

AGATHIYAR KUZHAMBU (HERBO-MINERAL SIDDHA FORMULATION)**Rakulini Raveendran¹, Sounthararajan Kalaiselvi², Sundararajan S³**

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**ABSTRACT**

Introduction: *Agathiyar kuzhambu* (A.k) is a herbo-mineral siddha formulation. It is explained in the *Siddha Vaithiya Thiraddu* Book. In Siddha Medicine, there are 32 internal & external medicines are explained in the Siddha Literatures. *Agathiyar kuzhambu* is a one form of the internal medicine which is commonly used in purgation therapy. It contains 11 ingredients. *Agathiyar kuzhambu* has different herbo- mineral ingredients which are having wide range of therapeutic uses. It is commonly used in Siddha OPDs. **Aim:** The researcher is going to develop the documentary evidence for the effectiveness of *Agathiyar kuzhambu*. **Results and Discussion:** Six ingredients herbs have hot potency and Pungent efficacy. These have many pharmacological actions. Commonly, these ingredients are possessed antioxidant, anti-microbial, hepatoprotective, anti-inflammatory, anti-fungal, anthelmintic, anti-diabetic and anti -hypertensive activity. In Siddha, these ingredients and 5 minerals and metals ingredients were used in many disease conditions. Lots of adjuvants of *Agathiyar kuzhambu* have hot potency and pungent efficacy. Some of adjuvants have cool potency and sweet efficacy. In Siddha, these adjuvants were used in many disease conditions. **Conclusion:** According to the above study, *Agathiyar kuzhambu* may be act as stimulant and osmotic purgative at the same time it can use as a treatment aspect of many diseases. This study gives documentary evidence of *Agathiyar kuzhambu* as a purgative & possess many pharmacological activities in Siddha medicine.

Keywords: Agathiyar kuzhambu, Siddha Medicine, Purgative, Croton tiglium

INTRODUCTION

Agathiyar kuzhambu (A.k) is a herbo-mineral siddha formulation. It is explained in the Siddha Vaithiya Thiraddu Book. In Siddha Medicine, there are 32 internal & external medicines are explained in the Siddha Literatures. Agathiyar kuzhambu is a one form of the internal medicine which is commonly used in purgation therapy. It contains 11 ingredients; 6 herbal ingredients: *Ferula asafoetida* H.Karst, *Brassica nigra* (L.) K.Koch, *Aconitum ferox* Wall. ex Ser., *Trachyspermum ammi* (L.) Sprague, *Nigella sativa* L. and *Croton tiglium* L. and 5 minerals and metals: *Rasam* (Mercury quicksilver), *Inthuppu* (Sodium chloride impura), *Venkaram* (Sodium baborate), *Manosilai* (Arsenic disulphidum bisulphuret of arsenic realgar (Red orpiment)) and *Aritharam* (Trisulphate of arsenic (Yellow orpiment)). It is used to treat a wide variety of diseases. ^[1]

4448 diseases are mentioned in *Agathiyar 2000*, *Agathipatham*, *Noi Naadal Noi Muthal Naadal part I* and *Theriyar vaakadam*. Diseases are classified according to anatomical structures of body parts, tri humors, clinical sign and symptoms and physical constituents. ^[2] According to the Siddha Medicine, methods of treatment are explained in three different kinds. They are Divine treatment, Rational treatment and Surgical treatment. Treatments are classified according to the therapy. There are Purgative therapy, Emetic therapy, Fasting therapy, Steam therapy, Oleation therapy, Physical therapy (*Thokkanam*), Solar therapy, Bloodletting therapy, Diseases curable with herbal medicines and Diseases curable with metals and mineral preparation. Purgation therapy is a base line treatment. It is given during

the month of *Aani* and *aadi* (mid-June to mid-August). The decoction, pastes, *kuzhambu* and medicated oil are preferred for purgation. ^[3]

Elimination of vitiated *Doshas* through rectum is called purgation therapy. Proper administrated purificatory drug will give clarify of the mind, strengthens sense organs, gives stability to tissues, improve digestive power, reduces aging etc...

