



## Review Article

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### A REVIEW ON THE EFFICACY OF SIDDHA DRUG THIPPILI NEI IN THE MANAGEMENT OF SWASAKASAM

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#### ABSTRACT

The Siddha system is an ancient traditional medicine in Tamilnadu in South India. In the Siddha system, the disease is classified into 4448 types based on derangements of Mukkutram (i.e.: Vatham, Pitham, Kapham). According to Siddha text Yugi Vaidhya Chinthamani, there are nearly 20 kinds of Kasam. Swasakasam (Bronchial Asthma) is one among them. Bronchial asthma is the most common chronic respiratory disorder among all age groups with a reported prevalence of 5 to 10 %. In India, the prevalence of Asthma has been reported to be 0.6% and 3.2% in rural and urban women respectively. The same in urban males has been 4%. This review article deals with siddha poly herbal formulation “Thippili nei” indicated for Swasakasam (Bronchial Asthma) in Siddha Sastric literature “The Siddha Formulary of India”.

**Keywords:** Swasakasam, Bronchial Asthma, Siddha formulation, Thippili nei.

#### INTRODUCTION

Siddha system is one of the ancient and holistic medicines in the world. Vatham, Pitham, Kapham are the 3 vital humours which play dominant role in the functioning of human body. Derangements in these humour results in the disease. According to Yugi vaithya chinthamani there are nearly 20 types of Kasam<sup>1</sup>. Kasam is due to vitiation of Kapham humour. Swasakasam (Bronchial Asthma) is one among them. The “Thippili Nei” is a poly herbal preparation mentioned in Siddha Sastric literature “The Siddha Formulary of India”. This is indicated for Swasakasam, Illai, Valli, Neerkasam, Surakasam, and Pithakasam<sup>2</sup>. It has 16 herbal ingredients that are from plant origin and detoxification process of all ingredients should be done before the preparation of medicine. The ingredients are having anti-inflammatory, antioxidant, anti-histaminic, bronchodilator, anti-asthmatic and expectorant activities.

This review describes the action, phytochemicals constituents and pharmacological action of the part of each ingredient used in this formulation. (Table 1)

#### Preparation of Thippili Nei

Step: 1 The 30 gm of all drugs is purified, dried and pulverised separately.

Step: 2 Then the grounded powder is mixed with 5200 ml of cow's milk and the mixture is strained in a sieve.

Step: 3 2600 ml of ghee is added to the mixture and boil up to the ghee consistency.

Step: 4 Later the ghee is filtered and preserved.

**Dosage** 5-10 ml (BD)

**Duration** 15 days

**Adjuvant** Hot water

**Indication** Swasakasam, Illai, Valli, Neerkasam, Surakasam, and Pithakasam.<sup>2</sup>

**Cow's Milk**

**Pharmacological activity:** Antibacterial, antifungal, antiviral, anticancer, antioxidant and immunomodulatory properties <sup>21</sup>.

**Medicinal uses**

- Cow's milk has calcium, phosphorus, choline, zinc, selenium and vitamin A and E.
- Cow's milk is essential in strengthens the immune system and repair the damaged cells and tissues.
- Cow's Milk is also rich in vitamin B, which helps to calm you down and regulate your sleep cycle.

**Cow's ghee**

**Action:** Expectorant, laxative, astringent, stomachic, demulcent and antiseptic<sup>3</sup>.

**Pharmacological activity:** Antioxidant, antibacterial, anti-inflammatory and antiseptic properties<sup>22</sup>.

**Medicinal uses**

- Ghee is easily absorbed and reaches the targeted areas in the body.

- Ghee helps to reduce stress, anxiety, risk of cancer, diabetes, and improves immunity
- It is mainly composed of glycerines (usually mixed), free fatty acids, phospholipids, sterols, sterol esters, fat-soluble vitamins (A, D and E), carbonyls, hydrocarbons and carotenoids.

