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# PUSHPAYURVEDA (FLOWERS OF MEDICINAL PLANTS) DELINEATED IN KAIYADEVANIGHANTU

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#### **ABSTRACT:**

Majority of Ayurvedic treatise like Charakasamhita, Sushrutasamhita, Ashtangasangraha etc. have described various formulations consisting of herbs and drugs of animal and mineral origin. In these works the details regarding the identification of medicinal plants and their individual pharmacological actions and identifications were not mentioned. In view to fulfill this lacuna some authors written lexicon (Nighantus) during medieval period in a comprehensive way. Among them Kaiyadevanighantu (KN) written by Kaiyadeva (15A.D) furnished the information in eight vargas, though in certain manuscripts ninth varga namely Nanarthavarga was mentioned and the details about it are not provided. KN has deposited very useful information about medicinal plants and a critical analysis of the content indicates that more information about therapeutic utility of flowers of medicinal plants is mentioned in comparison to rest of lexicons. The information compiled and presented in this paper may help to identify the active principles of different flowers which give a scope to develop new herbal leads for the management of various disease conditions.

**Key words:** Flower, Kaiyadevanighantu (hello sir, if possible add 3-4 appropriate key words)

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### INTRODUCTION

Kaiyadeva has named his work as "Pathyapathyavibodhaka" which in later years popularly referred as "Kaiyadevanighantu". P.K.Gode has

placed this work during 1450 A.D. 1 External evidence clearly indicates that Kaiyadevanighantu was referred in the commentary of Saradatilaka by Raghavabhatt and he also wrote commentary on the present work namely 'Padarthadarsha' during 1493 A.D. Basing on this evidence the present nighantu can be placed before 1493 A.D. (15<sup>th</sup> century). Saranga, the father of Kaiyadeva has written work namely "Virasimhavalokana" during 1383 A.D. Madanapalanighantu (1374 A.D) quoted two varieties of Karavira, while Kaiyadeva introduced a third variety known as *Peetakaraveera*. Basing on this internal evidence some prefer to consider Kaiyadevanighantu as post Madanapalanighantu work. Taking into the period of spectrum which begins from 1383 A.D. (father's work) to 1493 written work commentary on this Raghavabhatt it can be assumed that the present work might be compiled during the early part of 15<sup>th</sup> Century. Kaiyadeva belong to Gujarat and his gotra is Bharadwaja. During 1928, Acharya Surendramohan published only Aushadhavarga from Lahore. But Acharya Priyavrat Sharma edited and published the complete text basing on the manuscripts (Sr. no.2092 & no.3092, BHU, Ms no.931, Bhandarkar oriental Research Institute, Pune. Sr.no. 1376, Theoseplical society

Library, Madras & Sr.no. 1/157, 87063, Saraswati Bhavan, Varanasi).<sup>2</sup>

Kaiyadev first time reported that tender leaf of Bimbi as a best Kamalahara drug. Brahmi is referred as Mandookaparni. Kapikachu is indicated in Dushtavrana. Bimbi is noted as Prajnyahara (Amedhya) and basing this "Bimbi on budhhivinashini" saying has become popular in the tradition. Vacha is referred as Prajnyajanana (Medhya). Sarpagandha mentioned in Sushrutasamhita cannot be considered as Rauvolfia serpentina, but Kaiyadev included one synonym such as Sarpasugandhika for Nakuli which indicates that Sarpagandha may be considered as Nakuli though its indications does not include hypertension (a disease not clearly mentioned in Ayurvedic literature) *Shakhamla* is mentioned as a synonym for Amlavetasa by Kaiyadev, meaning that its branches possess Amlarasa (Sour taste). Its fruit is useful part and it was included by most of the texts of Ayurveda under Phalavarga. Acharya Priyavrat Sharma interpreted that the market sample sold under the name Amlavetasa which belong to long petioles of Rheum emodi should be considered as Amlayetasa and it may not be considered as adulterant. This interpretation appears to be improper and one way gives a scope to officialise adulteration.

