

## A CLASSICAL AYURVEDIC REVIEW OF *ARAGVADHA* (*Cassia fistula* L.), *NIMBA* (*Azadirachta indica* A. Juss) AND *KARAVEER* (*Nerium oleander* L.) LEAVES w.s.r. TO SKIN AILMENTS

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### ABSTRACT

**Background:** Skin diseases are frequently occurring health problem affecting all ages from the neonates to the elderly. Chronic skin conditions have a negative impact on one's quality of life. Numerous medicinal plants and dosage/usage forms are mentioned for the management of various skin disorders in Ayurvedic classics but *Aragvadha* (*Cassia fistula* L.), *Nimba* (*Azadirachta indica* A. Juss) and *Karaveer* (*Nerium oleander* L.) are the plants which have wide availability. Further, Bark, root, seed, flower and leaf are the commonly used botanical parts of the plants. But among all botanical parts of the plants, leaves are easily available and cost effective, thus most suitable for use. **Aim:** To explore Ayurvedic classics and contemporary literature for potential of *Aragvadha* (*Cassia fistula* L.), *Nimba* (*Azadirachta indica* A. Juss) and *Karaveer* (*Nerium oleander* L.) leaves in the management of skin disorders. **Methods:** Ayurvedic *Samhitas*, *Chikitsa Granthas* and different search engines were reviewed for the plants *Aragvadha*, *Neem* and *Karaveer* used in the management of skin ailments. **Result:** The leaves of *Aragvadha* (*Cassia fistula* L.), *Nimba* (*Azadirachta indica* A. Juss) and *Karaveer* (*Nerium oleander* L.) are ascribed for the management of variety of skin disorders. Most of the dosage forms are in *Lepa* form (i.e. topical application). The contemporary review also suggests that leaves of *Aragvadha* (*Cassia fistula* L.), *Nimba* (*Azadirachta indica* A. Juss) and *Karaveer* (*Nerium oleander* L.) are rich in anti-fungal and anti-bacterial potential. **Conclusion:** The leaves of *Aragvadha*, *Nimba* and *Karaveer* are easily available and can be applied as a *Lepa* (topical application) to combat skin disorders. The wide range of action over skin diseases make these leaves a potent natural remedy to combat many skin disorders.

**Keywords:** Leaves, *Aragvadha*, *Nimba*, *Karaveer*, Skin ailments, Anti-fungal, Anti-bacterial

### INTRODUCTION

Worldwide the prevalence of skin diseases is increasing day by day. It is contributed about 1.79% to the global burden of disease<sup>1</sup>. There is a popular adage that skin patients are never cured and never die.

Healthy skin is a reflection of overall wellness. Chronic skin conditions can have a negative impact on one's quality of life, affecting their physical, functional, and emotional well-being. Conventional medicine pro-

vides temporary relief but recurrence and side effects are well reported. Therefore, the whole world is looking towards natural remedies for complete curing of skin diseases. Ayurveda is the science, where natural drugs are used to combat various disorders. Skin diseases are covered under the umbrella of *Kushta* in Ayurveda classics. According to Ayurveda, *Kushta* refers to “*Kushnani vapuh iti Kustham*” or “*Kustham-Shareeram kushnati kutchitam karoti*”<sup>2</sup>. The term “*Kushta*” means disfigurement of the body, especially skin surface. According to *Acharyas*, *Kushta* are mainly of two types i.e *Mahakushta* (chronic and difficult to treat) and *Kshudra kushta* (mild skin diseases). Again *Mahakushta* are of 7 types and *Kshudra kushtas* are of 11 types<sup>3</sup>. The identified skin disorders of present scenario correlates with the sign and symptoms of these *Kushtas*. Numerous single herbs, herbal preparations and herbo-mineral preparations are indicated in Ayurvedic classics for the treatment of skin disorders. *Acharya Charak* has been described *Mahakashayas* regarding the skin i.e. *Varnya*<sup>4</sup>, *Kusthaghna*<sup>5</sup> and *Kandughna*<sup>6</sup> *Mahakashayas*. Various plant parts are used for the treatment of skin disorders but among all, the leaves are easily available and their collection is almost harmless to the plant. Further the plants of *Aragvadha* (*Cassia fistula* L.), *Nimba* (*Azadirachta indica* A. Juss) and *Karaveer*

