

A REVIEW ARTICLE ON BODHIVRIKSH KASHYA AND GUDUCHI KASHYA – AYURVEDIC FORMULATIONS FOR VATRAKTA

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Abstract: In the age of modern technology, Ayurvedic pharmaceutical industries are demanding standardization at every step of processing pharmaceutical area. *Kwath*(decoction) *Kalpna* is the basic dosage for many other important dosage formulations. *KwathKalpana* is the most considerable and mostly used form of the Ayurvedic pharmaceutical formulations. It has some disadvantages i.e. to certifying the quality control of the herbal ingredients. There are many drugs for *Vatrakata* in Ayurveda. But here in this review article I am going to describe the components of these drugs which are used in treatment of *Vatrakata*. These herbs in these drugs are having potential to treat the symptoms of *Vatrakata*. *Bodhi VrikshaKashya* is having Analgesic, Anti-arthritis effect which reduces the symptoms like pain and inflammation in *Vatrakata* and on the other hand *Guduchi Kashaya* is having also analgesic and anti oxidant properties which reduces the symptoms of *Vatrakata*. This drug has been taken from *Charak Bodhi Vriksha kashaya* and *Guduchi Kashaya* has been taken from *Chakardat*. These classical text describes the importance of these drugs in *Vatrakata*. This review article is an attempt to describe the properties of these drugs which are used in *vatrakata*.

Keywords: *Kwath Kalpana, Kashya, Vatrakata, Bodhi Vriksha, Guduchi*

INTRODUCTION

The antiquity of *Indian materia medica* goes back to the period of Vedas, when certain Vedic *Samhitas* mentioned the use of many herbs. *Charaka Samhita* the foremost *Ayurvedic* classical text devotes its fourth chapter on *Ayurvedic materia medica* arranging the drugs in fifty groups according to their action on different functions of the body or in different symptoms of the diseases. *Sushruta Samhita* has also described drugs and their botanical categories in detail. Further details are available in subsequent treatises like *Ashtanga Sangraha, Ashtanga Hridayam*, and medicinal texts like *Bhavaprakasha* and several *Nighantus* i.e. special texts dealing with the drugs.^[1] *Charaka* proclaims that there is nothing in this universe which is not a medicine. For selection of the drugs for clinical research work, the drugs to be tried must have some authentic background either in the form of classical reference or the successful clinical experience of previous researchers. All these principles of drug selection were kept in mind while selecting the said drug. The formulation chosen here has been used with classical mention in *Charaka Samhita (Vatashonita Chikitsa Adhyaya)* and *Chakradutta-Vatarkata Chikitsa*.

Justification of selection of drug: -

Principles of management of *Vata-Rakta* were kept in mind while planning the research work. The drugs capable of pacifying *Vata* and *Rakta* were selected. Pacification of the *Doshas* brings homeostasis and causes clearance of metabolic wastes.

Specific toxins in case of *Vatarkata* accumulated in the body are metabolic wastes. Herbs help specific organs of elimination in the body to remove them. *VataShamaka* drugs relieve pain and swelling whereas *Rakta Shodhaka* drugs purify blood and eliminate retained metabolic wastes, thus lower the Serum uric acid level in blood. Taking this fact into consideration, Ayurvedic physicians have formulated single as well as compound drugs for the cure and prevention of *Vatarkata*. As many systemic and local therapeutic applications have been mentioned in Ayurvedic texts.

The present study is a clinical trial on *Vatarkata* (Gouty Arthritis) to assess the efficacy of *Bodhi Vriksha kashaya* in Group A and *Guduchi Kashaya* in Group B.

BODHI VRIKSHA (ASHWATHA) KASHAYA^[7,8]

Ashwatha is a religious tree, as a drug it is mentioned in *Charaka Samhita* for the treatment of *Vatarkata*.

Botanical Name – *Ficus religiosa*

Family – Moraceae

Ashwatha in samhita: –

Charaka– Mutrasangrahiya, Kashayasakand

Susruta– Nayagrodhadi

Bavaprakasha – Kashiri vriksha, Panchvalkal

Classical Names: -

Ashwatha ,Bodhidru, Pippala, Chalapatra ,Gajasa

Distribution:

The tree is found wild or cultivated nearly throughout India. It is found up to an altitude of 1500 m. in sub-Himalayan forests, districts of Bihar and

Orissa, Upper Gangetic Plain, West Bengal and Central India.

Botanical description: –

A large tree, frequently epiphytal. Leaves leathery broadly ovate, entire undulate, tip narrowed into a linear, tail like point, petiolate. Figs axillary, sessile, in pairs, globose, slightly vertically flattened 12 mm in diameter, dark purple when ripe.

