

## A CRITICAL REVIEW OF VARUNA (*CRATAEVA NURVALA*)

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### ABSTRACT

*Varuna* is frequently used in the management of urinary tract infection, renal calculus and many other ailments related to human belonging to the family *capparidacea*. Charaka did not mentioned *varuna* among the *dasaimani* group, *susruta* quoted *varunadi gana* for the treatment of *asmari* and *mutrakrichha*. In this review study we are try to assemble all the information about *varuna* mentioned in ayurvedic *nighantus*.

**Keywords:** *Varuna, Nighantu.*

### INTRODUCTION

*Crataeva nurvala* commonly known as *varuna*<sup>[1]</sup> is a very much important herb in ayurvedic system of medicine belonging to family *capparidaceae*. The different medicinal preparations of *varuna* are used in various disorder of human being since times immemorial. Systemic and proper use of *varuna* can cure various life threatening disorder like *asmari*, *mutrakrichha*, *vatarakta*, *gulma*, *krimi etc.* *Varuna* has a definite role as a enhancer of digestive fire. It has *tikta*, *kasaya*, *madhura rasa*; *laghu-rukhsya guna*; *usna virya* and *katu vipaka*. *Ayurvedic nighantus* broadly described about *varuna* with different synonyms and therapeutic indications. Neither *Dhanwantari* nor *Raj nighantu* mentioned about the

lithotriptic property but *Vridhya madhav* mainly emphasized *asmarghna* property.

**Sanskrit Synonym of *Varuna* according to different *Nighantus*:**

***Bhavprakas nighantu*:** *Varana*, *kumāraka*, *varuna*, *tiktashak*.

***Dhanwantari nighantu*:** *Kumāraka*, *swetapuspa*, *tiktashak*, *tamal*, *marutapana*, *shakdrum*, *gandhabriksha*.

***Kaidev nighantu*:** *kumāraka*, *varuna*, *swetapuspa*, *tiktashak*, *sadhuvriksha*, *uruman*, *swetavriksha*, *shakdrum*, *rodhavriksha*, *chalapaha*, *tamalak*

***Madanpal Nighantu*:** *Varana*, *sweta*, *hakavriksha*, *kumāraka*

**Saligram nighantu:** *Shakavriksha, kumāraka, varuna, tiktashak, swetadruma, sadhuvriksha, urumanswetavriksha, swetadru, sweta.*

**Raj Nighantu:** *Kumāraka, varuna, swetapuspa, tiktashak, swetadruma, sadhuvriksha, tamal, marutapana*

**Priya Nighantu:** *Varuna*

**Sankar Nighantu:** *Varuna, tiktashak, marutapana, varhapuspa, uruman, swetavriksha, swetadru*

**Nighantu Adarsha:** *Varana, sweta, shakavriksha, kumāraka, tiktashak, swetavriksha, asimarighna*

**National Name**<sup>[12]</sup>: Bengal: Varun, Telegu: Bilvaram, Bombay: Bhatavarna, Uriya: Boryno Gujarati: Varane, Hindi: Barna, Lepana: Purbong, Malayalam: Kili, Marathi: Hamvarna, Punjab: Barna, Rajputana: Barna, Tamil: Maralingam.

**International Name**<sup>[12]</sup>: Burma: Kadat Canarese: Bilpatri, Coong: Nerajane, Hansot: Kagdakeri, Konkani: Nervol, Malay: Cadat Meehi: Bunboronda, Sinhalese: Lunuwarana.

**Habitat**<sup>[14]</sup>:

All over India especially Madhya Pradesh, grown in the vicinity of temples in Bengal, Assam, Malabar.

**Botanical Description**<sup>[13]</sup>:

A moderate sized deciduous tree. Bark bitter, brown.

**Wood:** Moderately hard, smooth, close – grained, Lustrous, yellowish – white.

**Leaves:** Digitately trifoliolate, upper surface deep green and lower grey, 20.3 cm long and 7.6 cm broad, bitter, aromatic when bruised.

