



A LITERARY REVIEW OF *SEMECARPUS ANACARDIUM* Linn. f. – IN TRADITIONAL SIDDHA MEDICINE

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ABSTRACT

Siddha System of Medicine is well known for the usage of *Peru Marunthugal* in the chronic diseased conditions. Ancient Siddhars dealt with lot of highly potential medicine and mentioned in a Palm leaf manuscripts. Knowledge about herbal medicine is useful to cure the initial stage of the diseases. Herbs are the base for the medicinal preparation used in many forms of single herbal remedy, poly herbal formulation, in herbo mineral preparation, herbo metallic preparation etc. *Serankottai* is being in use since from the ancient days. Many preparations using it as a chief ingredient or an ingredient were seen in many Siddha Classical texts like *Therayar karisal*, *Agathiya vallahy 600*. *Semecarpus anacardium* (Anacardiaceae) is used for the various

conditions like Skin diseases, fever, malignant growths, haemoptysis etc. This review dealt with the botanical information, Physical properties, Therapeutic actions, Phytochemistry, uses, Experimental Pharmacology and Classical preparations used in Indian System of medicine.

KEYWORDS: *Semecarpus anacardium*, herbal remedy, Siddha Classic Literature.

INTRODUCTION

Facing the newer diseases is being a challenge in present days. Evolution of new drug is useful in the aspect of treatment. Drug selection for the *dhegi* (type of body) is most important. Among various section of medicine herbal plays a major role *S.anacardium* is one of the poisonous plant and are used after proper purification process (Detoxification). Used without purification shows some drastic symptomatic changes in the body. This drug is used along with metals, animals or poly herbal in origin. In herb *serankottai* is compared to

mercury in metals. The potency of the medicine is so higher in curing diseases. In the book of Agathiyar vallathy 600 Agathiyar mentioned lot of remedies using serankottai. Siddha traditional medicine is popular in Southern part of India where the usage of herbal drugs are wider. Medicines are prepared with the process mentioned in the classical texts and given in smaller doses with excellent results especially for chronic diseases. It is safe to use. The nut with various biological content it is widely used to treat Skin diseases like irritant contact dermatitis, allergic contact dermatitis which are an inflammatory response.^[1,2]

Classification

Kingdom : Plantae

Subkingdom : Tracheobionta

Super division : Spermatophyta

Division : Magnoliophyta

Class : Magnoliopsida

Subclass : Rosidae

Order : Sapindales

Family : Anacardiaceae

Genus : Semecarpus

Species : Anacardium.^[3]

Synonyms

Hindi : Bhilwa, Billar, Bhelwa, Bhilawa

Sanskrit : Bhallataka, Antahsattva,

Arusharah, Aruskara, Arzohita,

Bhallata, Viravrksa, Vishasya, Bhallatakah

English : Marking Nut Tree, Marsh Nut,

Oriental Cashew Nut

Tamil : Erimugi (Erimuki)

Telugu : Nallajeedi, Bhallatamu

Gujarati : Bhilamu, Bhilamo

Marathi : Bibba, Bhillava

Oriya : Bhollataki, Bonebhalia, Amberi

Urdu : Baladur, billar, bhilavan

Assamese : Bhala

Nepali : Bhalaayo.^[3]

Classical names

Ayurvedic: Bhallaataka, Arushkar (Charaka, Sushruta), Agnik, Agnimukha, Shophkrit, Viravrksha.

Unani: Bhilaavaa, Balaadur, Bilaadur.

Siddha : Sorankottai.^[4]

Habitat^[4,5]

Deciduous tree, moderate sized, 12-15 m high On Himlayan region from Sutlej to Sikkim, hotter parts of India like Assam.

Physiochemical Property^[5]

Macroscopical view:

Leaves: large, oblongate, simple

Bark: rough, dark brown

Pericarp: black, oily, bitter

Flower: greenish- yellow

Fruit: smooth, black when ripe

Juice: bhilwan shell liquid obtained by petroleum extraction method.

Microscopic structure^[3]

Fruit - Pericarp differentiated into epicarp, mesocarp and endocarp; pericarp shows outer epicarp consisting of single layer of epidermal cells longitudinally then radially and lignified. Glands are found in pericarp which exude oil globules. Cuticles are rupture in the surface of the seeds and oils from the oil glands are produced; mesocarp has a very broad zone mesocarp is broad, lysegenous cavities are present in the cells and fibro-vascular bundles, parenchymal cells are broader smaller as compared to rest; calcium oxalate crystals are arranged in rosette form found scattered in parenchymatous cells, some cells get dissolved and form lysigenous cavities which increase in size with maturity of fruit, there is no lining of the cavities, and contain an acrid and oily secretion yellowish and irritant in nature; endocarps are in two distinct layers, innermost has radical walls, thickened, outer layer is prismatic in nature, oil drops in oil glands from the rosette calcium carbonate cells, vesicating material is present in the cavities.

