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**REVIEW ARTICLE** 

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## A review on Narikela Thaila & Narikela regarding its use and properties

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### ABSTRACT

Sneha Kalpana is one among the several highly established Kalpanas of Ayurvedic system of medicine. Many types of Taila Kalpanas are mentioned in Ayurvedic classics and used effectively in therapeutic practice. Tila Taila is the most commonly using Taila. However, Narikela Taila, Eranda Taila, Sarshapa Taila, etc, are also used in special conditions. While checking different Sneha Kalpana, we can see same formulations prepared in different bases. While comparing this main reason may be due to the peculiar quality of bases used like its Veerya, Guna, etc. It is interesting to note that certain preparations are available in the market based on both Tila Taila and Narikela Taila.

Key words: Narilela Taila, Narikela, Ayurveda

#### INTRODUCTION

Sneha Kalpana is one among the several highly established Kalpanas of ayurvedic system of medicine. The main advantage of oily preparation is the extraction of both fat soluble and water soluble active principles of plants and minerals. Oily preparations include not only the oral preparation, but those intended for topical application also. The oily preparations for topical application have the potential to diffuse locally into the soft tissues. The medicated oil of our pharmacopoeia which are prepared by successively boiling or cooking them with drug decoctions etc.[1]

The substance which is called Sneha Dravya will be

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having guru, Sita, Sara, Snigdha, Manda, Suksma. Mrudu, Dravagunas.[2] The fatty substances used for Snehapaka may be of animal origin (i.e. Jangama Sneha like Ghrta, Vasa, Majja) or herbal origin (i.e., Sthavara Sneha like Tila Taila, Eranda Taila etc.).[3,4] Particularly Ghrta & Taila are commonly used for the preparation of Sneha Kalpana.

Narikela Taila is the oil extracted from the endocarp of coconut, it is one of most popular edible oil and is used both for internal and external application, it has a special utility as hair oil throughout Indian subcontinents, because of its effect to stimulate hair growth and antidandruff effects. It is popularly used to prepare various Taila preparations especially used external for skin and hair in southern part of India,

Many types of Taila Kalpanas are mentioned in Ayurvedic classics and used effectively in therapeutic practice. Tila Taila<sup>[5,6,7]</sup> is the most commonly using Taila. However Narikela Taila<sup>[8,9,10]</sup> Eranda Taila, Sarshapa Taila, etc., are also used in special conditions.

List of some Tailas having two different media as base

- 1) Lakshadikeram and Lakshadi Tailam
- 2) Nalpamaradikeram and Nalpamaraditailam

#### Narikela Taila[11](Coconut Oil)

Narikela Taila is Brahmana, Balavardaka, Kesya, Vatapittasamana, sweet in taste and is beneficial to teeth, Madura Vipaka, Rakthapittha Hara, Kaphahara, Grahanihara, having Dipana property, Anaha Hara<sup>[12]</sup>

Naraikela Taila is Vata Pitta Hara, Sleshmakara, Guru, Hima, Kesya<sup>[13]</sup>

Narikela Taila is Vajikara in nature, Guru, does Dhatuposhana, mitigate Vata and Pitta, helps elimination of urine, beneficial for Swasa, Kasa, Yakshma<sup>[14]</sup>

Oil of *Narikela* are sweet in taste and after digestion; mitigate *Vata* and *Pitta*, cold in potency, produces more moisture inside the tissues, helps elimination of urine and diminish the digestive fire<sup>[15]</sup>

It is the oily portion extracted from the endocarp of coconut. The kernel of fruit contains nitrogenous substances, fat, glucose, sucrose and other similar substances. Kernel yields oil 60-70%, which contains Lauric acid (44-55.3%), Myristic acid (13-18%), Caprilic acid, Palmitic acid, Stearic acid and Glycerides.

The oil determinations made on the dried flesh of the nut yield.