(*Nerium oleander* L.) are easily available abundantly and indicated in Ayurvedic classics to combat skin disorders. *Acharya Charak* mentioned the plant *Aragvadha* in *Kusthaghna* and *Kandughna Mahakashaya*. The plant *Neem* is mentioned in *Kandughna Mahakashaya* and the plant *Karaveer* is mentioned in *Kusthaghna Mahakashaya dravyas*. The three plants are mentioned under *Tikta Skandha Dravyas*<sup>7</sup>. But the review is mainly focusing on the leaves of *Aragvadha*, *Nimba* and *Karaveer*, because the three leaves are easily available and easily identified by the common people. Thus the present paper is dedicated to three wonderful leaves of Ayurvedic classics which may be used to manage wide array of skin diseases.

#### METHODOLOGY

Important Ayurvedic classics i.e. *Charak Samhita*, *Sushrut Samhita*, *Ashtanga Hridaya*, *Ashtanga Samgraha* and the *Chikitsa Granthas* i.e. *Chakra-datta*, *Bangasena* were reviewed regarding use of *Aragvadha*, *Nimba* and *Karaveer* leaves in the aspect of ‘*Kushta* (Skin disorders)’. The contemporary information regarding *Aragvadha*, *Nimba* and *Karaveer* for the management of skin disorders is also gathered from books and web sources. The information was analyzed and presented in systematic manner.

**Table 1:** Indications and Various dosage/usage forms of leaf of *Aragvadha*, *Nimba* and *Karaveer* in the management of *Kushta* in *Charak Samhita*

Charak	Sl.no.	Dosage/Usage form	Method of use	Indication	Ref.
ARAGVADHA	1.	Kalka/Lepa (Aragvadhadi Lepa)	Leaf of Aragvadha, Kakamachi and Karaveer +Takra (External application)	Kushta	CS.Su.3/17, p(61)
	2.	Kalka/Lepa (Kushthanashaka Lepa)	Paste of leaf of Aragvadha (External application)	Kushta	CS.Ch.7/96,p(264)
	3.	Kwatha (Kushthanashakashta Kashaya)	Decoction of leaf of Aragvadha (Internal use)	Kushta	CS.Ch.7/97-99, p(264)
	4.	Kwatha (Siddharathaka Snana)	Vaman, Virechana, Lepa and Udgharshan of this kwatha.	Twak dosha, Kushta	CS.Ch.7/92,p(263)
	5.	Ghrita (Mahatiktaka)	Leaf of Aragvadha is one of the	Kushta,	CS.Ch.7/144,p(270)

		Ghrita)	ingredient (Internal use)	Kandu, pama	
<b>NIMBA</b>	1.	Swarasa	Vamana with Nimba leaf juice (Internal use)	Kustha	CS.Ch.7/43,p(255)
	2.	Swarasa	Asthapana Vasti with Nimba leaf juice (Internal use)	Kustha	CS.Ch.7/46,p(256)
	3.	Churna/Pradeha	Gharshan by Nimba leaf (External use)	Asweda, Stabdha, Supta, Kandu yukta Kustha	CS.Ch.7/56, p(257)
	4.	Kwatha Kashaya Yoga	Decoction of Leaf of Nimba (Internal use)	Kustha	CS.Ch.7/97, p(264)
	5.	Kwatha/Kalka	Decoction (Internal use) Paste (External use)	Ugra Galita Kustha	CS.Ch.7/157, p(271)
<b>KARAVEER</b>	1.	Kwatha	Snana, Pana, Lepana with this Kwatha (External & internal use)	Kustha	CS.Ch.7/158, p(272)
	2.	Taila (Sweta Karaveer Pallavadya Tailam)	Abhayanga with this taila (External use)	Kustha, Kandu	CS.Ch.7/106, p(265)
	3.	Taila (Kanakakshiri taila)	Leaf of Karaveer is one of the ingredient Abhyanga (External use)	Mandala Kustha	CS.Ch.7/115, p(266)

**Table 2:** Indications and Various dosage/usage forms of leaf of *Aragvadha*, *Nimba* and *Karaveer* in the chapter of *Kustha* in *Sushrut Samhita*