Chemical Constituents: –

Sterols

➤ Lanosterol, β -Sitosterol and its glucoside, stigmasterol, lupen-3-one are present in the bark and campesterol, stigmasterol, 28-isofucosterol, α -amyirin, β -amyirin and lupeol in the leaf.

Coumarins

➤ Bergapten and bergaptol have been isolated from the bark.

Tannins

➤ The leaves contain significant amounts of tannic acid.

Aminoacids

➤ Asparagine and tyrosine have been isolated from the fruit; alanine, threonine, tyrosine and valine from the seeds and arginine, serine, aspartic acid, glycine, threonine, alanine, proline, tryptophan, tyrosine, methionine, valine, isoleucine, leucine and others from the leaf.

Vitamin

➤ Vitamin K has been found in the stem bark.

Hydrocarbons and aliphatic alcohols

➤ N-Nonacosane, n-hentriacontanen-hexacosanol, n-octacosanol in the leaf.

Minerals

➤ Calcium, iron, copper, manganese and zinc are present in the leaf.

Ayurvedic Pharmacology:

<i>Rasa</i>	–	<i>Kashaya, Madhura</i>
<i>Guna</i>	–	<i>Guru, Ruksha,</i>
<i>Veerya</i>	–	<i>Sheeta</i>
<i>Vipaka</i>	–	<i>Katu</i>
<i>Doshagnata</i>	–	<i>Kaphapittashamaka</i>
<i>Rogagnata</i>	–	<i>Vedana, Shotha, Vatarakta, Raktapitta</i>
<i>Kasa, Shwasa, Prameha, Raktavikara, Vrana, Atisara, Pravahika.</i>		^[6]

Pharmacological action: –

Hypoglycemic, Analgesic, Anti-arthritic, Anti-viral, Anti-bacterial, **Hypolipidaemic, Anti-ulcer, Anti-tumor, Antiprotozoal and Oestrogenic.**

Action and uses: –

The bark is astringent, sweet, cooling and aphrodisiac. It is used in treatment of gonorrhoea, diarrhoea, dysentery, hemorrhoids and gastric ulcer. The paste of powdered bark is good absorbent for inflammatory swellings and useful in burns. Leaves fruits are pulverized and administered with water to cure asthma. Seeds are refrigerant and laxative. The latex is useful in inflammation and hemorrhages.

Parts used	-	Stem bark, fruit, apical bud, latex, root
Doses	-	Decoction: 40–100 ml

Recent studies on *Bodhi Vriksha (Peepal)*:-

Ficus religiosa as a source of bioactive molecules that have antidiabetic properties (Elavarasi et al.,2013; Shukla et al.,2012; Ambika and Rao, 1967).

Different parts of the tree also known to promote wound healing (Bairy et al.,2011; Roy et al.,2009; Nayeem et al.,2009).

A study was carried out by Supriya and Harshita (2013) in which extracts of dried powdered leaves of *Ficus religiosa* in petroleum ether, chloroform, methanol and water was made. These extracts were then subjected for *in vivo* antimicrobial activity against *E.coli* and *S.aureus*. It was found that chloroform extract showed more activity against *E.coli* and *S.aureus* as compared to methanol and water extracts. The petroleum ether extract did not show any activity.(Supriya and Harshita 2013)

Preparation of *Bodhi Vriksha (Ashwatha) Kashaya* :-

Raw Drug :-The raw drug i.e, *Ashwath Twak* was purchased from the Baijnath pharmaceuticals due to the unavailability of raw drug in *Charaka* pharmacy Paprola and Jogindernagar pharmacy. The *Yavkut Churna* of *Ashwath twak* was prepared in *Charaka* Pharmacy Paprola. Then this *Yavkut* form of *Ashwath Twak* was packed in small packets according to the desired dose.

Method of Preparation:-*Ashwath Twak* was added to water in the ratio 1:8 and *Kashaya* was prepared by reducing it to ¼ th .^[2]

Probable mode of action of *Bodhi Vriksha (Ashwatha)Kashaya* :- *Ashwath* possesses anti-inflammatory and analgesic properties. Due to the combination of these two activities, *Ashwath* is regarded therapeutically as highly efficacious for *Vatarakta* as it decreases inflammation and pain.

GUDUCHI KASHAYA^[5]

Guduchi is the crown of drugs mentioned in the various classics in the treatment of *Vatarakta*.