## TABLE NO.1 SHOWING LIST OF FLOWER DESCRIBED IN KAIYADEVANIGHANTU

No.	Drugs	<b>Botanical source</b>	Guna	Action	Indication
1.	Vasa	Adhatoda vasica Nees.	ı	Vatakara, Kapha- pittaghna	Kshaya
2.	Bilva	Aegle marmelos (L.) Correa ex Roxb.	ı	-	Atisara, Trishna, Chhardi
3.	Gambhari	<i>Gmelina arborea</i> Roxb.	-	Grahi, Vatala	Raktapitta, Raktapradara
4.	Patala	Stereospermum personatum (Hassk.) D. Chatterjee	Sheeta	Hridya	Pittatisara, Daha
5.	Eranda	Ricinus communis Linn.		Vatahara, Mutradoshahara, Raktapittapakopaka	-
6.	Nirgundi	Vitex negundo Linn.	-	Vata-kaphanashaka	Krimi, Gulma, Pleeha, Aruchi, Kushtha, Kandu, Shotha
7.	Bijapuraka	Citrus medica Linn.	Sheeta	Grahi, Raktapittaghna, Vatahara	-
8.	Narikela	Cocos nucifera Linn.	-	Vibandha	Raktapitta, Prameha, Raktatisara, Somaroga
9.	Kadali	Musa paradisiaca Linn.	Ushna	Grahi, Deepana, Kaphahara	-
10.	Amra	Mangifera indica Linn.	-	Kaphapittahara, Ruchya, Grahi, vatala,	Atisara, Prameha, Dushtashonita
11.	Badara	Ziziphus jujuba Mill.	-	Kaphapittahara	Kushtha
12.	Amlika	Tamarindus indica Linn.	Laghu	Ruchya, Kaphavatahara, Vishada, Deepana	Meha
13.	Karira	Capparis aphylla Roth.	-	Vatakara, Kapha- pittahara	-
14.	Kapittha	Feronia limonia (Linn.) Swingle.	-	-	Akhuvisha
15.	Madhooka	<i>Madhuca indica</i> J. F. Gmel.	Sheeta, Guru	Ahridya, Brihmana	-
16.	Panasa	Artocarpus integrifolia Linn. f.	Guru	Vaktravishodhana	-
17.	Moolaka	Raphanus sativus Linn.	-	Kaphapittashamaka	-
18.	Kasamarda	Cassia occidentalis Linn	-	-	Shwasa, Kasa, Urdhvavata
19.	Shigru	Moringa concanensis Nimmo ex Gibs.	Guru	Madhushigru- Grahi, Chakshushya,	Krimi,

		Moringa oliefera		Kaphapittahara	
		Lam		Kaphakara, Pittashamaka, Netrya	Raktapitta, krimi
20.	Shaka	Tectona grandis Linn. f.	Ruksha, Vishada, Laghu	Kaphapittahara,	Prameha
21.	Asana	Pterocarpus marsupium Roxb.	-	Vatakara, Pachaka	-
22.	Palasha	Butea monosperma (Lam.) Taub.	-	-	Grahani, Gulma, Gudaroga
23.	Varuna	Crataeva nurvala BuchHam.	-	Grahi, Rakta- pittashamaka	v
24.	Shallaki	Boswellia serrata Roxb.	-	Kapha-vatasra	Kushtha, Arochaka
25.	Mokshaka	Schrebera swientenioides Roxb	-	Kapha-pittahara	Kushtha
26.	Nimba	Azadirachta indica A. Juss.	-	Chakshushya, Pittahara, Vatakara	Krimi, Visha, Arochaka
27.	Kutaja	Holarrhena antidysenterica (Linn.) Wall.	Laghu	Deepana, vatala, Kapha-pittahara	Kushtha, Atisara, Krimi
28.	Paribhadra	Erythrina indica Lam.	-	-	Karnavyadhi, Pittaroga
29.	Shalmali	Salmalia malabarica (DC) Schott & Endl.	Ruksha, Sheeta, Guru, vatakara	Grahi, Kapha-pitta- rakta shamaka	-
30.	Kanchanara	Bauhinia variegata Linn	Guru, Sheeta, ruksha,	Grahi, Rochana	Kasa, Kshaya, Shwasa, Raktapitta, Pradara
31.	Agasti	Sesbania grandiflora (L.) Poir.	Anushna	Vatala	Naktandhya
32.	Aragvadha	Cassia fistula Linn.	Sheeta	Grahi	-
33.	Avartaki	Cassia auriculata Linn.		Varnya	Prameha
34.	Dhataki	Woodfordia fruticosa Kurz.	Ruksha, laghu	-	-
35.	Lodhra	Symplocos racemosa Roxb.	Sheeta	Grahi, kaphapittahara	-
36.	Nagakeshara	Mesua ferrea Linn.	Tikshna, Laghu, Ruksha	Pachana, Pitta- Kaphahara	Chardi, Kandu, Visarpa, Hrillasa, Kushtha, Trishna, Visha
37.	Padmini	Nelumbo nucifera Gaertn.	Sheeta, Guru, Ruksha	Kapha- raktashamana, Vishambhi,	-