**Flower:** Violet, 5.1 – 7.6 cm diameter. Season: February – March.

**Fruit:** Globose, many – seeded berry, 2.5 – 5.1 cm diameters. Season: April – May.

**Dose**<sup>5</sup> : Decoction 50 to 100 ml.

**Parts Use**<sup>5</sup>: Root bark, Stem bark.

**Properties of Varuna**<sup>[14]</sup>:

*Rasa (taste): Tikta, madhura, kashay*

*Guna (physical property): Laghu, ruksha*

*Virya (potency): Ushna*

*Vipaka: Katu*

*Probhav: Bhedan (ashmarighna)*

**Properties of Varuna according to different ayurvedic classical text:**

**Bhavprakas nighantu**<sup>[2]</sup>: *Rasa: Madhur, Katu, Tikta, kasaya, Guna: Laghu, Ruksha, Virya: Usna*

**Dhanwantari nighantu**<sup>[3]</sup>: *Tikta, Katu*

**Kaidev nighantu**<sup>[4]</sup>: *Rasa: Madhur, Tikta, Kasaya, Katu, Guna: Laghu, Ruksha, Virya: Usna*

**Madanpal Nighantu**<sup>[5]</sup>: *Not mention.*

**Saligram nighantu**<sup>[6]</sup>: *Rasa: Madhur, Katu, Kasaya, Guna: Ruksha*

**Raj Nighantu**<sup>[7]</sup>: *Rasa: Katu, Guna: Snigdha, Virya: Usna*

**Priya Nighantu**<sup>[8]</sup>: *Rasa: Tikta, Virya: Usna*

**Sankar Nighantu**<sup>[9]</sup>: *Rasa: Kasaya, Madhura, Katu, Guna: Snigdha*

**Nighantu Adarsha**<sup>[10]</sup>: *Rasa: Kasaya Madhur, Guna: Singdha, Ruksha, Laghu*

**Chemical Constituents**<sup>[5]</sup>:

Lupeol is reported from stem bark Varunol, rutin, quer-cetin,  $\beta$ -sitosterol etc.

**Botanical describition**<sup>[11]</sup>:

**Root:** The roots are long, cylindrical, woods root bark is 1.0 mm to 4.0 mm thick, outer surface yellowish brown, longitudinally wrinkled. Fracture is tough, fibrous, taste slightly bitter. Microscopically the root shows tetrarch stele. Transverse section of mature root shows periderm consisting of 8–10 layers of cork, 2–3 layered phellogen, 6–8 layers of phellogen and a wide zone of phloem and central wood. The phloem consists of sieve tubes, companion cells, phloem parenchyma, a few stone cells traversed by phloem rays. The xylem is composed of vessels, tracheids, wood fibres and wood parenchyma, traversed contain a resinous substance. The fibres are thick walled.

**Stem Bark:** The bark occurs in pieces, 6–15 cm long, 3 to 10 cm wide and 5–12 mm thick outer surface is ash coloured and rough due to presence of lenticels. Inner surface is smooth, whitish brown or buff coloured. In transverse section, the epidermis consists of single layer of cubical cells followed by a cortex consisting of 6–10 layers of collenchymas and 5–10 layers of parenchyma containing chloroplasts

and starch grains. The stele is represented by a large number of vascular bundles. Simple and compound starch grains and prismatic crystals of calcium oxalate are found in most of the parenchyma.

**Leaf:** The leaves are long petioled, thin, entire, and trifoliate. The leaf shows a dorsiventral structure. The petiole shows a single layered epidermis followed by cortex and vascular bundles, traversed by thick – walled medullary rays enclosing a pitch in the centre. The palisade ratio is 10.0, stomatal index is 21.17 and vein islet number is 9.0. Tanin and resin are present in the parenchymatous cells.

#### Identity, Purity and Strength <sup>[11]</sup>:

**Root:** Total ash 17.5%

Acid insoluble ash 0.7%

Water soluble extractive 14.0%

**Bark:** Total ash 10.36%

Acid insoluble ash 0.254%

Alcohol soluble extractive 6.08%

Water soluble extractive 15.94%

**Leaf:** Total ash 16.38%

Acid insoluble ash 0.582%

Alcohol soluble extractive 6.62%

Water soluble extractive 50.47%

#### Substitute and Adulterant <sup>[11]</sup>:

It is reported that samples of stem bark collected from markets of Northern India, i.e. Varanasi, Gorakhpur, Lucnow, Dehradun and Calcutta, tallied with genuine bark but the sample collected from Madras was found to be little different microscopically. All the bark powders except the Madras sample exhibited yellow fluorescence under showed brown fluorescence. Leaf market showed that quite different materials go under the name of Varuna in raw trade. Leaf samples procured from Calcutta drug market was found to be that of *Corchorus Capsularis* Linn. *Corchorus Capsularis* Linn. Leaves are adulterated with leaves of *C. nurvala* Buch. Ham. due to similarity in regional names viz. Tiktashaka for Varuna and Tiktapat for *Cochorus capsularis*, both meaning bitter leaves.