Moisture - 2.60 to 6.95 P.C

Oil - 60.0 to 71.0 P.C

# A brief description of the plant *Narikeia Vriksha*<sup>[16]</sup> [coconut tree]

Latin name - Cocos nucifera Linn.

Family - Aracaceac.

#### **Vernacular names**

Sanskrit: Narikela Vriksah, Narikelah

Assamese: Khopra

English: Coconut palm, Coconut

Hindi: Nariyal

Kannada: Tengu khobbari, Tengnamara, Temgu,

Thengu, Thenginamara

Malayalam: Thengu, Nalikeram

Gujarathi: Naliar, Nariyel, Shriphal, Koprun

Marathi: Naral

Oriya: Nariyal

Punjabi: Narela, Khopra, Garigola

Tamil: Tenkai-Maram, Tennaimaram, Tenkai

Telugu: Kobbari Cettu – Tenkaya

Cocos nucifera is the scientific name. It is a primary source of food, drinks and shelter. In Sanskrit the coconut palm is called "Kalpavriksha", which is defined as "the tree which provides all the necessities of life."

#### **Origin and distribution**

The Coconut (Cocos nucifera) is a member of the Family Arecaceae (palm family). The coconut is a long-living plant that may live as long as 100 years; it has a single trunk, 20-30m tall, its bark is smooth and grey, marked by ringed scars left by fallen leaf bases. The leaves, from 4 to 6m long, are pinnate; they consist of linearlanceolate, more or less recurved, rigid, bright green leaflets. The inflorescences, arising at leaf axils and enveloped by a carinatespathe, are unbranched spadices. Flower bear lanceolate petals,6 stamens and an ovary consisting of 3 connate carpels. Its fruit, as big as a man's head and 1-2 kg in weight, is a drupe with a thin, smooth, grey-brownish epicarp, a fibrous, 4-8 cm thick, mesocarp and a woody endocarp; as it is rather light, it can be carried long distances by water while keeping its germinability for a long time.

The flower of the coconut palm is polygamomonoecious, with both male and female flowers in the same inflorescence. Flowering occurs continuously, with female flowers producing seeds. Coconut palms are believed to be largely crosspollinated, although some dwarf varieties are self pollinating.

Cocos nucifera is native to tropical eastern regions, today it is grown both over the Asian continent (India, Ceylon, Indonesia) and in central and South America (Mexico, Brazil); in Africa, the largest producing countries are Mozambique, Tanzania and Ghana.

The plant: A straight unbranched stately palm usually upto 25m in height with a cylindrical annulated stem bearing a crown of large leaves; leaves pinnate 2-5m long, leaflets equidistant, narrow and tapering; inflorescence spadix with a hard oblong longitudinally splitting spathe enclosing many yellow or orange male flowers and few female flowers; fruits trigonously obovoid or subglobose green or yellowish fibrous drupes; seed one, oval or spherical with a hard endocarp and oily white endosperm and sweet milky or watery fluid in the large cavity.

#### Parts used

Roots, inflorescence, seed (shell, kernel, water and oil)

#### **Properties and uses**

The roots are astringent, diuretic, and anthelmintic, and are useful in uterine disorders, bronchitis. The juice of the young spadix when fresh is sweet, refrigerant, aperients, aphrodisiac, intoxicating, diuretic and tonic, and is useful in dyspepsia, diarrhoea, dysentery, diabetes, haemoptysis, leprosy and general debility. The shell is cooling, diuretic and deodorant, and is good for hyperdipsia and halitosis. The kernel is sweet, cooling, oleaginous, indigestible, appetizer, aphrodisiac, laxative and tonic and is useful in bronchitis, vitiated condition of pitta, hyperdipsia, tumours, skin diseases, eruptive fevers, haemoptysis and general debility. The water is sweet, cooling, digestive, aphrodisiac, diuretic, anthelmintic and tonic, and is useful in vitiated condition of Pitta, hyperdipsia, exhaustion, dysentery and diarrhoea, dehydration and general debility. The oil is sweet, disinfectant, insecticidal, trichogenous, digestive, aphrodisiac, appetizer and tonic, and is useful in diabetes, bronchitis, cough, greying of hair and is used as a medium for many medicated oils and ointments.