Botanical Name – *Tinospora cordifolia*

Family – *Menispermaceae*

***Guduchi* in samhita: –**

<i>Charaka–</i>	<i>Vayasthapana, Trishna nigradhana, Satnayashodhana,</i>
<i>Triptighna.</i>	^[7]
<i>Susuruta–</i>	<i>Guduchyadi, Aarghvadadi, Kakolyadi, Valli</i>
<i>Panchamoola.</i>	^[8]

Distribution:

Found throughout tropical India, ascending to an altitude of 900 m.

Botanical description: –

It is glabrous climbing shrub with a succulent stem and usually attains a large height. Stem is green, striated and ribbed and has long filiform fleshy aerial roots arising from the branches. Bark is grey brown with deep spiral and longitudinal clefts. Branches bear heart shaped leaves and the fruit is pea sized. Plants are dioecious, inflorescence is racemose or simple, staminate inflorescences are drooping longer than the leaves. Pistillate inflorescence is shorter with flower born singly but densely packed on the rachis. Flowers are small, numerous and greenish yellow in color.

Chemical Constituents: –

Tinosporine, tinosporon, tinosporic acid, tinosporol, tinosporide, tinosporidine, columbin, chasmanthis, palmarin, berberine, giloin, giloinisin, cordifol, cordifolon, magnoflorine etc.

Ayurvedic Pharmacology:

<i>Rasa</i>	–	<i>Tikta, Kashaya</i>
<i>Guna</i>	–	<i>Guru, Snigdha,</i>
<i>Veerya</i>	–	<i>Ushna</i>
<i>Vipaka</i>	–	<i>Madhura</i>
<i>Doshaghata</i>	–	<i>Tridoshashamaka.</i>
<i>Rogaghata</i>	–	<i>Kushtha, Vatarakta, Chhardi, Jvara,</i>
<i>Kamala, Agnimandya, Visarpa, Phiranga Twakroga,</i>		

Pharmacological action: –

Hypoglycemic, Analgesic, Anti-arthritis, Hepatoprotective, Anti-oxidant, Anti-stress, Anti-allergic, Anti-bacterial and immunomodulator.

Action and uses: –

The stem is bitter, astringent, sweet, thermogenic, anodyne, anthelmintic, antispasmodic, anti-inflammatory and antipyretic. It is useful in burning sensation, dyspepsia, vomiting, flatulence, acid gastritis, fevers, inflammations, gout, skin disease, anaemia, cough, asthma, general debility, urinary disorders, splenomegaly, eye diseases etc. The roots and stems are useful in relieving the symptoms of rheumatism. Leaves are useful in Jaundice.

Parts used - Root, Stem and Leaf
Doses - Decoction: 40–100 ml
 Powder: 3–6 gm.

Satva: 1–2gm

Ghrita : 5– 10gm

Recent studies on Guduchi

According to Gupta *et. al.* 1967 alcoholic extract of *Guduchi* stem has shown activity against E.coli.

In 1961 Sisodia and Laxmi Narayana have found the drug effective as diuretic and anti-rheumatic.

In 1966 Rai and Gupta reported that the drug is having anti-inflammatory properties. The drug is reported to possess one-fifth the analgesic effect of sodium salicylate. Its aqueous extract has high phagocytic index. The active constituent was also found to inhibit in vitro growth of *Mycobacterium tuberculosis*. (*Annual Report, ICMR 1968–69, 92 Anonymous, 1976*) The aqueous extract of *Tinospora Cardifolia* was found to enhance phagocytosis in vitro and also induced an increase in antibody production in vivo when SRBC (sheep red blood cells) was used as an antigen, thus finding a new dimension in immunomodulation (Ranjith MS *et al.* 1998) .Aqueous extract of *Tinospora cordifolia* roots when administered for weeks resulted significant reduction in serum and tissue cholesterol, phospholipids and free fatty acid in alloxon diabetic rats (Prince P *et al.*1999) Extract of TC exhibited variable inhibitory response against pathogenic bacteria (Amita Mishra *et al.*2013).

Guduchi is a natural diuretic which may aid in excretion of serum uric acid. It is also analgesic and anti-inflammatory. So *Guduchi* is a reliable therapeutic treatment for *Vatarakta* (Shivaprasad Huded et al. 2013)

Preparation of Guduchi Kashaya:-

Raw Drug :- The raw drug i.e, *Guduchi* Kand was purchased from the Baijnath pharmaceuticals due to the unavailability of raw drug in *Charaka* pharmacy Paprola and Jogindernagar pharmacy. The *Yavkut Churna* of *Guduchi Kand* was prepared in *Charaka* Pharmacy Paprola. Then this *Yavkut* form of *Guduchi Kand* was packed in small packets according to the desired dose.