Ingredients of Agathiyar Kuzhambu ^[1]

<i>Ferula asafoetida</i> H.Karst	5g
<i>Brassica nigra</i> (L.) K.Koch	5g
Purified <i>Aconitum ferox</i> Wall. ex Ser.	5g
<i>Trachyspermum ammi</i> (L.) Sprague	5g
<i>Nigella sativa</i> L.	5g
Purified <i>Rasam</i> (Mercury quicksilver)	5g
Purified <i>Inthuppu</i> (Sodium chloride impura)	5g
Purified <i>Venkaram</i> (Sodium baborate)	5g
Purified <i>Manosilai</i> (Arsenic disulphidum bisulphuret of arsenic realgar (Red orpiment))	5g
Purified <i>Aritharam</i> (Trisulphate of arsenic (Yellow orpiment))	5g
Purified <i>Croton tiglium</i> L.	50g

Preparation of Agathiyar Kuzhambu ^[1]

All above crude and raw drugs were purified and finely powdered separately except *Croton tiglium* L. The quantity of each ingredients was accurately weighted and mixed and grained all together in grindstone. Weighted *Croton tiglium* L. was divided into two parts. One part was added directly, and another part was fried with castor oil, then both were grinded in grind stone. Finally, all ingredients were grained all together and preserved in the bottle.

Dosage form, vehicle and disease conditions ^[1]

Dosage form	Vehicle	Disease conditions
Internal – 130 mg	<i>Chukku</i> (<i>Zingiber officinale</i> Roscoe) <i>katkam</i>	Fever
	<i>Kadukkai</i> (<i>Terminalia chebula</i> Retz.) <i>kudineer</i>	Cough
	<i>Chukku</i> (<i>Zingiber officinale</i> Roscoe) & <i>Milaku</i> (<i>Piper nigrum</i> L.) powder	Chills with fever
	Ghee, Buffalo milk	Bleeding piles
	<i>Milaku</i> (<i>Piper nigrum</i> L.) powder with white onion juice	Anaemia, <i>Veppup paavai</i> , <i>Neerampal</i> , <i>Sokai</i>

	Honey with ginger juice	<i>Sanni vatham</i>
	Decoction of <i>Kodiveli (Plumbago zeylanica L.)</i> root-bark, <i>Kazharchi (Caesalpinia bonducella L.)</i> rootbark, <i>Musumusukkai (Melothria maderaspatana (L.) Cogn.)</i> and <i>Nochchi (Vitex negundo L.)</i>	13 types of <i>Sanni</i>
	A.k gives with tender leaves of <i>Ficus benghalensis L.</i> grind with cow milk - 3 days / Morning	Infertility (<i>Maladu</i>)
	A.k gives with juice of barks of <i>Eugenia jambolana Lam.</i> grind with goat milk and powder of <i>Cuminum cyminum L.</i>	<i>Karppa vayu, Karppa vatham</i>
	Powder of <i>Piper nigrum L.</i> & Dry ginger	<i>Soothaga vayu, Thiradchivali</i>
	Candy	<i>Piramiyam, Sokam</i>
External		
<i>Kanmai (Eyetex) – ½ ka- duku alavu</i> It is used with more precau- tion.		<i>Sanni vatham, Visangal</i>
A.k mixed with Santal wood powder, <i>Aloe vera</i> (L.) Burm.f. and curd. This is applied as <i>pattu</i> .		Swelling, <i>Sanni</i>
A.k mixed with saliva is applied as paste		<i>Pilavai, Thodaivaalai, ariyappuch chilanthi, mulaich chilanthi.</i>
Fumigation	<i>Kummaddi juice</i>	<i>Gunmam (Peptic ulcer)</i>
	<i>Chukku (Zingiber officinale Roscoe)</i> powder with <i>Nochchi (Vitex negundo L.)</i> juice	<i>Vaaivu</i>
	<i>Sangan kuppi juice</i>	<i>Neer serippu, kalladaippu, kiranthi, parangi pun,</i>
		<i>Kapala vali, Pisasam, Visakkadi</i>

Pathiyam: Ghee, *Murukkam pinchu, Vaalai pinchu, Naaraththai* and *Thuthuvalai. Morum sorum.* [1]

Excessive Purgation: Use decoction of *Cuminum cyminum L.*, and tamarind or lemon / burned *Acorus calamus L.* / Butter milk with rice.