#### **Identity, Purity and Strength**

Foreign matter	Nil	Appendix 2.2.2
Total ash	not more than 2.5 Percent	Appendix 2.2.3
Acid-insoluble ash	not more than 0.5 Percent	Appendix 2.2.4

Alcohol-soluble extractive	not less than 13 Percent	Appendix 2.2.6
Water-soluble extractive	not less than 10 Percent	Appendix 2.2.7
Fixed oil	not less than 59 Percent	Appendix 2.2.8

**Constituents** - Fixed Oil

#### **Properties and action**

Rasa : Madhura

Guna : Guru, Snigdha

Virya: Sita

Vipaka : Madhura

Karma : Balya, Hrdya, Vrsya, Vatahara Pittahara, Kaphakara, Brmhana, Bastisodhaka, Vistambhi.

Important formulations - Narikela Khanda, Narikela Lavana

Therapeutic uses - Daha, Ksata, Ksaya, Raktapitta, Trsna, Sosa, Sula

Dose - 10 to 20 g. of the drug in powder form.

#### History<sup>[17]</sup>

The coconut was first mentioned in 545 AD by an Egyptian Monk named Cosmos Indicopleustes. He visited western India and Ceylon. In his "Topographia Christiana", Cosmos describes the coconut as the "great nut of India." The Mahavasma, an ancient chronological history of Ceylon, describes the planting of coconut in that country in 589 AD. In 1280 Marco Polo, described coconut growing in Sumatra, as well as in Madras and Malabar in India, calling it nux indica, the Indian nut. The first detailed description of the coconut palm in western literature was provided by the Italian explorer Lodovico, di Varthema in his "Itinerario" of 1510, in which he referred to it as tenga. The coconut palm was spread by Austronesians through the pacific, perhaps eventually to the Pacific coast of Central America, and westward to India and East Africa.

#### **Phytochemical**

Desiccated coconut contains about 60 to 70% coconut oil. Coconut oil is composed, as might be inferred by its high melting point of over 32°C, mostly of triglycerides

of saturated fatty acids. Lauric (dodecanoic acid; 40 to 50%) and myristic acid (tetradecanoic acid; 15 to 20%) dominate, but several other fatty acids are found at concentrations of 5 to 10%: The two short-chain acids caprylic (octanoic) and capric (decanoic) acid (which are responsible for the smell of overaged coconut oil), the long-chain palmitic acid (hexadecanoic acid) and oleic acid, which is the only unsaturated fatty acid found at significant amounts. Consequently, the iodine index is very low (typically below 10). The typical coconut flavour is caused by several lactones of aliphatic hydroxy-carboxylic acids, ranging in chain length from 8 to 14; 5-decanolide (5-pentyloxan-2-one) is the most important single compound. Synthetic coconut flavourings often contain a homologous ylactone,4-nonanolide (pentyloxolan-2-one), which is not found in coconuts. Toasting coconuts leads to pyrolysis of maltose and glucose, whereby new fragrant compounds are formed: maltol (2-hydroxy-3methyl-Y-pyrone) and cyclotene (cyclopentenolone, 2hydroxy-3-methyl-2-cyclopenten-1-one), respectively. Futhermore, a great number of alkylpyrazines were identified (pyrazine, methyl pyrazin, dimethyl pyrazines, vinyl pyrazin, isopropyl pyrazin).

**Fixed oil:** 57.5 - 71%; volatile oil, wax containing the myricyl ester of cerotic acid.

**Meat:** protein, 6.3%; vitamins A, B, and C; nonyl alcohol, methyl heptyl ketone; methyl undecyletone; capronic, decylic, caprylic, lauric and oyristic acids; lecithin; stigmasterin, phytosterin; choline; globulin; galactoaraban; galactomannan.