Method of Preparation: -*Guduchi Kand Yavkut Churna* was added to water in the ratio 1:8 and *Kashaya* was prepared by reducing it to ¼ th .^[2]

PROBABLE MODE OF ACTION OF THE GUDUCHI KASHAYA:-

Guduchi have analgesic and anti-inflammatory properties due to which it helps in relieving symptoms of Vata Rakta. Due to its anti-oxidant activity it prevents further cell injury and promotes healing. All these properties of *Guduchi* yield high efficacy in the treatment of Vata Rakta.^[9]

DISCUSSION

Ayurveda have unique way to explain the mode of action of drugs. The action of every drug is depend on its *Rasa*, *Guna*, *Veerya*, *Vipaka* and *Prabhava*. There are some specific properties of drugs which are not explained in *Ayurvedic* text are explained on the basis of *Prabhava*. These drugs act in combination of *Dosha* and *Dushya* to cause *Samprapti Vighatana* to allay the symptoms of the disease.

Probable mode of action of *Bodhi Vrisha Kashaya* can be explained on the following basis.

According to Rasapanchaka

S. No.	Name of drug	Rasa	Guna	Veerya	Vipaka	Dosha Karma
1.	<i>Bodhi Vriksha</i> (<i>Peepal</i>)	<i>Kashaya</i> , <i>Madhura</i>	<i>Guru</i> , <i>Ruksha</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Kaphapittashamaka</i>

➤ ON THE BASIS OF RASA: *Kashaya* and *Mathura Rasa* are present in *Bodhi Vriksha*. *Madhura* and *Kashaya Rasa* are said to be *Pitta Shamaka*. *Kashaya Rasa* has predominance of *Prithvi* and *Vayu* mahabhoota . Both of these Mahabhoota possess *Ruksha Guna* which helps in cleansing the channels (*Srotovishodhana*) and also helps in absorbing undigested Ahar Rasa(*Amashoshna*).

➤ ON THE BASIS OF GUNA: *Guru Guna* helps in pacifying *vata* and *Ruksha Guna* help in clearance of *Srotas-Avarodha*. As a result of *Guru Guna* properties patients got relief in symptoms caused due to vitiated *Vata Dosha* like *Sandhi Shoola* and *Pain on Movement of Joints*.

➤ ON THE BASIS OF VEERYA: *Bodhi vriksha*(*Ashwatha*) has sheet veerya due to which it helps in pacifying pitta dosha and helps in relieving symptoms like *Sandhi Shotha*, *Raga*, *Vidaha*, *Sparshasahatava*.

➤ ON THE BASIS OF VIPAKA: Due to *Katu Vipaka* *Bodhi vriksha* (*Ashwatha*) helps in digestion of *Ama* . Because of *Amapachana*, *Rakta Dhatu* don't get vitiated with *Ama* and there is no further progression of the disease occurs.

➤ ON THE BASIS OF DOSHA KARMA: *Bodhi vriksha* has *vatapittashamka* property. In the pathogenesis of *Vatarakta* ,*Vata* and *Rakta* are mainly involved. As we know *Rakta Dhatu* is the *dushya* of *Pitta dosha* and according to *Doshadushya ashrayashrayibhava*, *aggravation* of *Pittadosha* leads to *Rakta Dhatu Pradushna*(*vitiation*). Due to *Pittashamaka* property of the trial drug *Rakta dhatu* don't get vitiated and there is no further progression of the disease occurs. So we can say that due to *Vata* and *Pitta Shamaka* property *Bodhi Vriksha* helps in curing *Vatarakta* .

➤ **According to Samprapti vighatana**

Avoiding the cause of disease is, of course the first line of treatment of all the diseases but the drug (medicine) which is instituted as a treatment should not only reduce the vitiating power of the *Doshas* but also should increase the *Dhatu bala*. This is so because *Dhatu* help in maintaining a balance between the *Doshas*. If *Dhatu* are strong, the *doshas* will not be able to produce any deformity no matter what the extent of the vitiating *Doshas* is. Hence, the drug used for the treatment of diseases must have the capability to reduce the vitiating of *Doshas* and bring about an equivalent increase in *Dhatu bala*. Treatment is done for achieving health and health depends on the strength (*bala*) of *Dhatu*, hence the regimen of treatment must be so constituted that it increases the balance of all those *Dhatu* which are involved in the *Samprapti*.

Bodhi Vriksha Kashaya because of its *Katu Vipaka* causes *Agni Pradeepana* and helps in digestion of *Ama*. This leads to the *Samprapti Vighatna* of the disease. Further we can infer that *Vatapitta Shamka* property of the *Bodhi Vriksha Kashaya* also helps in disintegrating the disease process associated with pathogenesis of the disease.

