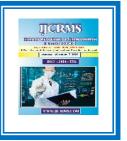


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Multifacted role of Ilaikkarichoru in Varmam treatment - A review

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Abstract

In Kanyakumari and other parts of Southern Tamilnadu, The Varmam branch of the Siddha system is still practiced. The methodical study of varmam energy in martial arts and therapeutic applications is known as varmakkalai. Varmam points are bioenergetic sites that facilitate subtle energy flow and support the body's physiological processes. The junctions of muscles, bones, veins, and nerves constitute these Varmam points. Diseases arise from any disruption of the flow of energy and are addressed by stimulating Varmam points, Adangalgal, Thadavu muraigal, Ilakku muraigal, Varmam drugs, and diet. The ideal diet for individuals receiving Varma drugs is ilaikkarichoru, as stated in Varma odivu murivu saari 1500. The two ingredients of ilaikkarichoru are murungai ilai and kuruvai arisi. The primary actions of these two substances are anti-inflammatory, antioxidant, immunomodulatory, and neuroprotective. This essay aims to examine the pharmacological actions, nutritional analysis, phytochemical characteristics, and health advantages of a diet rich in iliaikkarichoru. Information on the literature has been compiled from reliable sources, priceless research findings, and websites. The high nutritional value and variety of activities of the substances in Ilaikkarichoru provide further help in the treatment of varmam-related disorders.

Keywords: Varmam diet, Ikaikkarichoru, Kuruvai arisi, Moringa leaves, Traditional diet.

Introduction

A healthy lifestyle is heavily reliant on food. Food ingredients should fortify bodily components and biological humors to provide energy for the proper functioning of the key organs. Additionally, food ought to be suitable and easily digested. Food that balances the six tastes is necessary for the body to carry out its many functions and strengthen its defenses. Food tastes are the result of different nutrients acting naturally.

"Food is Medicine," according to Siddha (Unavae Marunthu). The renowned siddhar Thiruvalluvar made this claim in his work "Thirukkural."In Siddha, food is not only defined by the items utilized, but also by the eating individual's temperament. The five elements—Earth, Water, Fire, Air, and Space—are what make up every object in the cosmos. The three humours in the human body— Vatha, Pitha and Kapha—are made out of the five elements. For a healthy life, these humours should be perfectly balanced.

Thus, poor quality food or certain tastes consumed in excess might throw off the body's delicate balance and lead to humors. As a result, there are 4448 different disorders. Thus, one of the main causes of sickness is what people eat.

Southern Tamilnadu and Southern Kerala, particularly Kanyakumari, practice varmam, a branch of the siddha medical system. Varmakkalai is an organized investigation into the use of varmam energy in martial arts and healing practices. Varmam points are bioenergetic sites, supporting the body's physiological processes by being subtle energy conduits. These Varmam points form where muscles, bones, veins, and nerves converge. Diseases are caused by any disruptions in the flow of energy, and these can be addressed by stimulating Varmam points, Adangalgal, Thadavu muraigal, Ilakku muraigal, Varmam drugs, and diet. Ilaikkarichoru is recommended as the ideal diet for people using

Varma drugs in Varma Odivu Murivu Saari Sarasoothiram -1500.

Kuruvai arisi (also known as Karungkuruvai arisi) and Murungai ilai are the two constituents of ilaikkarichoru. The key properties of both substances are their anti-inflammatory, antioxidant, immunomodulatory, and neuroprotective properties.¹

Aim & Objective

To evaluate the nutritional analysis, phytochemical characteristics pharmacological activities and health advantages of ilaikkarichoru through various reliable sources.

Literature Review

Ilaikkarichoru, which includes Kuruvai arisi (Karungkuruvai arisi) and Murungai ilai. 1

Karungkuruvai Arisi



Kingdom : Plantae
Class : Monocots
Order : Poales
Family : Poaceae
Species : Oryza species

Kuruvai sown in the month of May – June.