Sushrut	Sl.No.	Dosage/Usage form	Method of Use	Indication	Ref.
<b>ARAGVADHA</b>	1.	Kalka/Lepa	Paste of Leaf of Aragvadha + Lodhra + Nimba + Haridra (External application)	Switra	SS. Ch. 9/27, p(66)
	2.	Kalka/Lepa	Paste of Leaf of Aragvadha+Gomutra (External application)	Switra, Dadru, Vrana	SS. Ch. 9/40,p(67)
<b>NIMBA</b>	1.	As a single herb	Leaf of Nimba is used inter- nally as a food along with Shali, Shastik and Mudga Yusha.	Kustha	SS. Ch. 9/5, p(62)
	2.	Kwatha/Kalka	Snana, Lepana and Udgharshan.	Dadru	SS. Ch. 9/14, p(64)
	3.	Ghrita (Mahatiktak Ghrita )	Nimba is one of the ingredi- ent (Internal use)	Kustha	SS. Ch. 9/8, p(63)
<b>KARAVEER</b>	No	Not mentioned	Not mentioned	Not men- tioned	

**Table 3:** Indications and Various dosage/usage forms of leaf of *Aragvadha*, *Nimba* and *Karaveer* in the aspect of *Kustha* in *Ashtanga Hridaya*

Ashtanga Hridaya	Sl.No.	Dosage/Usage form	Method of use	Indication	Ref.
ARAGVADHA	1.	Kalka/Lepa	Leaf of Aragvadha + Gomutra (External application)	Switra, Dadru, Pama, Kotha	A.H. Ch. 20/9, p(563)
	2.	Kalka/Lepa	Leaf of Aragvadha+ Shirish bark + Karpash flower + Makoya leaf = paste (External application)	Kustha	A.H. Ch. 19/63, p(558)
NIMBA	1.	Kalka/Ubatana (Nimbadi Ubatana)	Leaf of Nimba is one of the main ingredient (External application)	Kandu, Pidaka, Kotha, Kustha, Sotha	A.H. Ch. 19/65, p(558)
KARAVEER		Not mentioned	Not mentioned		

**Table 4:** Indications and Various dosage/usage forms of leaf of *Aragvadha*, *Nimba* and *Karaveer* in the management of *Kustha* in *Ashtanga Samgraha*

Ashtanga Samgraha	Sl.No.	Dosage/Usage form	Method of use	Indication	Ref.
ARAGVADHA	1.	Kalka/Lepa	Sirish Bark+ Karpas flower+Aragvadha leaf+Kakamachi (External application)	Kustha	AS. 21/74, p(558)
	2.	Kalka/Lepa	Leaf of Aragvadha + Gomutra = Kalka (External application)	Switra, Dadru, Pama, Kotha	AS. 22/11, p(560)
NIMBA	1.	Churna	Udvertana of this Churna (External use)	Stabdha, Supta, Asweda and Kanduyukta Kustha	AS. 21/53, p(555)
KARAVEER	1.	As a single herb	Lekhana with the leaves of Karaveer. (External use)	Stabdha, Supta, Asweda and Kanduyukta Kustha	AS. 21/53, p(555)
	2.	Taila (Kanakakshiri tailam)	Katu taila boiled with decoction of root and young leaves of Karaveer. Abhyanga (External use)	Vatakaphaj Kustha, Dadru, Kotha, Krimi, Pama, Vicharchika	AS. 21/65, p(557)

**Table 5:** Indications and Various dosage/usage forms of leaf of *Aragvadha*, *Nimba* and *Karveer* in the chapter of *Kustha* in *Chakradatt*

Chakradatt	Sl.No.	Dosage/Usage form	Method of use	Indication	Ref.
ARAGVADHA	1.	Kalka/Udvertana (Kusthe Chaturngul Pralepa)	After massaging with mustard oil Udvertana of paste of Leaf of Aragvadha, makoya, Karaveer + Takra	Kustha	CD. 50/7, p(278)