Butter milk

One cup (245 ml) of cultured buttermilk provides the following nutrients: Calories: 98, Protein: 8 grams, Carbs: 12 grams, Fat: 3 grams, Fiber: 0 grams, Calcium: 22% of the Daily Value (DV), Sodium: 16% of the DV, Riboflavin: 29% of the DV, Vitamin B12: 22% of the DV and Pantothenic acid: 13% of the DV.

Agathiyar kuzhambu has different herbo- mineral ingredients which are having wide range of therapeutic

3.Results

uses. It is commonly used in Siddha OPDs. So, the researcher is going to develop the documentary evidence for the A.k.

2. Material and Methods

Research Type: Literature Review

Research Design: Collection of data from the available authenticated Tamil Siddha texts and journal articles. All data (Part use, taste, potency, efficacy, phytochemical, pharmacological action, chemical constituents and medicinal uses) were collected of all ingredients of A.k and adjuvants of A.k.

Statistical analysis: Collected data were processed and statistically analysed by simple statistical method using MS. Excel 2019.

Table 1: Description of raw materials of *Agathiyar Kuzhambu* [4][5]

Botanical Name	Tamil Name / English Name	Family Name	Parts used	Siddha properties			Pharmacological action	Medicinal uses
				Taste	Po-tency	Effi-cacy		
<i>Ferula asafoetida</i> H.Karst	<i>Perumkayam</i> / Asafetida	Umbelliferae	Gum resin	Bitter	Hot	Pungent	Stimulant, Carminative, Antispasmodic, Expectorant, Laxative, Anthelmintic, Diuretic, Aphrodisiac, Emmenagogue	It is used for Dental diseases, <i>Thantha moolarogam</i> , All snake poison, <i>Kirumi</i> , Indigestion, <i>Vathathikkam</i> , <i>Uthavarththavaatham</i> , <i>Yonirogam</i> , <i>Iruthaya vayu</i> , 8 types of <i>Gunmam</i> , <i>Uthara rogam</i> , <i>Karppa vippuruthi</i> , <i>Soolai</i> , <i>Iraththa kirumi</i> , <i>Kapha</i> diseases and Body pain[7].
<i>Brassica nigra</i> (L.) K.Koch	<i>Kadugu</i> / Black Mustard Seed	Brassicaceae	Seeds	Pungent	Hot	Pungent	Emetic, Stimulant, Rubefacient, Vesicant, Digestive, Diuretic	It is used to treat Sinusitis, Headache due to cough, Phlegm, Indigestion, abdominal pain, <i>Vatha thodam</i> , <i>Kaanak kadi</i> , <i>Vatha kapham</i> , <i>Kirakani</i> , <i>Tri-humors</i> , <i>Seetha kaduppu</i> , Joint diseases, giddiness and hiccough.
<i>Aconitum ferox</i> Wall. ex Ser.	<i>Naabi</i> / Indian acconite	Ranunculaceae	Dry rhizome	Bitter	Hot	Pungent	Diaphoretic, Diuretic, Anti-periodic, Anodyne, Anti-diabetic, Anti-phlogistic, Antipyretic, Narcotic, Sedative	It is used for <i>Vatha Kaduppu</i> , Indigestion, <i>Kapha</i> diseases, <i>Kuddam</i> , Peptic ulcer and Scorpion poison.
<i>Trachyspermum ammi</i> (L.) Sprague	<i>Omam</i> / The Bishop's weed	Apiaceae		Pungent	Hot	Pungent	Stomachic, Antispasmodic, Carminative, Antiseptic, Stimulant, Astringent, Tonic, Sialogogue	It is used for <i>Seetha suram</i> , Indigestion, Abdominal discomfort, Purgative, <i>Seetha Pathi</i> , <i>Suvasakasam</i> , Dental diseases and Rectal pain
<i>Nigella sativa</i> L.	<i>Karumcheerakam</i> / Black cumin, Small fennel	Ranunculaceae	Seeds	Bitter	Hot	Pungent	Carminative, Diuretic, Emmenagogue, Galactagogue, Anthelmintic, Stomachic, Parasiticide, Emollient	It is used for <i>Mandai karappan</i> , Wounds, Sinusitis, Body heat, Head pain, Eye diseases, <i>Sirangu</i> , Abdominal discomfort, Peptic ulcer, Chest pain, Cough, Vomiting, Nausea, Swelling and jaundice.
<i>Croton tiglium</i> L.	<i>Nervalam</i> / Purgative croton	Euphorbiaceae	Seeds	Bitter	Hot	Pungent	Purgative, Stimulant, Rubefacient	It is used for chronic constipation, Rectal and abdominal diseases, <i>Vatha</i> diseases, <i>Visama sanni</i> paatham and Body pain

