



RESEARCH ARTICLE

VARUNADYA TAILA: A CRITICAL REVIEW

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ABSTRACT

Ayurveda, an ancient system of medicine, involves numerous therapeutic approaches, including *Sneha Kalpana*, which involves medicated oils such as *Varunadya Taila*. This formulation contains *Crataeva nurvala* (*Varuna*), *Tribulus terrestris* (*Gokshura*), and *Sesamum indicum* (*Tila Taila*), each contributing to its pharmacological effects. *Varuna* exhibits lithotriptic activity by preventing kidney stone formation through anti-lithogenic and anti-crystallization properties while maintaining urinary pH balance.^[1] *Gokshura* enhances diuresis, reduces oxalate excretion, and inhibits calcium oxalate crystallization, thus aiding in urinary stone dissolution.^[2] *Tila Taila*, with its high antioxidant and lipid content, serves as a stable carrier, enhancing the bioavailability of the active ingredients. The present review discusses the therapeutic efficacy of *Varunadya Taila* in urinary disorders, focusing on its lithotriptic, diuretic, and anti-inflammatory properties.

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INTRODUCTION

Ayurveda is one of the oldest sciences and takes a comprehensive approach to illness. One of the most important dosage techniques frequently discussed in *Ayurvedic* pharmaceuticals is *Sneha Kalpana*. Four types of *Snehas* described are *Ghrita*, *Taila*, *Vasa* and *Majja*. Among these, *Ghrita* (medicated ghee) and *Taila* (medicated oil) are more frequently used in medicinal applications.^[3]

According to *Acharya Sushruta Ghrita, Taila, Vasa, Meda* and *Majja* are succeeding heavy and *Vata- Shamaka*.^[4] *Taila* preparations involve boiling the *Taila* with predetermined *Kashayas* (decoction) and *Kalkas* in accordance with the recipe. This approach ensures that the active therapeutic qualities of the drugs are ingested.^[5]

TAILA MURCHHANA :-

During the preparation of *Taila* formulation, the first step is *Taila Murchhana*. It is the process adopted for enhancing the potency of oil and to remove the bad odour and *Amadosha*. *Taila* with *Murchhana* have more therapeutic potency and shelf life than crude oil. Tailored formulations enhance the body's power, anabolism, health, and beauty. Both fat-soluble and water-soluble active substances can be transformed into a *Taila*

medium, which adds material qualities that make *Taila* potent and effective.^[6] According to analysis, the *Murchhana* cycle increases the significance of saponification and reduces the amount of acid. A larger concentration of low molecular fatty acids is implied by a better saponification content, whereas a lower acid content indicates a lower fraction of free fatty acids. Low molecular fatty acid-containing medicinal oils are quickly absorbed. Shelf- Life period of *Taila* according to Govt. of India notification is three years.^[7] The process of *Taila Murchhana* has been mentioned in detail in *Bhaishajya Ratnavali*.^[8,9]

VARUNADYA TAILA:-^[10]

CONTENTS :-

Varuna
Gokshura
Tila Taila

INDICATIONS - *Sharakara, Ashmari, Mutrakrichcha*.

VARUNA:-^[11,12,13,14,15]

Numerous health abnormalities may be successfully managed and treated by the holistic approach of traditional medicine.

Rich in herbs, the ancient *Ayurvedic* medicine offers a guaranteed natural remedy for a variety of health issues. And *Varuna*, a medium-sized deciduous tree that grows both wild and in cultivation all over India, is one such potent herbal plant.

BOTANICAL NAME-*Crataeva nurvala*

FAMILY-*Capparaceae*

VERNACULAR NAMES:-			
ENGLISH	Three leaved caper	HINDI	Barun, Barna, Bilasi
BENGALI	Tikto-shak	GUJARATI	Vayavarna, Varane
PUNJABI	Barnahi	TAMIL	Varanam, Narvala

BOTANICAL DESCRIPTION:-



Varuna is a deciduous tree of moderate size that can reach up to a height of 20 meters.

Bark: The outer surface is rough due to the presence of lenticals, and is ash coloured. Inner surface is smooth, whitish brown or buff coloured.

