



Nirgundi (*Vitex negundo* Linn.) –A Review

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Abstract : In *Agada Tantra*, *visha chikitsa* includes with various methods of removing the poisonous substances out of the body as well as suggested antidotes for peculiar poisons. In recent time excessive use of pseudo drugs, which gives rise to adverse reaction, has motivated mankind to return to nature for secure treatment or remedies. In this review we have focused *Vitex negundo* Linn aka Nirgundi which is one of the essential medicinal tree. Present review aimed to compile the data to present the *Vishaghna* property of Nirgundi and attempt is made to collect scientific evidences and researches. A herbal drug commonly known as Nirgundi (*Vitex negundo* Linn) is very helpful for the therapeutic property and proven effective in various disease treatment.

Keywords: *Agadtantra*, *Nirgundi*, *Vishaghna*, *Agada*, *Ayurveda*.

Introduction:

Word Nirgundi literary means in Sanskrit that one which prevent body from infection. This herb mentioned in all samhitas of Ayurveda. It grows in woody and humid places also grow in mixed open forest along the coast of water. It has a good Habitat India, Afghanistan, Sri Lanka, Thailand, East of Africa and Madagascar. Usually it bears tri-foliolate and penta-foliolate leaves on branches quadrangular in shape which give rise to Bluish-Purple flowers. This Plant grows on commercial basis in some part of Asia, Europe, North America and West Indies. In Present day to fulfill the necessity of ailing humanity, exploration and wisdom of classical indigenous herb is important in order to regain the human prosperity in all aspect of Health and life.

Ancient Review:

There is no reference to sindhuvara (white flowered negundo) in the Vedas. The Sanskrit word for V. Negundo – *Nirgundi* – literally means ‘that which protects the body from diseases’. It is one of the herbs mentioned in all of Ayurvedic Samhitas. The Amarakosha (500–800 CE) lists various names assigned to newri as sinduk, *sindhuvara*, *indrasursa*, *nirgundi*, *indranika*, and *sinduar*. The ancient treatise Varahamihira’s *Brahat Samhita* (c. 500 CE) identifies two names as sindhuvara.¹

In the Puranas, it is referred to by four names: nirgundi [Matsya Purana (MP)], nirgundika, sindhuvara (MP), and sindhuvaraka [Agni Purana, MP, Brahma Vaivarta Purana, (BvP)].²

The classical Sanskrit literature such as Kalidasa’s *Ritu Savambhara*³ and Banbhata’s *Harsacharita* and Kadambari also identify and refer to these two varieties.⁴

Probably the earliest reference on the blue variety of nirgundi/ka occurs in the *Charaka Samhita* (c. 700 BCE).



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Fig. 1 *Vitex negundo*

Ayurvedic Review:

People in ancient India identified two varieties of nirgundi, one bearing white flowers (shwetapushpi), called sindhuvar, and the other having blue flowers (pushpanilika) designated as nirgundi in Sanskrit.

The following kinds of Nirgundi are described by various scholars:⁵

- 1) Susruta- 2 types Svetapuspa & Nila puspā.
- 2) Dalhana- 2 types Nirgundi & Sinduvara.
- 3) Dhanvantari Nighantu- 2 types Sveta & Nila.
- 4) Bhāvamisra- 2 types Svetapuspa (Sinduvara) & Nilapuspi (Nirgundi)
- 5) Kaiyadeva- 3 types Nirgundi, Sinduvara & Sephalika
- 6) Sodhala- 2 types Sinduvara (white) & Sephalika (blue)
- 7) Raja Narahari- 3 types Sinduvara, Nlanirgundi & Sephalika.
- 8) Nighantu Ratnākara- 2 types Kartari Nirgundi & Aranya Nirgundi.

Parts Used: Root, leaves, flowers, fruits and bark

Nirgundi Vernacular names :^{6,7}

Assamese	Pochotia
Bengali	Nirgundi ; Nishinda; Samalu
English	Five-leaved chaste tree; Horseshoe vitex; chinese chaste tree
Gujarati	Nagoda; Shamalic
Hindi	Mewri; Nirgundi; Nisinda; Sambhalu;
Kannada	Bile-nekki
Malayalam	Indrani
Marathi	Nirgunda
Nepali	Simali; Nirgundi
Punjabi	Banna; Marwan; Maura; Mawa; Swanjan Torbanna
Sanskrit	Nirgundi; Sephalika; Sindhuvara; Svetasurasa; Vrikshaha
Konkani	Lingad
Tamil	Chinduvaram; Nirnochchi; Nochchi; Notchi; Vellai-nochchi
Telugu	Sindhuvara; Vavili; Nalla-vavili; Tella-vavili, lekkali
Urdu	Sumbaloo
Odia	Nirgundi

Pharmacological properties of Sinduvara according to Ayurveda:⁸

Rasa	Katu (pungent), Tikta (bitter)
Guna	Laghu (lightness), Ruksha (dry)
Virya	Ushna (hot)
Vipaka	Katu (pungent)
Doshakarma	Kapha-Vata Shamaka