**Table 1: Ingredients and Purification of Thippili Nei**

Name of the Plant	Used Parts <sup>2</sup>	Weight	Purification
<b>Nilavembu</b> <i>Andrographis paniculata</i> (Burm. f.) Wall. ex Nees	Whole Plant	30 gm	Clean and dry it under sunlight
<b>Nannari</b> <i>Hemidesmus indicus</i> (L.) R. Br.	Root	30 gm	Clean and dry it
<b>Kuruver</b> <i>Vetiveria zizanioides</i> (L.) Nash	Root	30 gm	Cut into small pieces and dry it in sunlight
<b>Vilamichuver</b> <i>Plectranthus vetiveroides</i> (Jacob)	Root	30 gm	Cut into small pieces and dry it in sunlight
<b>Santhanam</b> <i>Santalum album</i> L.	Saw Dust	30 gm	Clean and dry it
<b>Peramalli</b> <i>Pavonia odorata</i> Willd.	Root	30 gm	Clean and dry it
<b>Nellivatral</b> <i>Phyllanthus emblica</i> L.	Dry Fruit Flesh	30 gm	Boil with milk, remove the seed and dry it
<b>Vetpallai Arisi</b> <i>Wrightia tinctoria</i> (Roxb.) R. Br.	Seed	30 gm	Clean and dry it
<b>Munthirigai</b> <i>Vitis vinifera</i> L.	Dry Fruit	30 gm	Clean and dry it
<b>Kilkainelli</b> <i>Phyllanthus amarus</i> Schumach. & Thonn.	Whole Plant	30 gm	Clean and dry it
<b>Arathai</b> <i>Alpinia galangal</i> (L.) Willd.	Rhizome	30 gm	Clean and scrap the outer layer
<b>Seergam</b> <i>Cuminum cyminum</i> L.	Seed	30 gm	Clean and dry it in sunlight and later fry it
<b>Kadukurohini</b> <i>Picrorhiza scrophulariiflora</i> Pennell	Rhizome and Root	30 gm	Soak it in neem leaves juice and notch leaves juice for 3 hours and dry under sunlight
<b>Thippili</b> <i>Piper longum</i> L.	Fruit	30 gm	Soak it in Kodiveli leaves juice for 24 mins and then dry under sunlight
<b>Cow's Milk</b>		5200 ml	
<b>Cow's Ghee</b>		2600 ml	

**Table 2: Taste, Potency and Biotransformation of Thippili Nei**

Botanical Name of Plant	Taste <sup>3</sup>	Potency <sup>3</sup>	Bio transformation <sup>3</sup>	Family <sup>3</sup>
<i>Andrographis paniculata</i> (Burm. f.) Wall. ex Nees	Bitter	Hot	Pungent	Acanthaceae
<i>Hemidesmus indicus</i> (L.) R. Br.	Sweet, Bitter	Cold	Sweet	Apocynaceae
<i>Vetiveria zizanioides</i> (L.) Nash	Sweet	Cold	Sweet	Poaceae
<i>Santalum album</i> L.	Bitter, Sour	Hot, Cold	Sweet	Santalaceae
<i>Pavonia odorata</i> Willd.	Astringent	Cold	Sweet	Malvaceae
<i>Phyllanthus emblica</i> L.	Bitter, Sweet, Sour, Astringent	Cold	Sweet	Phyllanthaceae
<i>Wrightia tinctoria</i> (Roxb.) R. Br.	Bitter, Sweet, Astringent	Hot	Pungent	Apocynaceae
<i>Vitis vinifera</i> L.	Sweet	Cold	Sweet	Vitaceae
<i>Phyllanthus amarus</i> Schumach. & Thonn.	Bitter, Sweet, Sour, Astringent	Cold	Sweet	Euphorbiaceae
<i>Alpinia galangal</i> (L.) Willd.	Pungent	Hot	Sweet	Piperaceae
<i>Cuminum cyminum</i> L.	Sweet, Pungent	Cold	Sweet	Apiaceae
<i>Picrorhiza scrophulariiflora</i> Pennell.	Bitter, Pungent	Hot	Pungent	Scrophulariaceae
<i>Piper longum</i> L.	Pungent	Hot	Sweet	Piperaceae

**Table 3: Pharmacological action and Phytochemical Constituents of Thippili Nei**

Botanical Name of Plants	Action	Pharmacological Activity	Phytochemical Constituents
<i>Andrographis paniculata</i> (Burm. f.) Wall. ex Nees	Stomachic, Tonic, Alterative, Stimulant <sup>3</sup>	Anti-inflammatory <sup>4</sup> Antioxidant <sup>4</sup>	andrographidine, andrograpanin, andrographolide, beta-sitosterol, beta-daucosterol, oleanolic acid <sup>24</sup> .
<i>Hemidesmus indicus</i> (L.) R. Br.	Alterative, Tonic, Demulcent, Diuretic, Diaphoretic <sup>3</sup>	Antiasthmatic <sup>5</sup>	indicine, hemidine, hemidesmine, emidine, medidesmine, hemisine, demisine, indicusin, hemindicusin, hemidesminine, hemidesmusoic acid <sup>28</sup> .