				Vatakara	
38.	Kamala	Nelumbo nucifera	Sheeta	Varnya, kapha-	Vishpota,
	(white)	Gaertn.		pittanashana	Daha, Trishna
39.	Kumuda	Nymphaea alba Linn.	Picchila, Snigdha, Sheeta	Alhadakara	-
40.	Mallika	Jasminum sambac (Linn.) Ait.	Laghu, Ushna	Shukrala, vata- pittahara	Hridroga, Kushtha, Aruchi, Visha, Vrana
41.	Malati	Jasminum officinale Linn. var. grandiflorum (L.) Kobuski.	Ushna	<u>-</u>	Shiro-Akshi- Mukha-Danta roga, Visha, Kushtha, vrana, Raktavikara
42.	Yuthika	Jasminum auriculatum Vahl.	Sheeta, laghu	Hridya, Pittaghna, Kapha-vatakara	Vrana, Asya- Mukha-Danta- Akshi- Shiroroga, Visha
43.	Taruni	Rosa alba Linn.	Sheeta, laghu	Shukralla, Grahi, Deepana, Hridya, Varnya	-
44.	Ketaki	Pandanus Odoratissimus Linn.f.	Laghu	Kaphahara	-
45.	Madhavi	Hiptage benghalensis Kurz	Laghu, Sheeta	-	-
46.	Vasanti	Jasminum humile Linn.	Sheeta, Laghu	Tridoshahara	-
47.	Champaka	Michelia champaca Linn	Sheeta,	Kapha-pitta- raktahara	Mutrakrichha, Visha, krimi
48.	Ashoka	Saraca asoca (Roxb.) DeWilde.	Snigdha	Varnya, Grahi	Apachi, Trishna, Daha, Krimi, Shosha, Visha
49.	Punnaga	Calophyllum inophyllum Linn.	Sheeta	Pitta-kapha-rakta shaman	-
50.	Bakula	Mimusops elengi Linn.	Guru, Ushna	Kapha-pittahara,	Visha, Shwitra, Krimi, Dantaroga
51.	Kunda	Jasminum multiflorum (Burm. f.) Andr.	Laghu, Sheeta	-	Shiroroga, Visha
52.	Japa	Hibiscus rosa- sinensis Linn.	Sheeta	Pitta-kaphahara	Visha
53.	Nepali	-	Anushna, laghu,	Tridoshahara	Netra-asya- karnaroga
54.	Varshiki	A species of Jasminum	Anushna, laghu	Tridoshahara	-
55.	Alarka	Calotropis gigantea		Vrishya, Deepana,	Arochaka,

		(Linn.) R.Br. ex.Ait.		pachana	Praseka,
					Arsha, Kasa,
					Shwasa
56.	Tulasi	Ocimum sanctum	Ruksha,	Hridya	Daha, Shwasa,
		Linn.	Laghu		Kasa, Hikka,
					Vami, Krimi,
					Parshvashoola,
					Kushtha,
					Visha,Krichha,
					Ashmari
57.	Kshiravidari	Ipomoea digitata	Guru	Vrishya, Pittaghna,	-
		Linn.		Vata-kaphakara	
58.	Kumari	Aloe barbadensis	Guru	Vata-pittahara	Krimi
		Mill.			

#### DISCUSSION

Agastva is useful in the management of Naktandhyatva and is also referred by many nighantus. It is to be administered in the form of *Nasya* (Nasal drops) to treat Vishamajwara. Bhavamishra suggested Shalmali flower as the prime drug in the treatment of *Pradara* (Uterine bleeding), but the author had not mentioned its usage in the present work. For Krimi (worm infestation & other bacterial and viral infections), the drugs namely Kumari, Tulasi, Bakula, Ashoka, Champaka, Nimba and Shigru are indicated. Vermifuge or antimicrobial activities of these flowers are yet to be proved. The botanical source of Nepali and Varshiki are not known.

The flowers of *Patala* (*Stereospermum* personatum (Hassk.) D. Chatterjee), *Taruni* <sup>3</sup>(*Rosa alba* Linn.), *Yuthika* (*Jasminum auriculatum* Vahl.) and *Tulasi* <sup>4</sup> (*Ocimum sanctum* Linn) are attributed with *Hridya* property (cardio protective

activity) and Mallika<sup>5</sup> (Jasminum sambac (Linn.) Ait.) is indicated in Hridroga (heart disease). Among these plants Tulasi is indicated in *Shwasa*, *Kasa*, *Hikka* and Parshvashoola which are the indications given for *Pushkaramoola* by Charaka.<sup>6</sup> Medieval compendia recorded single drug claims for *Pushkaramoola* management of Hrichhula (cardiac pain). Basing on this one may prefer *Tulasi* in the place of *Pushkarmoola* for this condition since Tulasi is available in abundance growing everywhere throughout country.