Nirgundi Botanical Classification:⁹

Kingdom	Plantae- Plants
Subkingdom	Tracheobionta – Vascular plants
Super division	Spermatophyte – Seed plants
Division	Magnoliophyta – Flowering plants
Class	Magnoliopsida - Dicotyledons
Subclas	Asteridae
Order	Lamiales
Family	Lamiaceae
Genus	Vitex Linn.
Species	Vitex negundo Linn



Fig. 2 Vitex leaves



Fig. 3 Vitex seeds



Fig. 4 Vitex roots

Table 1 Nirgundi in Charak Samhita as Agad

Drug	Formulation	Part Used	Therapeutic Action	Reference
Sutrasthana				
Paste of sirisa with sindhuvara	<i>Visahara lepa</i>	Bark	Counteract effects of toxicosis	Cha.Sam.Su. 3/28
Haridra, manjishta, chandana, sindhuvara, shirisha etc	<i>Vishaghna gana</i>	Prayojyanga	Mitigates visa (Antidotes to poison)	Cha.Sam.Su. 4/16
Chikitsasthana				
Patra, agaru, musta, suradaru, kushta, sindhuvara, rajani, gairika, nimba manjishta, laksha etc	<i>Mahagandhahasti Agada</i>	Prayojyanga	Destroys eye diseases irregular fever, indigestion, skin disease, destroys quickly the poisons of all rats spiders, serpents.	Cha.Sam.Chi. 23/77-82
Sindhuvara, sveta and girikarnika	-	Root	For bite of darvikara type of snake, kushta	Cha.Sam.Chi. 23/195.
Candara, padmaka, ushira, shirisa, sindhuvarika, ksirasukla, tagara, kustha patala, udijya, sariva etc	<i>Chandanadi lepa</i>	Prayojyanga	Universal application for spider poison.	Cha.Sam.Chi.23/200-201

Synonyms used for nirgundi : Nirgundi, Sindhuvara,

Table 2 Nirgundi in Sushrut Samhita as Agad

Drug	Formulation	Part Used	Therapeutic Action	Reference
Kalpasthan				
Prapoundarika, sindhuvaraka, suradaru, musta, candana, guggulu etc	<i>Tarkshya Agada</i>	Prayojyanga	Capable of neutralizing the effect even of the poison of takshaka.	Su.Sam.Ka. 5/64-67
Draksha, surasa, bilwasindhavaraka, dadima, gairika etc	<i>Drakshadhi Agada (Mandali-vishahara Agada)</i>	Prayojyanga	Highly effective especially in poisoning by a mandali bite	Su.Sam.Ka. 5/76-77
Somraji, kushta, sindhuvaraka, punarnava, aragvadha sirisha etc.	<i>Ekasara Gana</i>	Pushpa	Destroys the effects of poison.	Su.Sam.Ka. 5/83-85
Chandana, kushta, nagara, gairika, bala, sindhuvar, sirisa, patali, shalmali etc	<i>Mahasugandhi Agada</i>	Pushpa	King of all the other agada as it Destroys all poisons	Su.Sam.Ka 6/14-27
Mudgaparni, mashaparni, sindhuvara etc	-	Prayojyanga	For poison by bite of rat of Kulinga species	Su.Sam.Ka. 7/20

Synonyms used for nirgundi : Nirgundi, Sindhuvara, Sephali.

Table 3 Nirgundi in Ashtanga Hridaya as Agad

Drug	Formulation	Part Used	Therapeutic Action	Reference
<i>Sutrasthana</i>				
Haridra, katabhi, sindhuvarita, nispava, Avalguja, satapavika	-	Prayojyanga	Relieve the effect of poison in case of food	Ash.Hri.Su. 7/24-25
<i>Uttarasthana</i>				
Sindhuvarita & shveta girikarnika	<i>Sinduvaradhi nasya</i>	Moola	In case of bite by darvikara snake & also for kushta	Ash.Hri.Utt 36/57
Yasthyahava, madana, ankola, jalini & sinduvarika	-	Prayojyanga	Kapha should be removed in case of loota visha	Ash.Hri.Utt. 37/75-76
Bilva, chandan, sindhuvara, bharagi, nata, shunthi etc	-	Prayojyanga	Cures the poison of spider predominant of kapha	Ash.Hri.Utt 37/84-85
Sindhuvara, nata, sigru, bilva, punarnava, vacha etc	<i>Sinduvaradhi Kwatha</i>	Prayojyanga	Cures Mooshika visa	Ash.Hri.Utt. 38/27-28