Leaves: It has long petioles, thin, lanceolate, trifoliate leaves.

Flowers-They occur in terminal corymbs and are greenish-yellow in colour.

Fruits: The fruits contain fleshy pulp and are spherical or oval-shaped berries.

Seeds: The seeds are reniform and multiple which are present engulfed in fresh yellow pulp.

Root: It is long, cylindrical, woody. Microscopically, the root show tetrarch stele.

DISTRIBUTION :-

This plant is indigenous to South Asia, Myanmar, and the Indo-Malaysian region. In India, it is found throughout, either wild or cultivated in Upper Gangetic Plains, Bengal, Bihar and Orissa, Gujarat, Konkan and Tamil Nadu.

AYURVEDIC PROPERTIES:-

Rasa	Tikta, Kashaya
Guna	Laghu, Ruksha
Virya	Ushna
Vipaka	Katu
Doshaghnata	Kapha- Vata Shamaka
Karma	Mootrala, Anulomana, Bhedana, Deepana, Ashmaribhedana
Part Used	Panchanga (Twaka)

Pharmacological / Phytochemical Constituents :-

PHYTOCHEMICAL	EXAMPLE	SPECIFIC PART
Tannin	(-)Epiafzelechin,(-) Epiafzelechin-S-O-βDglucoside& Catechin	Bark of stem, root bark, leaves
Saponins	Diosgenin	Bark of stem
Glycosinolates	6-C-Glycopyranosyl luteolin, Glucocapparin	Leaves
Flavonoids	Rutin, Quercetin	Leaves
Alkaloids	Stachydrine, Cadabicine diacetate	Bark of stem
Triterpenoid	Taraxasterol, Lupeol, Friedelin, Betulinic acid	Bark of stem, root bark
Sterols	Beta- Sitosterol, Spinasterol acetate	Bark of stem, root bark

PHARMACOLOGICAL ACTIONS:-

Diuretic
Anti-inflammatory
Antibacterial
Spasmolytic
Lithotriptic
Antipyretic

GOKSHURA:-^[16,17,18,19,20,21]

In the Indian *Ayurvedic* medical system, *Gokshura* is a highly valued plant used to treat a variety of illnesses.

BOTANICAL NAME -*Tribulus terrestris*

FAMILY-*Zygophyllaceae*

VERNACULAR NAMES			
ENGLISH	Land-Caltrops, Puncture Vine	HINDI	Gokharu
BENGALI	Gokhura	GUJARATI	Bethagokharu
PUNJABI	Bhakhra	TAMIL	Nerinjil
URDU	Khar-e-khusakkhurd	ASSAM	Gokhurkata

BOTANICAL DESCRIPTION:-



It is a tiny, prostrate shrub that is hirsute or silky hairy and ranges in height from 10 to 60 cm.

Leaves: They are paripinnate, with 5-8 pairs of leaflets, subequal, linear-oblong, mucronate and pubescent on both surfaces.

Flowers: The flowers are yellow in colour, appear axillary or leaf opposed, solitary on peduncles.

Fruits: Faint greenish yellow with spines. They are globose, consisting of five, nearly glabrous, muriculate, wedge-shaped, woody cocci, each with two pairs of hard sharp spines, one pair longer than the other.

Seeds: There are numerous seeds in each crocus with transverse partitions in between. They have an oily texture or consistency.

Roots: The root is slender, fibrous, cylindrical, frequently branched, bearing a number of small rootlets and is of light brown colour.

DISTRIBUTION:-

It is an annual shrub found in Mediterranean, subtropical, and desert climate regions around the world, viz. India, China, southern USA, Mexico, Spain, and Bulgaria. In India, it is found throughout, ascending to 3300 m in Himalaya, particularly common in dry and hotter parts of the country viz., Rajasthan, Gujarat, Deccan, Andhra Pradesh, etc.

