumin*, *turmerin*, *turmerones* and *turmeronols*. Three main chemical

constituents of curcuma longa are curcumin (diferuloylmethane), demethoxycurcumin and bisdemethoxycurcumin. These are responsible for different type of therapeutic uses of curcuma longa.^[9]

Aruskara; Semicarpus anacardium

This plant is described in Dipaniya, Mutrasangrahaniya, Kushaghna mahakashaya, and Nyagrodhadi, Mustadigana of shusruta samhita. The synonyms are agnika, agnimukha. Dosh-Karma are Kaphvata samak. Traditionally Bhallataka has been used in the management of *Bibandha*, *Agnimandhya*, *Apasamar*, *Amavata*, *Gridhrasi*, *Gulma*, *Udar roga*, *Arsha*, *Grahani roga*, *Kushtha*, *Shwitra*, *Vatrakta* and used externally in snake bite.^[10] The most significant components of the *Bhallataka* are *bhilwanols*, phenolic compounds, 4, 5 *biflavonoids*, sterols and glycosides.

Saptaparna; Alstonia scholaris

This plant is described in *Kusthaghna*, *Udardaprasamana mahakashaya*, and *Aragvadhadi*, *Lakshadi gana* of *shusruta samhita*. The synonyms are *vishaltvaka*, *sharad*. Dosh-Karma are *Kaphpitta samak*. Since *Bhallataka* is extremely hot and sharp in its attributes, it should be used with caution. Individuals showing allergic reactions to it should stop and avoid the usage of *Bhallataka*. It should not be used in small children, very old persons, pregnant women and individuals of predominant pitta constitution. The use of the same should be restricted in summer season. For its allergic reactions like rash, itching and swelling, the antidotes used externally are coconut oil, *rala* ointment, ghee, coriander leaves pulp or butter mixed with *musta* (*Cyperus rotundus*). The salt and spices should be strictly restricted during *Bhallataka* treatment. It is also recommended to avoid exposure to sun, heat and excessive sex.^[11]

Aragvadhya; Nerium indicum

This plant is described in *Kusthaghna*, *Kandughna*, *mahakashaya*, and *Aragvadhadi*, *Syamadi gana*, *Adhobhagahara* of *shusruta samhita*. The synonyms are *rajvriksha*, *shampaak*, and *chaturangula*. Dosh Karma are *Kaph pitta samak*. Traditionally it is used for the management of *Kushtha*, *Aruchi*, *Bibandha*, *Shuska Kasa*, *Hridroga*, *Raktapitta*, *Shoola*, *Kamala* etc.^[12]

Karavira; Nerium indicum

This plant is described in *Kusthaghna mahakashaya* and *Tikta skandha*, and *Lakshadi gana*, *Sirovirechana gana* of *shusruta samhita*. The synonyms are *Shatkumbha*, *asvamaraka*. Dosh-Karma are *Kaphvata samak*. It is used traditionally for the management of *Kushtha*, *Agnimandhya*, *Hridroga*, *Shotha* etc., it also used externally over the wounds of *Upadansa* and *Firanga roga*.^[13] The root of *Nerium indicum* contains glycosides, *neriodorin*, *neriodorein* and *karabin*. The bark contains *scopoletin*, *scopolin*. Besides this it contains tannins, red colouring matter, an aromatic oil, wax and *flobefin* and a yellow coloured stable oil. The roots contain bitter

glycosides *fenolinic acid* and aromatic oil. It also possesses potassium salts in excess.^[14]

Vidanga; Embelia ribes

This plant is described in *Teptighna*, *Kusthaghna*, *Sirovirechana mahakashaya* and *Sursadi*, *Pippalyadi gana* of *shusruta samhita*. The synonyms are *krimigna*, *chitratandula*. Dosh-Karma are *Kaphvata samak*. *Embelia ribes* is traditionally used in Ayurveda for treatment of various ailments viz. *Krimi roga* (as *vermifuge*), *Agnimandhya*, *Vatvyadhi*, *Aadhaman*, *Ajeerna*, skin diseases, *Gandamala*, *Mutrakrichchha* etc. It is one of the plants used as *Krimighna* (as *vermifuge*). It is included in *Krimighna*, *Kushthaghna*, *Triptighna Mahakashaya* (*Dashemani*) by Acharya Charaka and *Sursadi* and *Pippalyadi Gana* by Acharya Sushruta.^[15] *E. ribes* fruits contain a *quinone* derivative, *embelin*, an alkaloid *christembine*, a volatile oil and *vilangin*. Among them, *embelin* is the major bioactive constituents and marker compound in *E. ribes* berries. *Embelin* (2, 5-dihydroxy-3undecyl-1, 4- benzoquinone) has a wide spectrum of biological activities, including antioxidant, antitumor, anti-inflammatory, analgesic, anthelmintic, antifertility and antimicrobial.^[16]

Jatipraval; Jasminum grandiflorum

This plant is described in *Kusthaghna*, *mahakashaya* and *Sirovirecana darvya* of *shusruta samhita*. Synonyms *sumna*, *malati* and *rajputrika*. DoshKarma are *Tridosha hara*. In Ayurveda *Jati* is used traditionally for the management of *Kushtha roga*, *Shirshoola*, *Bhrama*, *Pakshaghata*, *eye diseses*, *Udavarta*, *Anaha*, *Raktavikar* etc. It also used externally for the management of *Mukha Vrana* (*apthous ulcers*), *erectile dysfunction*, *itching* and *Kushtha roga*.^[17] Its chemical constituents include, *salicylic acid* and an alkaloid named *jasminine*.

CONCLUSION

As stated in the pathogenesis, *kustha* is *tridoshaja*, their *dependance* on the dominance of *doshas*, different type there and so treatment also differs. Amongst the 3 *doshas*, the treatment of most dominant *dosha* is give & then the associated *dosha* is treated by the help of the drugs of *kusthagna mahakashaya*. These drugs possess various medicinal properties and hence used in the treatment of various disorders especially skin disorders. These are also good source of various biologically active *phytoconstituents*. These *phytoconstituents* used directly as therapeutic agents as well as starting materials for the synthesis of pharmacologically active compounds. In the present review an attempt has been made to provide a collective knowledge on therapeutic, pharmacological and medicinal applications of *Kushthaghna Mahakashaya* and its constituent drugs. This collective knowledge on these drugs would motivate to researchers and provide lead to further exploration of the treatment of skin *disordes*. *Ayurvedic* products is growing exponentially due to its fewer side effects as compare to other systems of medicine. All types of *Kustha* are caused by *tridosha*, hence the treatment is given

according to predominance of *dosas*. In *kusthagna Mahakashya* almost all the drugs are *tridoshasha shamaka*. It is considered that all *Kustha* are *Tridosaja*. After diagnose the kind of *Kustha*, we can choose drugs from *Kusthagna mahakashaya*. Among 10 drugs of *Kuathagna Mahakashaya* by virtue, some are very good *vatasamaka*, some are *pittasamaka* and some are *kaphasamaka*. According to predominance of *dosas*, we can choose suitable drugs for treating respective type of *Kustha*.

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