	2.	Churna/Pradeha (Kusthanashak Sat Pradeha)	External use	Kustha	CD. 50/8, p(278)
	3.	Kalka/Pralepa (Dadrubadau Aragvadha Patra Pralepa)	Aragvadha leaf + Kanji = Paste (External application)	Dadru, Kitibha, Sidhma	CD. 50/32, p(281)
	4.	Kwatha Mansyadi Kanduharo Yoga	Aragvadha leaf is one ingredient (Internal use)	Kustha	CD. 50/49, p(283)
	5.	Kalka/Lepa (Switradayo Pootikadi Lepa)	Paste of Aragvadha leaf + Putika + Arka + Snuhi + Jati leaf + Gomutra (External Application)	Dadru, Vrana, Switra, Kustha	CD. 50/67, p(285)
	6.	Tailam (Truna tailam)	Aragvadha leaf is one of the ingredient Abhyanga (External use)	Kustha	CD. 50/123, p(289)
	7.	Tailam (Mahatrana tailam)	Aragvadha leaf is one of the ingredient Abhyanga (External use)	Twak Roga	CD. 50/128, P(290)
	8.	Tailam (Somaraji Tailam)	Aragvadha leaf is one of the ingredient Abhyanga (External use)	Kustha, Kandu, Nyachha, Vyanga, Neelika, Kachhu, Pama	CD. 50/163, p(292)
<b>NIMBA</b>	1.	Kwatha (Mansyadi Kanduhara Yoga)	Nimba leaf is one of the ingredient (Internal use)	Kustha	CD. 50/49, p(283)
	2.	Churna (Sarvakusthe Abhaya Aristadi Churnam)	Nimba leaf + Haritaki + Amalaki – Powder (Curing of all skin dis- eases in 1 month) (Internal use)	Kustha	CD. 50/64, p(285)
	3.	Churna (Panchnimb Churna)	Nimba leaf is one of the ingredient (Internal use)	Kustha	CD. 50/74-83, p(287)
	4.	Churna/Lepa (Visphotakadou Nimbapatradi Lepa)	Nimba leaf + Ghee + Amla powder (External application)	Kotha, Bisphota, Kshyata, Seetapitta, Kandu, Raksa	CD. 51/9, p(294)
<b>KARAVEER</b>	1.	Churna/Udvardana	After massaging with mustard oil Udvardana of Leaf of Karaveer Aragvadha, makoya, + Takra (External application)	Kustha	CD. 50/7, p(278)
	2.	Tailam (Kusthesu Karaveeradya tailam)	Juice of Sweta karaveer + Chitrak + Vidang + Gomutra Abhyanga (External use)	Kustha	CD. 50/150, p(291)

**Table 6:** Indications and Various dosage/usage forms of leaf of *Aragvadha*, *Nimba* and *Karaveer* in the chapter of *Kustha* in *Bangasena*

Bangasena	Sl. No.	Dosage/Usage form	Method of use	Indication	Ref.
ARAGVADHA	1.	Kalka/Lepa	Paste of Aragvadha leaf + Takra(External application)	Kustha	BS. 25/58-59, p(332)
	2.	Kalka/Lepana	Paste of Aragvadha leaf + Aranala (External application)	Dadru, Kitibha Kustha, Sidhma	BS. 25/63, p(333)
	3.	Churna/Udva-rtana	Aragvadha leaf + Takra + Sarsapa Taila (External use)	Pama, Vicharchika	BS. 25/133, p(338)
	4.	Taila (Truna taila)	Aragvadha leaf is one of the ingredient Abhyanga (External use)	Ekadasa Kustha, Dadru, Vicharchika, Pama, Sidhma	BS. 25/225, p(346)
NIMBA	1.	Powder/Lepa	Nimba leaf + Moolaka seed + Sweta sarsapa + Guhadhuma + Water (External application)	Sidhma	BS. 25/75, p(333)
	2.	As a single herb	Nimba leaf (Intake of 100 Nimba leaves) (Internal use)	Twak roga	BS. 25/83, p(334)
	3.	Churna (Panchanimba Churna)	Neem leaf is one of the ingredient (Internal use)	Kustha	BS. 25/167, p(341)
KARAVEER	1.	Kalka/Lepa	Karaveer leaf paste (External application)	Kustha	BS. 25/58-59, p(332)