India has several different rice kinds. Kuruvai arisi is a traditional rice variety grown primarily in southern India. Padharthaguna sinthaamani

describes the attributes of several rice kinds. In the Siddha system, KARUNGKURUVAI rice is most usually utilized throughout the disease's convalescence period.¹

Cultivation Aspects

Navarai and Kuruvai season.

Agronomical Aspects

125 days crop, average height 95cms in maximum height 101cm, lodging variety.

Characteristics Of The Grain

Grain is black in colour, rice is dark brown in colour, bold rice, weight of 1000 grains is 25.48 gms.

Siddha Aspect

"Manakkatthai vaalaan karungkuruvai moondrum Ranakushtai chilvishathai pookkum inakkamura Aakkiyundaar karappaanahumenbar kalsilar Paarukkul idhaiyennip paar."

Padharthaguna sinthaamani 841

Karungkuruvai treats mild poisons, ulcers, and other skin problems. However, they may induce eczema.

Cooked Parboiled Rice

"Thenpuviyi naalunjche lithuvala kurunjaali Van pulungal vadisadha munbunave Vaayuvilaiyatthaal valiyun vannoiyilai Noiyudaiyaarkkaaru nuval."

Padharthaguna sinthaamani 1372

Parboiled rice is beneficial to those who are ill and helps to prevent seizures and vatha illnesses.

Greens

Vegetables abound in South Indian cuisine. They grow and cultivate greens such as Moringa oleifera, horse radish tree, pot herb, prickly green, small greens, *Amaranthus campestris*, and coriander (*Coriandrum sativum*). In watery lands, they also grow greens of *Althernanthera sessilis*, spinach (*Spinacia olaracea*), yellow wood sorrel

(Oxalis corniculata), Chanissoa albida, and aquatic cryptogamous plants.³

Postpartum women are prescribed a regimen of Indian acalypha (*Acalypha indica*), spreading hogweed (*Boerhaavia diffusa*), common spider wort (*Commelina bengalensis*), wild long pepper (*Lippia nodiflora*), and white dead nettle (*Leucas aspera*) that has been boiled with pepper. They are also called "Kalavai keerai" (Mixed Greens) and are eaten as food by others.³

After cleaning the greens to get rid of any insects, worms, grass, stems, and leaf veins, wash and finely chop the tender stems and fresh greens. Once the water has been drained, it can be prepared as mashed curry, soup, or curry.³

Murungai Ilai

Native to the Indian subcontinent, *Moringa oleifera* is a fast-growing, drought-resistant tree that is widely utilized in South and Southeast Asia. It is a member of the Moringaceae family. Common names for this plant include moringa, horse radish tree (named for the flavor of the roots, which is similar to horse radish), drumstick tree (named for the long, thin, triangular seedpods), and malunggay (found in Asian maritime or orchiplegic locations).



Kingdom : Plantae
Class : Angiosperm
Order : Brassicales
Family : Moringaceace
Genus : Moringa

Species : Moringa oleifera

Morphology of leaves

The *Moringa oleifera* tree is a tiny, rapidly growing deciduous or evergreen that can reach heights of up to 10 or 12 meters. It features a broad, open crown with drooping, delicate branches, tripinnate leaves for the feathery foliage, and thick, white, corky bark. The leaves on twigs are alternately and spirally arranged, up to 45 cm long, and either bipinnate or, more usually, tripinnate. Pinnae and pinnules are arranged in opposition to one another; leaflets measure 1.2 to 2.0 cm in length and 0.6 to 1.0 cm in width; petioles of lateral leaflets measure 1.5 to 2.5 mm in length, while those of terminal leaflets measure 3 to 6 mm.

Siddha Aspect

"Serimandham veppanth therikkunth thalainoi Verimoorcchai kannoi vilahu marame Nerungaiyilaiyottha vilinerilaiye nalla Murungaiyilai thannai mozhi".³

Padhaarthaguna sinthaamani -542.

