

A LITERARY REVIEW ON *KĀKODUMBARA***Dr. Krishnapriya K**

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ABSTRACT:

There are many unexplored drugs in Ayurveda which have very good effects in treatment. *Kākodumbara* is one such plant which plays an important role in the management of many diseases, but not explored much. Often the name *kākodumbara* gets confused with two varieties- *Ficus hispida* Linn. and *Ficus exasperata* Vahl. of family moraceae. On the basis of Ayurvedic literature and experimental studies conducted in various institutes this drug possesses properties like *kaphapitta hara*, *svitrahara* etc. A comprehensive review on *kākodumbara* especially on its pharmacological actions and botanical features will be helpful before starting any research.

KEY WORDS: *Kākodumbara*, *Ficus hispida*, *Śvitrahara*

INTRODUCTION:

Ayurveda [Traditional Medicine (TRM) of India as per WHO.], the holistic science of medicine, as practiced and utilized by Indians at large since centuries, is getting global by virtue of its qualitative strength. As per *Caraka samhita*, “Ayurveda not merely a system of medicine, but a way of life.” Its objective is to accomplish physical, mental, social and spiritual wellbeing by adopting preventive and promoting approaches as well as treating disease with a holistic approach. Medicinal plants can be considered as the backbone of Ayurveda. *Kākodumbara* is one among them and *ācāryā caraka* has included *kākodumbara* in *śramahara daśemāni* as *phalgu*.⁽¹⁾ All the *Brihatrayees* have mentioned *kākodumbara* in the management of *śvitra* (leukoderma). It has been known as *śvitra bheṣaja* due to its action in *śvitra*. Vangasena has mentioned the action of *kākodumbara* in *vātavyādhi*⁽²⁾ and *sārameya viṣa*⁽³⁾. Also, it has been used in *raktapitta*, *arśas*, *pradara* etc.

CLASSICAL CATEGORISATION OF KĀKODUMBARA:

S.No:	Classical texts	Gaṇa , varga or skandha
1	<i>Carak Samhita</i>	<i>Śramahara daśemāni⁽¹⁾, tikta skandhas⁽⁴⁾</i>
2	<i>Bhāvaprakāśa nighanṭu</i>	<i>Vaṭādi varga⁽⁵⁾</i>
3	<i>Dhanvantari nighanṭu</i>	<i>Āmrādi varga⁽⁶⁾</i>
4	<i>Priya nighanṭu</i>	<i>Haritakyādi varga⁽⁷⁾</i>
5	<i>Kaiyadeva nighanṭu</i>	<i>Oṣadhi varga⁽⁸⁾</i>
6	<i>Rāja nighanṭu</i>	<i>Āmrādi phala varga⁽⁹⁾</i>
7	<i>Nighanṭu Ādarṣh</i>	<i>Vaṭādi varga⁽¹⁰⁾</i>

VERNACULAR NAMES OF KĀKODUMBARA: ⁽¹¹⁾

S.NO:	LANGUAGE:	NAMES:
1	Sanskrit	<i>kākodumbarikā, malayū</i>
2	Hindi	<i>gōblā, kaṭguleria</i>
3	Telugu	<i>Adaviatti</i>
4	Tamil	<i>kāṭṭu atti, peyatti, cōnatti</i>
5	Kannada	<i>Kāduatti</i>
6	Malayalam	<i>kāṭṭatti, erumanākkku, pārakam</i>

SYNONYMS OF KĀKODUMBARA IN DIFFERENT CLASSICAL TEXTS: ^(5,6,7,8,9,10)

S.No:	Synonyms:	B.P.N	D.N	P.N	K.N	R.N	N.A
1	<i>Kākodumbarika</i>	+	+	+	+	+	+
2	<i>Phalgu</i>	+	+	-	+	-	+
3	<i>Kakṣa</i>	-	-	-	+	-	-
4	<i>Phalguśivāṭika</i>	-	-	-	+	-	-
5	<i>Malayu</i>	+	+	-	+	-	+
6	<i>Śvitrabhaiṣajyam</i>	-	+	-	+	+	-
7	<i>Phaṇika</i>	-	-	-	+	-	-
8	<i>Phalabhārika</i>	-	-	-	+	-	-
9	<i>Ārājī</i>	-	-	-	+	-	-
10	<i>Mañjarī</i>	-	-	-	+	-	-
11	<i>Bhadṛā</i>	-	-	-	+	-	-
12	<i>Māyūrā</i>	-	-	-	+	-	-
13	<i>Jaghanephalā</i>	+	-	-	+	-	+
14	<i>udumbarī</i>	-	-	-	+	+	-