According to Rasapanchaka

S. No.	Name of drug	Rasa	Guna	Veerya	Vipaka	Dosha Karma
1.	<i>Guduchi</i>	<i>Tikta, Kashaya</i>	<i>Guru, Snigdha</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Tridoshashamaka</i>

ON THE BASIS OF RASA: *Tikta* and *Kashaya* Rasa are present in *Guduchi*. In *Tikta Rasa* there is predominance of *Vata* and *Akaash Mahabhoot*. Hence having *Deepana* and *Pachana* properties. Other properties are *Lekhana* and *Kleda*, *Medashoshana* properties (*Ch.Su-26/40*). As *Agnimandyata* is one of the causative factor for *Vatarakta*. So *Tikta Rasa* help in *Jathragnideepan*. *Tikta Rasa* other properties like *Lekhana*, *Shoshana* help in clearance of *Srotas Avarodha*. *Tikta and Kashaya Rasa* both having properties of opening closed channels i.e., '*Strotaansi vivrinoti*' caused by *Ama*. Thus also help in *Ama Pachana*.

ON THE BASIS OF GUNA: *Guru* and *Snigdha Guna* helps in pacifying *Vata Dosha*. As a result of *Guru* and *Snigdha* properties patients got relief in symptoms caused due to vitiating *Vata Dosha* like *Sandhi Shoola* and *Pain on Movement of Joints*.

ON THE BASIS OF VEERYA: *Guduchi hasushna veerya* due to which it helps in pacifying *Vata Dosha* and helps in relieving symptoms which are caused by vitiating *Vata*.

ON THE BASIS OF VIPAKA: Due to *Madhur Vipaka*, *Guduchi* helps in pacifying *Pitta Dosha*. Because of *Pittashamak vipaka* of *Guduchi* patients got relief in symptoms like *Raga*, *Vidaha* and *Sparshasahatava*.

ON THE BASIS OF DOSHA KARMA: *Guduchi* is having *Tridosha Shamaka* property. In the pathogenesis of *Vatarakta* along with *Vata* there is vitiating of *Rakta dhatu* which is *Dushya* of *pitta*, although involvement of *Pitta* is also there. Due to manifestation of all (*Vata, Pitta, Rakta* and *Ama*) the disease characteristically represents vitiating of *Tridoshadosha*. *Guduchi* helps in pacifying *Tridosha* and causes break in the further progression of the disease (*Samprapti vighatana*).^[3]

According to Samprapti vighatana

Avoiding the cause of disease is, of course the first line of treatment of all the diseases but the drug (medicine) which is instituted as a treatment should not only reduce the vitiating power of the *Doshas* but also should increase the *Dhatu bala*. This is so because *Dhatu* help in maintaining a balance between the *Doshas*. If *Dhatu* are strong, the *Doshas* will not be able to produce any deformity no matter what the extent of the vitiating *Doshas* is. Hence, the drug used for the treatment of diseases must have the capability to reduce the vitiating of *Doshas* and bring about an equivalent increase in *Dhatu bala*. Treatment is done for achieving health and health depends on the strength (*bala*) of *Dhatu*, hence the regimen of treatment must be so constituted that it increases the balance of all those *Dhatu* which are involved in the *Samprapti*.

Guduchi because of its *Tikta Rasa* causes *Agni Pradeepana* and helps in digestion of *Ama*. This leads to the *Samprapti Vighatna* of the disease. Further we can infer that *Tridosha Shamka* property of the *Bodhi Vriksha Kashaya* also helps in disintegrating the disease process associated with pathogenesis of the disease.

CONCLUSION

The drug *Bodhi Vriksha (Peepal) Kashaya* mentioned in *Charka Samhita (Vatashonita Chikitsa Adhyayaya)* and *Guduchi Kashaya* as mentioned in *Chakradatta (Vatarakta Chikitsa Prakaran)* contains *Bodhi vriksha (Peepal)* and *Guduchi* as main content respectively. These drugs are explained on the basis of Therapeutics and detailed pharmacodynamics. Both of the drugs has been mentioned according to *Rasa – Panchaka*. They are having many properties like Hypoglycemic, Analgesic, Anti-arthritis, Anti-viral, Anti-bacterial, **Hypolipidaemic, Anti-ulcer, Anti-tumor, Antiprotozoal and Oestrogenic**. These properties show that these drugs are acting on *Vatrakata* and useful in treating *Vatrakata*.

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