Physical property

Contain Per cent.^[3]

Foreign matter 1%

Acid-insoluble ash 0.5%

Total Ash 4%

Water-soluble extractive 5%

Alcohol-soluble extractive 11%

Parts used: Detoxified nut, oil.

Season for administration: Winter is the best season.^[6]

Properties and Action^[4,6]

Properties: antiarthritic, anti tumour, hypotensive, antispasmodic, antiallergic properties.

Actions

Oil – antiseptic, cholagogue

Ripe fruits: stimulant, digestive, nervine

Kernel : nutritive, carminative, cardiac tonic.

Traditional uses

Table 1: Represents Semecarpus as a dying agent.^[5]

Plant name	Colour obtained	Pigment
Semecarpus anacardium	Black	Bhilawanol

Purification Process^[7]

1. Stalk part is removed, kept in middle of Sunnambu (Calcium caronate) it is roasted with toddy, fermented rice water done for 6 times.
2. Treated with decoction of Tamarindus indicum, flower from Thespesia populnea
3. Boiled in diluted cow dung

Traditional uses

1. Serankottai is used to treat *kuttam* which has bitter Taste with anti inflammatory activity.^[8]
2. It works well in the cases of beri-beri, neuritis
3. Amrita ballathaki legiyam half tola in milk, sugar, coffee, for chronic rheumatism.^[6]

Serankottai Karpam

The method of preparation of karpam is given Theraiyar karisal text.

To treat vata pitha thoda diseases like chest pain, paraplegia. It is given in the form of Nei, Ilagam, Choornam. it is a strengthener and prevents early death. Administrated for 48 days.^[9]

Toxic symptoms

1. Rising of blisters in tongue, throat, stomach, intestines appears red
2. Ulceration
3. Inflammation of mouth, stomach, intestine etc.
4. Fatty changes in liver
5. Vomiting
6. Diarrhea
7. *Udambu oothal*
8. Sleep disturbance
9. Scanty urination
10. Bloody urine
11. Erythemaous skin eruptions
12. May be fatal.^[10]

Antidote^[7]

Brick powder used for foementation

Wax mixed with gingley oil and applied.

1. *Koraikilangu* (*Cyperus rotundus*), *Santhanam* (*Santalum album*), *Ell* (*Sesamum indicum*), *Elarisi* (*Eletaria cardamomum*) of equal ratio made into a paste externally applied.
2. *Pugaiilai* (*Nicotina tabacum*) is crushed, soaked in tender coconut allowed to boil and the pulpy part of tender coconut is asked to eat.
3. A decoction used to treat the blisters:
 - *Cyperus rotandus*
 - *Santaum album*
 - *Sesamum indicum*
 - *Eletaria cardamomum* are grinder with water mixed with honey and applied externally to treat the eruptions.

Nanju murivu mooligai^[10]

1. A decoction prepared from the leaves of Tamarindus indicum
2. Coconut milk
3. Exposed to the air from the trees of Puli (Tamarindus inducm), punga maram (Pongamia pinnata)
4. Seeds are boiled in Aloe vera juice
5. Seeds in one part, palm toddy 2 parts, curd mixed and kept it under sunlight for nine days.

It is a special method of preparation mentioned in Theran karisal.

Table 2: Represents –Serankottai used as an ingredient.

Name of the medicine	Dosage	Mode of medicine	Uses	Reference
Ganthaga rasayanam	5 – 10 nelledai	Internal	Chronic skin diseases, Leucoderma, STD	[10]
Virana sanjeevi thailam	1 to 2 drops in betel leaf	Internal/ external	Wound, Delirium	[10]
Idivallathy legiyam	300 mg	internal	Palm jaggery	[11]
Nandhi mezhugu	50-100 mg	Internal	Ulcer, Burning sensation	[11]
Rasa ganthi mezhugu	Sundai alavu	Internal	leprosy	[12]

Constituents^[5]

Important constituent of oil.^[3]

- 1 Unsaponifiable matter 5.14%
- 2 Fatty acid 36.65%
- 3 Phenolic constituents 42.69%

Table 3: Represent the Phytochemicals present.^[5]

Plant part	Phytochemicals
Leaves	Amentoflavone
Nuts	Anacardic acid, bhilawanol, biflavanoids A,B and C, nallaflavone.
Nut shell	Galluflavone, Jeediflavone.
Seed oil	Linoleic acid, myristic acid, steric acid, palmitic acid
Juice	Bhilawanol