15	<i>Phalgunvāṭī</i>	-	-	-	+	+	-
16	<i>Phalinī</i>	-	-	-	+	-	-
17	<i>Mūlakarkatī</i>	-	-	-	+	-	-
18	<i>Kṛṣṇodumbarikā</i>	-	-	-	-	+	-
19	<i>Kharapatrī</i>	-	-	-	-	+	-
20	<i>Rājikā</i>	-	-	-	-	+	-
21	<i>kathinā</i>	-	-	-	-	+	-
22	<i>Kuṣṭhaghñī</i>	-	-	-	-	+	-
23	<i>Ajakṣī</i>	-	-	-	-	+	-
24	<i>Phalgunī</i>	-	+	-	-	+	-
25	<i>Malapū</i>	-	-	+	-	+	+
26	<i>Rājiphalgu</i>	-	+	-	-	-	-
27	<i>Śivāṭika</i>	-	+	-	-	-	-
28	<i>Phalasambhārī</i>	-	+	-	-	-	-
29	<i>Dhvākṣanāmnī</i>	-	-	-	-	+	-
30	<i>Maśakī</i>	-	-	-	-	-	+
31	<i>Kāṣṭhodumbarikā</i>	-	-	+	-	-	-

THERAPEUTIC USES OF KĀKODUMBARA IN DIFFERENT CLASSICAL TEXTS:

S.No:	Classical texts	Actions and uses
1	<i>Caraka Samhita</i>	<i>Śvitre sramsanam agryam</i> ⁽¹²⁾
2	<i>Suśruta samhita</i>	<i>In śvitra and pundarīkā</i> ⁽¹³⁾
3	<i>Aṣṭāṅga hṛdaya</i>	<i>Śvitra</i> ⁽¹⁴⁾
4	<i>Śarṅgdhara samhitha</i>	<i>Śvitrahara</i> ⁽¹⁵⁾
5	<i>Bhāvaprakāśa nighanṭu</i>	<i>Kaphapittahara , vrna, kuṣṭha, śvitra, pāṇḍu, arśa, kāmala śamana.</i> ⁽⁵⁾
6	<i>Dhanvantari nighanṭu</i>	<i>Raktapitta sleṣma hara, śvitra, kandu, kuṣṭha, vrna, śopha, pāṇḍu hara</i> ⁽⁶⁾
7	<i>Priya nighanṭu</i>	<i>Kaphapitta hari, sthambani, śvitra, vrna, kuṣṭha hara.</i> ⁽⁷⁾
8	<i>Kaiyadeva nighanṭu</i>	<i>Kaphapitta hara, śvitra, kuṣṭha ,pāṇḍu ,kāmala hara. Phalam: tridoṣahara, śukrala, viṣṭambhi, brmhanam, grāhi, kshata dāha viśasra jith.</i> ⁽⁸⁾
9	<i>Rāja nighanṭu</i>	<i>Raktapitta hara, tvak doṣa hara Valka is atisārajith.</i> ⁽⁹⁾
10	<i>Nighanṭu ādarṣa</i>	<i>Śvitra hara</i> ⁽¹⁰⁾
11	<i>Vaidya manorama</i>	<i>Kāsasvāsa hara</i> ⁽¹⁶⁾
12	<i>Rājamarttānda</i>	<i>Vadanāsrk hara</i> ⁽¹⁷⁾ , <i>sārameya viṣapaham</i> ⁽¹⁸⁾

13	<i>Vangasena</i>	<i>Avabāhukam</i> ⁽²⁾
14	<i>Vrnda mādhava</i>	<i>Upakuśa</i> ⁽¹⁹⁾ , <i>pradara</i> ⁽²⁰⁾ .

RASAPANCHAHA OF KAKODUMBARA IN DIFFERENT CLASSICAL TEXTS. (5,6,7,8,9,21)

S.No:	Classical texts:	Rasa	Guna	Virya	Vipaka	Doshakarma
1	<i>Bhāvaprakāśa nighanṭu</i>	<i>Kaṣaya</i>	-	<i>Sīta</i>	-	<i>Kaphapittahara</i>
2	<i>Dhanvantari nighanṭu</i>	-	-	-	-	<i>raktapittahara</i>
3	<i>Priya nighanṭu</i>	<i>Kaṣaya tikta</i>	-	-	-	<i>kaphapittahari</i>
4	<i>Kaiyadeva nighanṭu</i>	<i>Kaṣaya, tikta.</i>	-	<i>Sīta</i>	-	<i>Kaphapittahara</i>
		Phala: <i>madhura, kaṣaya</i>	<i>Guru , snighda</i>	<i>Sīta</i>	<i>madhura</i>	<i>Tridoṣahara.</i>
5	<i>Rāja nighanṭu</i>	<i>Amla, katu</i>	-	<i>Sīta</i>	-	<i>Pitta rakta hara</i>
6	<i>Nighanṭu ratnākara</i>	<i>Tikta , amla, katu, Kaṣaya</i>	-	<i>sīta</i>	-	<i>Kaphapitta hara</i>
		Phala: <i>madhura, kaṣayam</i>	<i>Guru, snigdha</i>	<i>sīta</i>	<i>madhura</i>	<i>Vatalam</i>

TAXONOMICAL CLASSIFICATION OF KĀKODUMBARA:

S.No:	Taxonomical classification	Kakodumbara
1	Kingdom	Plantae
2	Class	Magnoliopsida
3	Order	Urticales.
4	Family	Moraceae
5	Genus	Ficus L.
6	Species	Hispidia

BOTANICAL DESCRIPTION OF *KĀKODUMBARA*:⁽²²⁾

The plant *kākodumbara* often gets confused with two varieties *Ficus hispida* Linn. and *Ficus exasperata* Vahl, and both of them belongs to the same family moraceae.