AYURVEDIC PROPERTIES:-

Rasa	Madhura
Guna	Guru, Snigdha
Virya	Sheeta
Vipaka	Madhura
Doshaghata	Vata- Pitta Shamaka
Karma	Ashmari-Hara, Mootrakrichcha-Hara, Anulomana, Shotha-Hara
Part Used	Phala, Moola

Pharmacological / Phytochemical Constituents:-

PHYTOCHEMICAL	EXAMPLE	SPECIFIC PART
Alkaloids	Harmin, Harman, Harmaline	Leaves
Flavanoids	Astragalin, Kaempferol, Rutin, Quercetin	Fruits, leaves
Sugar	Glucose, Rhamnose	Roots
Sterols	Campesterol, Stigmasterol, Beta-Sitosterol	Fruits, leaves, seeds
Saponins	Diosgenin, Gracillin, Ruscogenin, Furostanol, Gitogenin	Leaves, fruits
Triterpenoid	Neotigogenin	Roots

PHARMACOLOGICAL ACTIONS :-

Analgesic
Muscle relaxant
Diuretic
Anti-Urolithiatic
Antibacterial
Hepatoprotective
Cytoprotective

TILA TAILA: Tila Taila is an oil extract derived from the plant *Sesamum indicum*. Linn, that has been used for its medicinal qualities in Ayurvedic medicine for centuries. It has high stability due to the presence of large concentrations of naturally occurring antioxidants. According to the *Sharangadhara Samhita*, Tila Taila (sesame oil) should be used wherever particular oil is not specified.^[22]

According to *Acharya Dalhana*- all the *Sthavara Sneha* have the same *Guna Dharma*, as that of *Tila Taila*. All the *Taila* preparations are *Vata-Shamaka*. *Tila Taila* is considered to be the best.^[23]

Tila Taila can be used for *Basti-Karma*, *Pana*, *Nasya*, *Karna-Poorana*, *Netra-Poorana*, for melioration of ingestible and for vitiation of *Vata Dosha*.^[24]

VERNACULAR NAMES :- ^[25]			
ENGLISH	Sesame oil	HINDI	TilaTaila, KrishnaTaila
TAMIL	Vallenne, Yellu, Cheddie	KANNADA	Ellenne

USES :-

It can be used both internally and externally. Its internal use is beneficial for boosting iron levels, reducing cholesterol, managing cardiac diseases and gaining strength.

It has purgative action and cures constipation. Sesame oil is beneficial for skin. It is an antioxidant as it contains vitamin E and penetrates skin easily. Minerals including copper, calcium, zinc and iron are abundant in this oil. Zinc and calcium are beneficial to bones. Copper relieves gout and arthritis. Magnesium helps cardiovascular and respiratory health.

TILA :-^[26,27,28,29]

The five varieties of *Tila* seeds—*Krishna*, *Sita*, *Rakta*, *Vanya*, *Alpa*—are described in the *Bhava Prakasha*. Sesame seeds of the white and black varieties have higher levels of lignin components. Iron and B vitamins are abundant in black sesame seeds. Zinc and calcium are also abundant in it. Healthy bones, muscles, blood, and nervous system are all supported by these minerals.

BOTANICAL NAME – *Sesamum indicum*

FAMILY–*Pedaliaceae*

VERNACULAR NAMES :-			
ENGLISH	Sesame, Gingelly	HINDI	Tila
GUJARAT	Tal	PUNJABI	Tili, Kunjad
ORISSA	Raisi, Khasa	KANNADA	Ellu

BOTANICAL DESCRIPTION:-

It is an erect, glandular-pubescent, annual herb upto 95 cm tall, branching from the base.

Flowers- They are ill smelling, white or pink with yellow marks, axillary, solitary forming a false raceme.



Leaves: The leaves are alternate or lower opposite, lanceolate, serrate, puberulous on its undersurface.

Fruits: The fruits are quadrangular, oblong, compressed capsules, deeply 4-grooved, dehiscent to half way down.

Seeds: It has multiple, obovoid, compressed, black or white seeds.

DISTRIBUTION:-

In India, it is cultivated in Uttar Pradesh, Madhya Pradesh, Rajasthan, Orissa, Gujarat, Andhra Pradesh, Tamil Nadu, and Maharashtra.