Synonyms used for nirgundi : Nirgundi, Sinduvara

Table 4 Nirgundi in Ashtanga Samgraha in Agad

Drug	Formulation	Used Part	Therapeutic Action	Reference
<i>Uttarasthana</i>				
Prapaundarika, sinduvara, sita, padmaka sunthi etc.	Tarkshya Agada	Prayojyanga	Removes the effect of poisoning even of Takshaka	Ash Sam Utt 42/79-82
Sirisa, padmaka, usira, sinduvara, padmaka, usira, sariva etc	-	Prayojyanga	Beneficial in spider poisoning	Ash Sam Utt 44/70-71
Syamadvaya, nisa, musta, nirgundi, kushta, nata etc	-	Prayojyanga	Beneficial in Loota damsha chikitsa	Ash Sam Utt 44/43-45
Bharangi, nimbi, patali, durva, sinduvaraka etc	-	Prayojyanga	Removes the poison of puthigandha spider	Ash Sam Utt 45/24-25
Sinduvara, nata, sigru, vaca, jimuta etc	-	Prayojyanga	In Mooshaka damsha	Ash Sam Utt 46/36

Synonyms used for nirgundi : Sindhuvaraka, Nirgundi

Morphology :

A large shrub or sometimes a small slender tree; bark thin, grey; branchlets quadrangular, whitish with a fine tomentum. Leaves 3-5 foliate; leaflets lanceolate, acute, the terminal leaflet 5-10 by 1.6-3.2 cm. with a petiole 1-1.3 cm. long, the lateral leaflets smaller with a very short petiole, all nearly glabrous above, covered with a fine white tomentum beneath, base acute.¹⁰ The root is considered tonic, febrifuge and expectorant.¹¹ The leaves are aromatic, tonic and vermifuge. A decoction of Nirgundi leaves is given with the addition of long pepper in catarrhal fever with heaviness of head and dullness of hearing¹². The flowers are useful in diarrhoea, cholera, fever, hemorrhages, hepatopathy and cardiac disorders. Leaves and bark are useful in scorpion stings, seeds are considered useful in eye diseases in form of anjan.¹³

Active Compounds:

Leaves contains an alkaloid Nishindine, flavanoids like flavones, luteolin-7, glucoside, casticin, iridoid, glycosides, an essential oil and other 36 constituents like vitamin C, carotene, gluco-nonital, benzoic acid, B-sitosterol, and C-glycoside. Seeds contain hydrocarbons, B-sitosterol and benzoic acid and phthalic acid. Anti-inflammatory diterpene, flavanoids, artemetin and triterpenoids. Fatty acids, B-sitosterol, vanillic acid, p-hydroxybenzoic acid and luteolin have been isolated from bark. Stem bark yields leucoanthocyanidins. Chaste berry has not been significantly investigated for its therapeutic effects.^[14,15]

Pharmacological activities and medicinal properties proven by modern research findings:-**1] Anti-inflammatory activity:**

The sub-effective dose of *Vitex negundo* Linn. potentiated anti inflammatory activity of phenylbutazone and ibuprofen significantly in carrageenin induced hind paw oedema and cotton pellet granuloma models. Study indicates that it may be useful as an adjuvant therapy along with standard anti-inflammatory drugs¹⁶

2] CNS depressant activity:

A methanolic extract of the leaves of *Vitex negundo* Linn. was found to significantly potentiate the sleeping time induced by pentobarbitone sodium, diazepam and chlorpromazine in mice.¹⁷

4] Antifungal activity:

Bioactivity guided fractionation of ethanolic extract of leaves of *Vitex negundo* Linn. Resulted in the isolation of new flavone glycoside along with five known compounds. The new flavone glycoside and compound 5 were found to have significant antifungal activity against Trichophyton mentagrophytes and Cryptococcus neoformans at MIC 6.25 µg/ml.¹⁸

16] Wormicidal activity:

Ethanolic extracts of *Moringa oleifera* and *Vitex negundo* were taken for anthelmintic activity against Indian earthworm *Pheritima posthuma*. Dose dependent activity was observed in both plant extracts but *Moringa oleifera* shows more activity as compared to *Vitex negundo*.¹⁹

9] Antiallergic Activity:

Ethanolic extract of *Vitex negundo* Linn. showed antiallergic activity against immunologically induced degranulation of mast cells.²⁰

10] Snake venom neutralization activity:

The methanolic root extracts of *Vitex negundo* Linn. and *Embllica officinalis* showed antisnake venom activity. The plant *Vitex negundo* Linn. extracts significantly antagonized the *Vipera russellii* and *Naja kaouthia* venom induced lethal activity both in in vitro and in vivo studies. *Vipera russellii* venom-induced haemorrhage, coagulant, defibrinogenating and inflammatory activity were significantly neutralized by both plant extracts. No precipitating bands were observed between the plant extract and snake venom.²¹

Conclusion: Nirgundi being amongst the Vishaghna Dashemani. It is also described as Vishagna & Krimighna similarly *vitex negundo* finds its place in almost all the systems of medicine including Ayurveda, Allopathy, Homeopathy, Chinese medicine even in folklore healing methods. The traditional use of Nirgundi also supported by the isolation and identification of certain essential chemical constituents particularly the Flavanoids etc from different parts leaves twigs, barks, seeds and roots. The Plantation, promotion of the plant as the medicinal values it posses is the key for future generation to grow as healthier society in all aspects.

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