**Trade & Commerce:** Retail market price **Bark:** Rs. 40/ kg. **Bark powder:** Rs. 180/kg.

**Cultivation <sup>[11]</sup>:** It can be propagated through axillary bud and leaf culture. Leaf explants (abaxial in position) inoculated on ms medium supplemented with Kaidev nighantu + BAP + Adenine Sulphate (2 μ M each) + NAA (0.1 μ M), developed 5-6 shoot buds within 4 weeks. After sub culturing on the same medium, these shoots became 3-4 inches long in next 4 weeks. Rooting was obtained on half strength MS medium containing 2% sucrose and 0.1 μM NAA.

#### Therapeutic Uses of *Varuna* in different text:

**Bhavprakas nighantu <sup>[2]</sup>:** *Aśmari, krimi, mutrakriccha, arbuda, vatarakta*

**Dhanwantari nighantu <sup>[3]</sup>:** *Rakta dosa, krimi, vidradhi*

**Kaidev nighantu <sup>[4]</sup>:** *Aśmari, rakta dosa, agnideepak, vata hara, krimi, mutraghat, hridayavikar*

**Madanpal Nighantu <sup>[5]</sup>:** *Aśmari, gandamālā, vyaṅga, kikkisa, mutrakriccha, vatarakta, gulma*

**Saligram nighantu <sup>[6]</sup>:** *Aśmari, krimi, mutrakriccha*

**Raj Nighantu <sup>[7]</sup>:** *Rakta dosa, agnideepak, vana, vata hara*

**Priya Nighantu <sup>[8]</sup>:** *Aśmari, mutrakriccha, vidradhi, gulma*

**Sankarnighantu <sup>[9]</sup>:** *Aśmari, raktadosa, vatahara, Krimi, Mutraghat, Hridayavikar,*

*Mutrakriccha, vidradhi, gulma, Udarsūla*

**Nighantu Adarsha <sup>[10]</sup>:** *Gandamālā, agnideepak, krimi, mutrakriccha, vatarakta,*

*Galasotha, vidradhi*

**Table 1:** Position of the *varuna* in different *ayurvedic* classical text:

| Nighantus                                 | Varga                   |
|---|-------------------------|
| <b>Bhavprakas nighantu<sup>[2]</sup></b>  | Vātādi Varga            |
| <b>Dhanwantari nighantu<sup>[3]</sup></b> | Amradi Varga            |
| <b>Kaidev nighantu<sup>[4]</sup></b>      | Ausadhi Varga           |
| <b>Madanpal nighantu<sup>[5]</sup></b>    | Vātādi Varga            |
| <b>Saligram nighantu<sup>[6]</sup></b>    | Vātādi Varga            |
| <b>Raj nighantu<sup>[7]</sup></b>         | Pravadradi Varga        |
| <b>Priya nighantu<sup>[8]</sup></b>       | Harityakadi Varga       |
| <b>Sankar nighantu<sup>[9]</sup></b>      | 2 <sup>nd</sup> Chapter |
| <b>Nighantu adarsha<sup>[10]</sup></b>    | Kariradi Varga          |

**Ethical preparations**<sup>[5]</sup>: *Varunadi Kwath, Varunadi ghruta, Varunadi Taila*

**Discussion:** Crataeva nurvala having near about nine synonym mentioned in ayurvedic nighantus among those few are most popular like varuna, varan, Sweta, Shakavriksha, Kumāraka, Tiktashak etc. each name of varuna signify specific meaning. It has various national and international names for identification. Plant is occurring in south Asia and indomalayasiana zone. The pharmacological properties having *usna virya* so it is *vata-kaphashamak* and *pitta bardhak*. It is *asmaragna* in *prabhava*. According to *Bhavprakash Nighantu* main indication of *varuna* is *Āsmari, krimi, mutrakriccha, arbuda, vatarakta* but *dhanwantar* and *Raj nighantu* not mentioned *varuna* in the treatment of *asmari*. *Hriday* is a *sthan* of *para ojo*, according to Shankar *nighantu* *varuna* uses to treat *hridayvikar*. The *krimighna* property of *varuna* is mentioned by *bhavprakash nighantu, shaligram nighantu, Shankar nighantu* and *nighantu adarsha*. The treatment protocol of *krimi* is *nidan parivarjan, prakriti vighat* and *apakarshan-* the *varuna* may be act as a *prakriti vighat* agent. So it can be use in *raktaja vyadhi*. All *nighantus* mentioned *varuna* in a specific *varga* but in *Caraka samhita* it described in *tikta Shandha, Susruta samhita* and *Astanga samgraha* it mentioned in *varunadi gana; varunadi gana, ausadhi varga*.

## CONCLUSION

The wide range of covering area in respect to therapeutic indication of *varuna* makes it popular in ayurveda. It is the best moment to give more attention about the other therapeutic indications of *varuna* apart from lithotriptic and diuretic effect.

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