S.No :	Botanical description :	<i>Ficus hispida</i> Linn.	<i>Ficus exasperata</i> Vahl.
1	Habit	Trees 10 m high	Deciduous tree, 18 m high
2	Bark	Grey , smooth	Greenish-white, smooth
3	Exudate	Milky	Watery
4	Branches	Laxly branched, internodes of branchlets hollow.	Young branches terete, with stout white scabrid hairs.
5	Leaves	Simple, opposite Lamina: elliptic-oblong, ovate-oblong or obovate-oblong. Base: round, sub cordate or cuneate. Apex: abruptly acute or acuminate or cuspidate. Margin: sub-entire to minutely dentate Surface: Membraneous, scabrid, hispid-pubescent.	Simple, laxly alternate spiral to opposite. Elliptic, ovate, oblong- lanceolate or obovate. Acute, round or cuneate. Acute to shortly acuminate. Denticulate or sinuate-crenate to serrate. Leaves of saplings and coppice shoots often lobed.
6	Flowers	Unisexual, inflorescence a	Unisexual,



THERAPEUTIC USES OF *KAKODUMBARA*: ⁽²³⁾

1. **Vitiligo:** In vitiligo, the best purgative is juice of *kākodumbara* mixed with jaggery.
2. **Cough and asthma:** *Kalka* of tender leaves of *kākodumbara* cooked in milk and added with *pippali*, taken in morning can cure all types of cough and asthma.
3. **Intrinsic haemorrhage:** The root of *kākodumbara* is pounded with rice water and ingested with the same can cure haemorrhage from mouth.
4. **Apabāhuka:** The latex of *kākodumbara* mixed with *hingu* and root of *kapikacchu* taken as snuff removes pain of *apabāhuka*.
5. **Upakuṣa:** It should be perforated and discharged with the leaves of *kākodumbara* and *goji*.
6. **Pradara:** Juice of *kākodumbara* fruits mixed honey alleviate *pradara*.
7. **Rabies:** *Kākodumbara* roots mixed with *dhattūra* seeds along with rice water destroys rabies.

BACKGROUND STUDIES:**Hepatoprotective study in leaves**

Methanolic extract of leaves exhibited significant hepatoprotective effect. (subhash c mandal et.al. 2000).⁽²⁴⁾

Acute toxicity studies:

Ficus hispida Linn. fruit was safe up to a dose level of 1600mg/kg of body weight. (Sariful Islam Howlader et al. 2012)⁽²⁵⁾

Anti oxidant activity:

Methanolic extract and fractions of *Ficus hispida* Linn. showed a moderate to potent antioxidant activity. (Sariful Islam Howlader et al. 2012)⁽²⁵⁾

Antinociceptive activity- in leaves and fruits.

Methanol extracts of leaves and fruits are evaluated for antinociceptive activity in acetic acid induced gastric pain writhing in Swiss albino rats. The result suggests both have strong antinociceptive components. (Towrait Jahan et.al. 2011)⁽²⁶⁾

Nephroprotective studies

Methanolic extract showed significant nephroprotective activity. (N Swathi et.al-pharmacognosy journal, 2011- Elsevier)⁽²⁷⁾

DISCUSSION:

Kākodumbara is mentioned in ayurvedic texts like *Carak Samhita*, *Suśruta Samhita*, *Aṣṭāṅga hṛdaya* etc and explained in detail in *Bhāvaprakāśa nighaṇṭu*, *Kaiyadeva nighaṇṭu*, *Dhanvantari nighaṇṭu*, *Priya nighaṇṭu* etc. Often the plant *Ficus hipida* Linn. gets confused with another species *Ficus exasperata* Vahl. of the same family. But the former can be clearly distinguished by the milky exudate and the comparatively bigger leaves. Due to the *Kaṣāya-tikta rasa* and *sita vīrya*, it is mainly *kaphapitta hara*, and can be used in *kuṣṭha*, *śvitra*, *vr̥ṇa*, *pāṇḍu*, *rakta vikārās* and in liver disorders. And also the chemical constituents of *kākodumbara* like hispidin, β -sitosterol, β -amyrin, lupeal acetate, tannins, oleanolic acids etc has proved the hypoglycemic, cardioprotective, antidiarrhoeal, neuroprotective, hepatoprotective, antineoplastic etc activities of the plant.

CONCLUSION:

As per the literature study, kakodumbara plant is mainly used in the management of svitra. In the traditional medicinal system, the plant is used to treat numerous diseases such as vrna, kusta, svitra, svasa, arsa, kamala etc. There are some reported pharmacological activities such as anti oxidant, anti nociceptive, nephroprotective etc. But still the plant needs attention in the research aspect as the pharmacological properties of this plant is not explored much. This plant claims to treat many diseases as per the literature study but there are limited reported evidences available that shows its effect. So this plant needs more experimental and clinical studies to prove its effects in various diseases.

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