Above six ingredients have hot potency and Pungent efficacy. In Siddha, these ingredients were used in many disease conditions.

Table 2: Description of Minerals of *Agathiyar Kuzhambu* [6]

Scientific Name of Minerals	Tamil Name / English Name	Pharmacological action	Medicinal uses
Mercury quicksilver	<i>Rasam</i> / Mercury/ Hydrargyrum	Tonic, Alternative, Nutrient, Laxative, anti-bilious, Sialagogue, Diuretic, Deobstruent, Antiseptic	Purify the blood, increase blood and semen, Appetizer, Antiseptic, improve concentration, Nervine tonic, relax the mind, Delay aging
Sodium chloride impure Or Sodii chloridum impura	<i>Inthuppu</i> / Rock Salt	Laxative, Purgative, Carminative, Diuretic, Appetizer	It is used for 8 types of <i>Gunmam</i> , <i>Alasam</i> , <i>Asirkkaram</i> , <i>Kapha piththam</i> , <i>Kaphaathikkam</i> , <i>Narambukiranthi</i> , Constipation, Poison and <i>kapha upsthamsam</i> . It gives relief from thirst, <i>Nethira kaasam</i> , Bleeding piles and Toxic bites.
Sodium baborate, Sodium Bi Boras	<i>Venkaram</i> / Sodii boras, Borax	Refrigerant, Antiseptic, Lithontriptic, Diuretic, Emmenagogue, Astringent, Sedative	It is used to treat psoriasis, 8 types of <i>Gunmam</i> , Bleeding piles, Urinary tract infection, <i>Kaphathikkam</i> , Dental diseases, Toxic bites and <i>Sanni paatham</i> .
Arsenic disulphidum bisulpuret of arsenic realgar & Trisulphate of arsenic	<i>Manosilai</i> / Red orpiment & <i>Aritharam</i> / Yellow orpiment	Alterative, Tonic, Febrifuge	It gives relief from <i>Saruma kuttam</i> , Chills with fever, Bronchial asthma, <i>Silanthi vidam</i> , <i>Kaasam</i> , <i>Kapha</i> diseases, Eye diseases and Urinary tract infections.

In Siddha, these ingredients were used in many disease conditions.

Table 3: Pharmacological action of raw material of *Agathiyar Kuzhambu*

Pharmacological activity	<i>Ferula asafoetida</i> H.Karst [7]	<i>Brassica nigra</i> (L.) K.Koch [8]	<i>Aconitum ferox</i> Wall. ex Ser. [9][10]	<i>Trachyspermum ammi</i> (L.) Sprague [11][12]	<i>Nigella sativa</i> L. [13]	<i>Croton tiglium</i> L. [14][15]
Antioxidant	*	*	-	*	*	*
Antimicrobial	*	-	-	*	*	*
Antiviral	*	-	-	-	-	-
Antifungal	*	-	-	*	*	-
Anticarcinogenic	*	-	-	-	*	-
Anticancer	*	-	-	-	*	-
Anticytotoxicity	*	-	-	*	-	-
Anthelmintic	*	*	-	*	-	-
Antagonistic effect	*	-	-	-	-	-
Antidiabetic	*	*	-	-	*	-
Antispasmodic	*	-	-	*	-	-
Antihypertensive	*	-	-	*	*	-
Anti-lithiasis	-	-	-	*	-	-
Anti-filarial	-	-	-	*	-	-
Anti-pyretic	-	-	*	-	-	-
Anti-inflammatory	-	*	-	-	*	*