Bilva, Patala, and Amra flower are indicated in Atisara (Diarrhea). Unripe fruit is indicated for Atisara by most of the texts of Ayurveda. Anti-diarrheal activity of unripe fruit was investigated by studying the influence on gastrointestinal transit as measured by a charcoal marker and on castor oil-induced accumulation of

intestinal fluid in mice.<sup>7</sup> Root of *Bilva* is also evaluated for anti-diarrheal activity against castor oil induced diarrhea in mice.<sup>8</sup> Bark or leaf of *Amra* is quoted for the same in other compendia. Methanolic and aqueous extract of seed and aqueous extract of leaves had been evaluated for anti-diarrheal activity.<sup>9, 10</sup>

Gambhari, Narikela, Beejapuraka, Varuna, Shigru and Kanchanara are suggested for Raktapitta (Hemorrhagic disorders) while Chakradutta described the flowers of Khadira, Priyangu, Kovidara and Shalmali in the management of Raktapitta. 11

Traditional practitioners prescribe the flowers of Arka pounded with Maricha for Asthma. Kaiyadeva indicated it in the and Shwasa. Kasa diseases like Methanolic extract of root of Arka had been evaluated in vitro for anti-histaminic activity and also in vivo for anti-asthmatic activity. 12 Tulasi. Kanchanara Kasamarda are other flowers indicated in respiratory disease like Shwasa and Kasa. Anti-asthmatic activity of an aqueous extract of C. occidentalis (COAE) leaves was carried out in vitro and in vivo animal models. In vitro studies carried out on histamine- induced contraction in isolated goat tracheal chain and in vivo studies on milk- induced eosinophilia, mast cell degranulation and capillary permeability in mice. 13 Hydro-alcoholic extract of dried

and fresh leaves, and the volatile and fixed oils of *Ocimum sanctum* was evaluated against histamine and acetylcholine-induced pre-convulsive dyspnea (PCD) in guinea pigs.<sup>14</sup>

Shukrala karma (Spermatopoietic activity) is attributed to Taruni and Mallika. Kshiravidari and Alarka are described as Vrishya (Aphrodisiac). Flowers namely Nimba, Nagakesara, Mallika, Malati, Yuthika, Kunda, Japa and Tulasi are indicated in Visha (various poisons of vegetable and animal in origin).

Vishahara activity is interpreted as antitoxic and includes the conditions engendering by allergies and Amavisha. Certain Vishahara drugs like Shirisha have shown to increase serum cortisol levels and produced anti-histaminic activity.<sup>15</sup> Eranda alleviates urinary infections (Mutradosha) and may be possessing antimicrobial activity. 16 Undecylenic acid (UDA) extracted from R. communis L. was evaluated for neuroprotective activity through inhibition of  $\mu$ -calpain. The results suggest that UDA is a novel non-peptidelike µ-calpain inhibitor with good cell permeability and potent neuroprotective effect. <sup>17</sup> Prameha is enumerated under the indications of Narikela, Amlika, Shaka and Avartaki which may be evaluated for their anti-hyperglycemic and urinary anti-septic activities. Hydro-alcoholic extract Cocus nucifera had been evaluated for

anti-diabetic activity on streptozotocin (STZ)-induced diabetic rats, showed significant results. Basavarajiyam quoted one formulation with *Avartaki* (*Cassia auriculata*) for the management of *Prameha*. Methanolic extract of roots had been evaluated for anti-diabetic activity in experimental study. <sup>20</sup>

Kaiyadeva nighantu appears to be the only nighantu which quotes Kapittha neutralizing Akhuvisha (Rat bite poisoning). Malati, Yuthika and Bakula flowers are suggested in the treatment of Dantaroga and these flowers should be enquired for their role in maintaining oral hygiene. Streptococcus mutans is the main cause of dental decay.<sup>21</sup>Bakul bark showed anti-microbial activity against S aureus, S saliva<mark>rius,</mark> mutans. sanguis,

Lactobacillus acidophilus and Candida albicans strains. <sup>22</sup>

Flavonoids are the most important plant pigments for flower coloration, producing vellow or red/blue pigmentation in petals designed to attract pollinator insects. The findings suggest that flavonoids have negligible systemic antioxidant activity, and that the increase in antioxidant capacity of blood seen after consumption of flavonoid-rich foods is not caused directly by flavonoids, but it is due to production of uric acid resulting from flavonoid depolymerization and excretion.<sup>23</sup> In the above context, in total 53 plants are screened for their antioxidant activity irrespective of their part used. Among them 17 herbs, part used as flower, had been evaluated for their antioxidant activity.

# CONCLUSION

Kaiyadevanighantu is the only nighatu which has described the therapeutic implications of many flowers of medicinal plants for the first time in comparison to other nighantus documented during medieval period. A proper scientific

evaluation and analysis of the phytoconstituents of these flowers may facilitate to develop new herbal leads which may help for the management of various ailments.

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