The leaves of the horse radish plant (*Moringa oleifera*) are used to treat eye disorders, indigestion, heat headaches, and coma brought on by pitham.

"Murungaikkeerai vendhu kettathu Agathikkeerai vegamal kettathu"³

Overcooked horseradish (*Moringa oleifera*) leaves are not recommended for consumption.

Methods and Materials

Ilaikkarichoru

Varma Odivu Murivu Sarasoothiram -1500 recommends Ilaikkarichoru as the optimum diet for patients taking varma perumarunthugal.²

Ingredients

- 1. Kuruvai arisi (Karungkuruvai arisi).
- 2. Murungai ilai (Moringa oleifera).
- 3. Salt (Dry fried).²

Preparation Of Ilaikkarichoru

Every component needs to be cleansed in accordance with Siddha literature.

- 1. Fresh Murungai ilai (*Moringa oleifera*) leaves should be rubbed with 100g of Karungkuruvai arisi till the rice turns green. If necessary, dry fried salt can then be added and the rice is boiled in water. (In accordance with custom).
- 2.100g of Karungkuruvai arisi is steeped in Murungai ilai juice for 15–20 minutes before cooking normally.
- 3. 100g of Karungkuruvai arisi is boiled, then combined with dry Murungai ilai powder.

Nutritive analysis of Karungkuruvai arisi

The following lists the nutritional value of 100 grams of Karungkuruvai arisi.⁴

S.No	Status	Boiled	
1.	Moisture	11.84g	
2.	Total ash	1.54g	
3.	Total protein	8.22g	
4.	Total fat	1.91g	
5.	Dietary fiber	1.92g	
6.	Carbohydrate	74.57g	
7.	Energy	348.35Kcal	
8.	Potassium	249.70mg	
9.	Iron	7.60mg	
10.	Calcium	37.70mg	
11.	Magnesium	94.70mg	
12.	Zinc	2.80mg	
13.	Phosphorus	344.5mg	

Phytochemical property of karungkuruvai arisi

The following phytochemical characteristics were found in 100g of Karungkuruvai rice during the initial phytochemical screening.⁷

)	Reducing sugar	
J	Catechins	
J	Tannins	
J	Anthroquinones	
J	Phenolic compounds	39mg/100g
J	Flavonoids 175mg/10	00g
J	Anthocyanin 33mg/10	00g

Pharmacological Activities Of Karungkuruvai Arisi

Anti-inflammatory activity – The anti-inflammatory activity was evaluated in vitro using lipopolysaccharide-stimulated RAW264.7 macrophage cell model with enzyme-linked immunosorbent assay.⁴

Anti-oxidant activity –High phenol, flavonoid, anthocyanin content.⁴

Anti-diabetic activity –low glycemic index⁴

Anti-cancer activity –Ghasemzadeh et al (2018) demonstrated that extracts of both black and red rice inhibit the proliferation of breast cancer cells.⁴

Nutritive analysis of *Moringa oleifera* leaves

The following lists the nutritional contents for 100g of leaves of Moringa oleifera.⁹