*Aragvadha*



*Nimba*



*Karaveera*

## OBSERVATION AND DISCUSSION

Skin diseases are among the most common health problems worldwide and are associated with a considerable burden. *Kustha* is the general term used in Ayurveda to denote diseases of skin. A good number of drugs are enumerated in Ayurvedic classics for its management. The leaves of *Aragvadha*, *Nimba* and *Karaveer* were said to be beneficial for the management of *Kustha* (Leprosy), *Switra* (Leucoderma), *Dadru* (Ringworm), *Pama* (Scabies), *Kotha*, *Sidhma* (Psoriasis), *Kandu* (Itching), *Vicharchika* (Eczema) etc (Table no. 5 and 6). The leaves were mentioned in various dosage forms like *Kashaya*, *Lepa*, *Udvardana*, *Churna*, *Taila*, *Kwatha* forms etc. *Acharya Chakradatt* mentioned the use of *Aragvadha* leaves along with *Aranala* for the management of *Dadru* (Ringworm), *Kitibha* and *Sidhma* (Psoriasis)<sup>8</sup>. According to *Acharya Charak*, the three plants came under *Tikta Skandha Dravyas*. It means the rasa of these three plants is Tikta. The effect of *Tikta Rasa* on skin is *Swedaghna*, *Kandooghna*, *Kushthaghna*, *Dahaprashmana* and *Sthirikarana*<sup>9</sup>. Due to *Tikta Rasa*, the leaves are used for the management of skin ailments. In Ayurvedic classics, the leaf of *Aragvadha* is mainly mentioned for the management of *Dadru* (Ringworm), *Shwitra* (Leucoderma) and *Sidhma* (Psoriasis). The leaf of *Nimba* is mostly described for the management of *Dadru* (Ringworm) and *Kotha*. Similarly *Karaveer* leaf is mainly mentioned in the aspect of *Kotha* and *Kandu* (Itching). *Dadru* is characterized by elevated circular lesions which spread along the skin. *Shwitra* is defined as the de-pigmented areas on the skin. Thus amongst *Aragvadha*, *Nimba* and *Karaveer*, the leaves of *Aragvadha* are most frequently mentioned for the management of skin disorders in all Ayurvedic classics. The leaves are used both for internal administration as well as for external application. But the review suggests most of the usage forms are in *Lepa* (i.e. Topical application) form. This is due to the fact that topical application of a medicine improves bioavailability of a drug and reduces its dose frequency. Further Skin is an effective medium from which maximum absorption of the drug takes place and the drug directly enters into the circulatory sys-

tem. This can greatly increase efficacy and also safety relative to systemic administration. The claims of Ayurveda are also supported by contemporary studies reveals that the leaves of *Aragvadha*, *Nimba* and *Karaveer* are having anti-microbial potential. Anti-fungal activity of aqueous and methanolic extract of leaves of *Cassia fistula* was reported<sup>10</sup>. In-vitro Anti-bacterial and Antifungal activity was also observed in Hydro-alcoholic extract of leaves of *Cassia fistula*<sup>11</sup>. It is also reported that Leaves of *Cassia fistula* Linn. is more effective to control discoloration, itching, oozing, pain, burning, thickening of skin and eruption. In a clinical study, Leaf of *Cassia fistula* Linn. was proved to check the etio-pathogenesis of Eczema (*Vicharcika*) and arrest its progress by local application of leaf extracts on boils and blisters<sup>12</sup>. In an in-vitro study the antifungal activity of Azadirachta leaf extract was reported against growth of some human pathogens (*Aspergillus flavus*, *Aspergillus fumigatus*, *Aspergillus niger*, *Aspergillus terreus*, *Candida albicans* and *Microsporum gypseum*)<sup>13</sup>. Azadirachta indica was proved to be a chemopreventive potential against murine skin carcinogenesis<sup>14</sup>. Anti-bacterial and antifungal activity of Methanolic and chloroform extract of leaf powder of *Nerium oleander* L. (cold maceration process) was proved to act against many bacteria's i.e. *Bacillus subtilis*, *Escherichia coli*, *Pseudomonas aeruginosa* and *Staphylococcus aureus* and the fungi *Candida albicans* and *Aspergillus brasiliensis*<sup>15</sup>. Thus we can say that leaves of *Aragvadha*, *Nimba* and *Karaveer* are time tested, cost effective and easily available and may serve as a natural remedy to combat various skin diseases.

## CONCLUSION:

Though the skin diseases are not a life threatening condition, but they affect the quality of life by appearance, burning sensation and excessive itching etc. The plants of *Aragvadha*, *Nimba* and *Karaveer* are easily available and well mentioned in Ayurvedic classics for management of skin disorders. However the leaves of *Aragvadha*, *Nimba* and *Karaveer* are also be used for specific skin conditions like *Dadru* (Ringworm),

*Shwitra* (Leucoderma), *Kandu* (Itching) etc. The scientific studies are in supportive of claims of Ayurveda. Therefore leaves of *Aragvadha*, Nimba and Karaveer may be recommended in clinical practice as a single drug for various skin disorders.

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