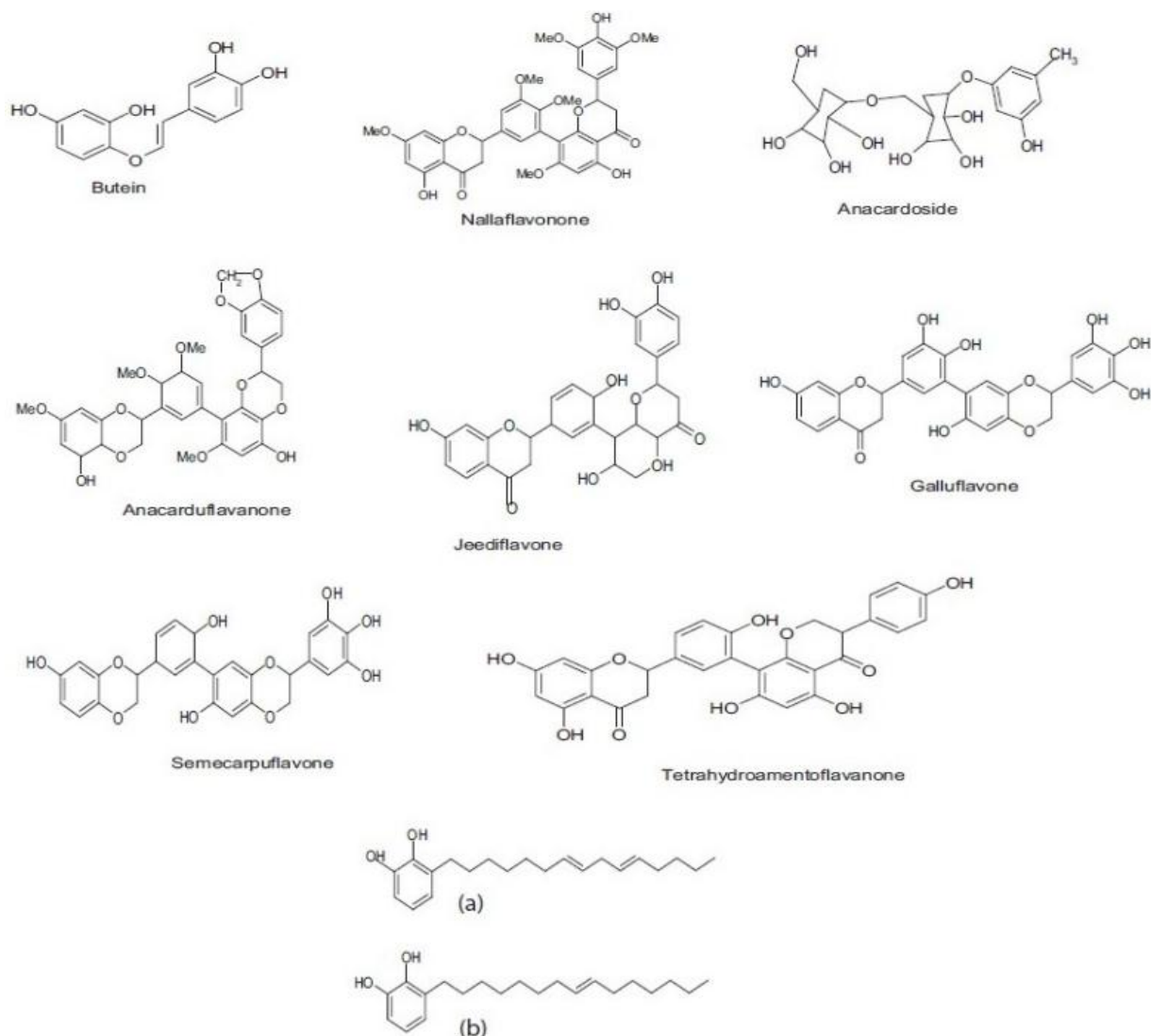


Figure represents the chemical structure of Semecarpus whereas A and b are cytotoxic compounds of S.anacardium.^[13]

Table 4: Represents Principles, minerals, vitamins in S.anacardium nuts (in 100g)^{2, [5]}

Moisture (g)	3.8
Protein (g)	26.4
Fat (g)	36.4
Mineral (g)	3.6
Fiber (g)	10.4
Carbohydrate (g)	28.4
Energy (K cal)	587
Calcium (mg)	295
Phosphorous (mg)	836
Iron (mg)	6.1
Thiamine (mg)	0.38
Riboflavin (mg)	0.15
Niacin (mg)	2.7

Experimental activity^[4]

1. To evaluate the analgesic activity of marking nut in classical siddha medicinal preparation Rasanaadhi Mezhu acute inflammations are induced in rats. The inflammation was reduced to 34.5% in 100 rug/kg dose.
2. Raasanaadhi Gugglu tablet, given two tablets thrice daily it showed up anti inflammatory property. It has *S.anacardium* as a chief ingredient.
3. To verify the anti inflammatory activity animals are treated with milk extract of the nut against carrageenin, formaldehyde induced rat paw oedema. The result showed up with the suppression of the primary lesion and gaining in weight of the rats.
4. Antitumour activity of the drugs are exhibited in nasopharynx.

CONCLUSION

From this we come to know about multifaced acions of semecarpus an effective analgesic, anti inflammatory, anti tumour activities. Traditional Siddha medicines are effective in treating chronic cases with effective remedies. These remedies helps us to live a healthier life. Thus *S.anacardium* is one of the promising ingredient to treat chronic diseases.

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