Anti-tumor activity	-	-	-	-	-	*
Anti-HIV activity	-	-	-	-	-	*
Analgesic	-	-	*	-	*	*
Antinociceptive effect	-	-	-	-	-	*
Hypolipidemic	-	-	-	*	-	-
Antiparasitic Effects	-	-	-	*	-	-
Molluscicidal	*	-	-	-	-	*
Nematicidal	-	-	-	*	-	-
Relaxant	*	-	-	-	-	-
Neuroprotective	*	-	-	-	*	-
Broncho-dilating actions	-	-	-	*	-	-
Diuretic	-	-	-	*	-	-
Immunomodulatory activity	-	-	-	-	*	-
Cardiovascular activity	-	*	-	*	*	-
Gastro-protective activity	-	-	-	*	*	-
Hepato-protective activity	*	*	-	*	*	-
Nephroprotective activity	-	*	-	-	*	-
Pulmonary protective	-	*	-	-	*	-
Anti-asthmatic activity	-	-	-	-	*	-

Above six ingredients have many pharmacological actions. Commonly, these ingredients are possessed antioxidant, anti-microbial, hepatoprotective, anti-inflammatory, anti-fungal, anthelmintic, anti-diabetic and anti-hypertensive activity.

DISCUSSION

Purgatives either provide semisolid stool or lead to watery evacuation. Purgative drugs are classified into 4: Bulk forming, Stool softener, Stimulant purgative and Osmotic purgative. Stimulant purgatives are stimulating peristalsis by irritant action on intestinal mucosa and also stimulate colonic electrolytes and fluid secretion by altering absorptive and secretory activity of mucosal cells. Osmotic purgatives are soluble inorganic salts, that increases the faecal bulk by retaining water osmotically and distend the bowel increasing peristalsis indirectly. It is an act on small as well as large intestine. A.k contains 11 ingredients; 6 herbal ingredients: *Ferula asafoetida*, *Brassica nigra*, *Aconitum ferox*, *Trachyspermum ammi*, *Nigella sativa* and *Croton tiglium*. All above six ingredients have hot potency and Pungent efficacy. These have many pharmacological actions.

Commonly, these ingredients are possessed antioxidant, anti-microbial, hepatoprotective, anti-inflammatory, anti-fungal, anthelmintic, anti-diabetic and anti-hypertensive activity. In Siddha, these ingredients were used in many disease conditions.

One of the studies said that crotonoleic acid in the ethanol extract of croton seeds possessed significant purgative effect in experimental animals. Crotonoleic acid which is a mixture of croton resin with inactive fatty acids may act as a powerful irritant to the intestinal mucosa and thereby causing enteropooling effect. In vitro studies using the extract showed the presence of muscarnic activity. Hence it can be presumed that the stimulation of the gut cause by the extract may partly be due to the activation of muscarnic receptors present. However, the present findings may be of support to the use of *Croton tiglium* as a purgative in traditional medicine.^[20]

5 minerals and metals are used. In Siddha, these ingredients were used in many disease conditions. Lots of adjuvants of A.k have hot potency and pungent efficacy. Some of adjuvants have cool potency and sweet

efficacy. In Siddha, these adjuvants were used in many disease conditions.

Rock salt: It may be act as an osmotic purgative.

Stimulant purgatives can lead to purgation resulting in fluid and electrolyte imbalance and hypokalemia. It is neutralized by buttermilk with rice.

CONCLUSION

According to the above study, Agathiyar kuzhambu may be act as stimulant and osmotic purgative at the same time it can be used as a treatment aspect of many diseases. This study gives documentary evidence of Agathiyar kuzhambu as a purgative & possess many pharmacological activities in Siddha medicine.

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