**Water:** 93%; protein, 0.5%; ash,1%; saccharose; oxidase; catalase, diastase.

#### **Traditional medicinal uses**

People from many diverse cultures, languages, religions, and races scattered around the globe have revered coconut as a valuable source of both food and medicine. Wherever the coconut palms grow the people have learned of its importance as an effective medicine. For thousands of years coconut products have held a respected and valuable place in local traditional medicine.

In traditional medicine around the world coconut is used to treat a wide variety of health problems including the following: abcesses, asthma, baldness, bronchitis, bruises, burns, colds, constipation, cough, dropsy, dysentery, earache, fever, flu, gingivitis, gonorrhea, irregular or painful menstruation, jaundice, kidney stones, lice, malnutrition, nausea, rash, scabies, scurvy, skin infections, sore throat, swelling, syphilis, toothache, tuberculosis, tumors, typhoid, ulcers, upset stomach, weakness and wounds.

Coconut ferments quickly into a beer with alcohol content upto 8%, called 'toddy' in India and SriLanka; 'tuba' in Philippines and Mexico; and 'tuwak' in Indonesia. After a few weeks, it becomes vinegar. Dried, desiccated, and shredded it is used in cakes, pies, candies, and in curries and sweets. When nuts are cut open and dried, meat becomes copra, which is processed for oil, rich in glycerine and used to make soaps, shampoos, shaving creams, toothpaste, lotions, lubricants, hydraulic fluid, paints, synthetic rubber, plastics, margarine, and in ice cream. In India, the Hindus make a vegetarian butter called 'ghee' from coconut oil; also used in infant formulas. When copra is heated, the clear oil separates out easily, and is made this way for home use in producing countries. Leaf fiber used in India to make mats, slippers and bags. Coconut roots provide a dye, a mouthwash, a medicine for dysentery and frayed out make toothbrushes; scorched, used as coffee substitute.

#### Traditionally used as:

- Constipation: Take 1 to 2 tablespoons of gata (cream)
- Dandruff: Massage oil on scalp, leave overnight, and wash hair.
- Diarrhea and/or vomiting: Drink water of young fruit, a tolerated.
- Dry skin: Apply oil and massage into affected area
- Young roots astringent for sore throats.
- Ash of bark used for scabies.
- Use oil for cooking; take meat and/or gata (cream) as food.

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#### Health benefits<sup>[18]</sup>

Coconut oil finds extensive use in food, toiletry and industrial sectors because of its unique characteristics. The numerous qualities of coconut oil reported are:

- Oil of natural origin
- Edible in raw form
- Saturated and stable
- Pleasing flavour
- Light colour
- Pleasant aroma
- Biodegradable
- High resistance to oxidative rancidity
- Sharp melting behaviour
- Narrow temperature range of melting
- Skin friendly oil
- Effective heat transfer agent in frying
- Better shelf life for fried product
- Contributes to palatability
- Carrier and protective agent for fat soluble vitamins
- Low viscosity
- Oldest and most widely used cosmetic raw material
- Contains 91 per cent assimilable glycerides
- Maximum glycerine content
- Easily saponifiable even in cold
- Good emollient on skin, skull and hair
- Spreads easily on the skin when used as massage oil
- Excellent base for hair oil
- Germicidal and antimicrobial property
- Lowers evaporative loss of water from skin
- Ready penetration into the skin and appreciable water absorbing property

#### **REVIEW ARTICLE**

March 2022

- Nourishes the hair roots and provides coolness to the body
- Only slight changes on hydrogenation
- Easily hydrolyses
- Highest saponification value and lowest iodine value
- Essential for the manufacture of toilet soaps, shaving cream, liquid soaps, natural shampoo and other cosmetics
- Desirable emulsifying property
- Contains fatty acid derivatives such as monoglycerides, fatty esters, polyol esters, fatty ethanolamide, ethoxylates, polysorbates and betaines.

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