S.No	Status	Fresh leaves	Cooked	Dried
1.	Energy	86.6Kcal	60Kcal	87Kcal
2.	Moisture	76.4+/-3.01mg	-	7.4+/-2.89mg
3.	Protein	8.8+/-3.72g	5.3g	24+/-5.8g
4.	Carbohydrate	7.6-12.5g	11g	36+/-9.2g
5.	Fiber, crude	2.2+/-1.01g	-	9+/-7.45g
6.	Fiber, total dietary	5.3-7.3g	2g	20.6-28.6g
7.	Fat	1.5+/-0.37g	0.9g	6+/-2.5g
8.	Calcium	532+/-378.8mg	151mg	1897+/-748.4mg
9.	Phosphorus	90-112mg	67.00mg	297+/-149.0mg
10.	Sodium	16mg	245mg	220+/-180.0mg
11.	Potassium	414+/-302.7mg	344mg	1467+/-636.7mg
12.	Magnesium	26-151mg	34.00mg	473+/-429.4mg
13.	Iron	10.8+/-6.04mg	2.3mg	32.5+/-10.78mg
14.	Zinc	0.3-1.3 mg	0.49mg	2.4+/-1.12mg
15.	Copper	0.23+/-0.125mg	0.09mg	0.9+/-0.48mg
16.	Selenium	-	0.90mcg	-
17.	Thiamine	-	0.222mg	2.6mg
18.	Riboflavin	-	0.509mcg	1.29-20.5mcg
19.	Niacin	-	1.995mg	8.2mg
20	Vitamin b5	-	0.102mg	-
21.	Vitamin b6	-	0.929mg	2.4mg
22.	Folate	-	23.00mcg	540mcg
23.	Vitamin A	1286+/-689mcg	351.00mcg	3639+/-1979.8mcg
24.	Vitamin C	162+/-63.0mg	31.0mg	172+/-37.7mg
25.	Vitamin E	25mg	0.10mg	56-113mg

Pharmacological activity of Moringa oleifera leaves

Anti-oxidant activity

The leaf extract was shown to exhibit the greatest antioxidant activity and to have the highest phenolic content (105mg Gallic acid equivalents/100g), the highest total flavonoid content (31mg Quercetin equivalents/100g), and Ascorbic acid content (107mg/100g).⁵

Anti-neoplastic activity

Jung (2014) has shown that an aqueous extract of *M. oleifera* leaves exhibited significant antineoplastic against a lung cancer cell line and several other type of cancer cells. The extract included apoptosis, inhibited tumor cell growth, and lowered the internal level of reactive oxygen species in human lung cancer cells.⁵

Anti-inflammatory activity

Waterman et al. (2014) isolated and characterized four isothiocyanates from *M. oleifera* leaves. An aqueous extract contained 1.66% isothiocyanates and 3.82% total polyphenols. The isothiocyanates were shown to exhibit anti-inflammatory activity in vitro macrophages cell system.⁵

Anti-analgesic activity

The analgesic effect of methanol extracts of leaves and roots of *M. oleifera* was demonstrated in rats (Manaheji et al., 2011).⁵

Immunomodulatory

Methanol extract of *M. oleifera* leaves given orally in mice at doses 250 and 750mg/kg stimulated both cellular and humoral immunity (Sudha et al.,2010).⁵

Hepatoprotective

Das et al.(2012) have shown that in mice fed with high fat diet, an aqueous extract of M. oleifera leaves protect against liver damage demonstrated by reductions in tissue histopathalogy and serum activities of marker enzymes AST,ALT,ALP as well reduced lipid peroxidation and increases in reduced glutathione.⁵

Neuroprotective

The neuroprotective effect of *M. oleifera* are an emerging area of study. Sutalangka et al.(2013) have determined that an aqueous *M. oleifera* extract is an potential cognitive enhancer and neuroprotectant in an animal model of demetia-induced rats.⁵

Results and Discussion

There are numerous macro and micronutrients in ilaikkarichoru. According to phytochemical study, phenolic compounds, tocopherols, flavonoids, and anthocyanins, among other substances, are present in karungkuruvai arisi and murungai ilai. These compounds have significant Anti-inflammatory,

Antioxidant, Immunomodulatory, Hepatoprotective and Neuroprotective properties. The vitamins and minerals found in Moringa oleifera leaves are vital for regular physiological processes, particularly those involving the neurological system. owing to trauma and any other factors that result in the disease associated to varmam, which mostly affects the muscles, bones, and nerves. In addition to ilaikkarichoru, which has neutraceutical value and promotes the medicine and body's early healing, under any treatment for varmam-related ailments.

Conclusion

Because Ilaikkarichoru has high nutrition value elements, it is the healthiest diet to follow when using varma drugs.

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