AYURVEDIC PROPERTIES :-

Rasa	Madhura, Tikta, Kashaya
Guna	Guru, Snigdha, Tikshna, Sukshma, Vyavayi, Vikasi
Veerya	Ushna
Vipaka	Madhura
Doshaghnata	Vata-Shamaka
Karma	Snehana, Mootrajanana, Vedanasthapana, Deepana
Part Used	Beeja

Pharmacological / Phytochemical Constituents of *Tila* seeds

Lipids	Glycolipids, Phospholipids
Amino Acids	Arginine, Cysteine, Histidine, Leucine, Lysine, Valline, Tryptophan
Antioxidants	Sesamol, Sesamol
Vitamins	Ascorbic acid, Biotin, Folate, Pyridoxine, Riboflavin, Thiamine
Fatty Acids	Linoleic acid, Myristic acid, Oleic acid, Stearic acid
Sugar	Glucose, Galactose, Lychnose, Sucrose
Sterols	Sitosterol, Campesterol

PHARMACOLOGICAL ACTIONS :-

Hepatoprotective
Anti-tumour
Free Radical Scavenging Activity
Diuretic
Antioxidant
Anti-spasmodic
Carminative

METHOD OF PREPARATION:-^[30,31]

One part of *Kalka* of drugs, four parts of *Murchhit Tila Taila* and sixteen parts of *Kwath* are the ingredients for preparation of *Taila*.

First, *Kwath* will be prepared, and for this, one part each of the dried powder of the drugs *Varuna* and *Gokshura* will be mixed with sixteen times quantity of water. The mixture will be boiled, until it reduces to a quarter (one fourth). After the *Kwath* gets reduced to one fourth, it will be filtered through cloth and residue will be discarded. Secondly, *Kalka* will be prepared, and for this, *Varuna* and *Gokshura* will be taken in powdered form and appropriate amount of water will be added init, to make its *Kalka*. Then the prepared *Kwath* will be again placed on the burner and boiled after adding *Murchhit Tila Taila* and *Kalka*. The mixture will be cooked on low flame till *Samyaka Snehapaka Lakshana* are attained. After the *Taila* gets cooked properly, it will be filtered through cloth and preserved.

DISCUSSION

Sneha Kalpana in *Ayurveda* plays a crucial role in enhancing the therapeutic efficacy of herbal formulations through lipid-based extraction. *Varunadya Taila*, a classical medicated oil, combines three potent herbal ingredients that synergistically address urolithiasis and associated urinary disorders. *Varuna* is traditionally known for its *Kapha-Vata* pacifying properties and its ability to prevent kidney stone formation. *Gokshura*, widely used in *Ayurveda* for urinary health, demonstrates significant diuretic activity due to its high potassium salt content, which increases urine output and reduces urinary supersaturation. *Tila Taila* (*Sesamum indicum*), as the lipid base in this formulation, enhances the absorption of active constituents while exhibiting antioxidant and anti-inflammatory properties. Though there are multiple ways to deliver *Sneha Kalpana*, *Varunadya Taila* can be actively administered via *Basti* therapy. Delivering the drug through rectal and vaginal route comes under Conventional / Traditional Drug Delivery System. The contents of the *Taila* have potent phytochemical constituents. They exhibit diuretic, anti-inflammatory, anti-lithogenic as well as lithotriptic, analgesic, anti-bacterial activity and many more. The overall combined therapeutic effect of these ingredients contribute in the treatment of various urinary disorders.

CONCLUSION

Urinary disorders encompass a wide range of conditions affecting the urinary system, including the kidneys, urinary bladder, ureters and urethra. These disorders are common and can significantly impact an individual's quality of life. Understanding the causes, risk factors and treatment options is essential for prevention and effective management. Though they can be managed with oral medications in *Ayurveda*, treatment with *Basti* can be helpful in relieving the symptoms as well as disease more efficiently. The oil-based preparation enhances the bioavailability and therapeutic potency of the herbal compounds, ensuring effective absorption and sustained action. *Varunadya taila*, formulated with *Crataeva nurvala*, *Tribulus terrestris*, and *Sesamum indicum*, presents a potent *Ayurvedic Sneha Kalpana*, that can be used as a *Basti* medication, and can prove to be a promising treatment for urinary disorders.

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