<i>Vetiveria zizanioides</i> (L.) Nash	Tonic, Stimulant, Antispasmodic, Diaphoretic, Diuretic, Emmenagogue, Febrifuge <sup>3</sup>	Antibacterial, Antifungal, Anticataleptic, Analgesic and Anti-inflammatory <sup>6</sup>	khusol, khusinol, khusilal, khusinol oxide, isokhusimol, Isobisabolene, khusimol, khusimene, khusenic acid, zizanol, zizanene, levojunenol, epikhusinol, zizaene, prezizaene, khusiol,a- & B- vetivones, eremophil <sup>25</sup> .
<i>Santalum album</i> L.	Alterative, Diuretic, Diaphoretic, Stimulant, Disinfectant, Astringent, Cooling <sup>3</sup>	Antioxidant Anti-inflammatory Antibacterial <sup>7</sup>	$\alpha$ -santalol & $\beta$ -santalol, Santenol, teresantalol, Santanone, $\beta$ -Sitosterol, Palmitate, Tricyclosantalal, $\alpha$ & $\beta$ santalenes, trans- $\beta$ - bergamotene, $\alpha$ -curcumine, $\alpha$ & $\beta$ santalol <sup>30</sup> .
<i>Pavonia odorata</i> Willd.	Cooling, Carminative, Diuretic, Diaphoretic <sup>3</sup>	Antimicrobial Anti-inflammatory <sup>8</sup>	$\beta$ -Sitosterol, isovaleric acid., Palmitic, stearic, oleic, linoleic and n-caproic acids; a-pinene, methyl heptenone <sup>29</sup> .
<i>Phyllanthus emblica</i> L.	Astringent, Refrigerant, Laxative, Diuretic <sup>3</sup>	Antioxidant, Anti-inflammatory, Anti-asthmatic <sup>9</sup>	Vitamin C, Carotene, Nicotinic acid, Riboflavine, myoinositol, Indole acetic acid, Phyllembin, tannin, Ellagic acid, Alkaloids, Phyllantidine and Phyllantine <sup>23</sup> .
<i>Wrightia tinctoria</i> (Roxb.) R. Br.	Aphrodisiac, Astringent, Tonic <sup>3</sup>	Antiasthmatic <sup>10</sup> , Antioxidant, Anti-inflammatory <sup>11</sup> .	glycoflavones-iso-orientin, phenolic acids, lupeol, stigmasterol and campesterol, Indigotin, indirubin, tryptanthrin, isatin, anthranilate, rutin Triacontanol, Wrightial, cycloartenone, cycloeucaenol, $\beta$ -amyrin, Alpha-Amyrin, and $\beta$ - sitosterol <sup>31</sup> .
<i>Vitis vinifera</i> L.	Laxative, Referigerant, Diuretic, Nutritive <sup>3</sup>	Antioxidative, Anti-inflammatory, Antimicrobial, Cardioprotective, Hepatoprotective, and Neuroprotective <sup>12</sup>	3- monoglucosides of delphinidin, cyanidin, petunidin, peonidin, malvidin, acetyl and coumaryl glycosides, biflavonoids, malic acid, tannic acid, dehydroascorbic acid, cholesterol, B-sitosterol, ergosterol, glucose, fructose, galactose, mannose, arabinose, rhamnose and amino acids like alanine, arginine and proline <sup>25</sup> .
<i>Phyllanthus amarus</i> Schumach. & Thonn.	Deobstruent, Diuretic, Astringent, Cooling <sup>3</sup>	Antiasthmatic <sup>13</sup> , Anti-inflammatory <sup>14</sup> , Antihistamine <sup>15</sup>	4- methoxy securinine, 4-methoxy- norsecurinine, nirphyllin, phyllinurin, phyllantheol, phyllanthenol, B-sitosterol, corilagin, ellagic acid, gallic acid, geranin an angiotensin converting enzyme inhibitor and the flavonoids - FG1 and FG2 (plant) <sup>23</sup> .
<i>Alpinia galangal</i> (L.) Willd.	Expectorant, Febrifuge, Stomachic <sup>3</sup>	Bronchodilator <sup>16</sup> , Expectorant <sup>17</sup>	1,8-cineol, $\alpha$ -fenchyl acetate, $\beta$ -farnesene, $\beta$ - bisabolene, $\alpha$ -bergamotene, $\beta$ -pinene, and 1'- acetoxychavicol acetate <sup>26</sup> .
<i>Cuminum cyminum</i> L.	Carminative, Stomachic, Astringent, Stimulant <sup>3</sup>	Antimicrobial, Anti-inflammatory, Spasmolytic, Bronchodilator <sup>18</sup>	daidzein, genistein, coumestrol, formononetin and biochanin A, phenolic acids, flavonoids, quinones, proanthocyanidin and tannins <sup>27</sup> .
<i>Picrorhiza</i> <i>scrophulariiflora</i> Pennell.	Antiperiodic, Cathartic, Stomachic, Anthelmintic <sup>3</sup>	Anti-inflammatory, Antiasthmatic, Immuno-modulatory <sup>19</sup>	iridoid glycosides, cucurbitacins (triterpenoids) glycosides, phenylethanoid glycosides and phenolics <sup>32</sup> .
<i>Piper longum</i> L.	Carminative, Stimulant, Alternative, Tonic, Aphrodisiac <sup>3</sup>	CNS stimulant, Cough suppressor, Immune stimulatory, Antimicrobial, Anti-inflammatory, Analgesic, Antioxidant, Anti-hyperglycaemic Hepato-protective, Immune modulatory, Antiasthmatic, Cardioprotective <sup>20</sup>	Piperine, Sesamin, Sesquiterpene hydrocarbon, Caryophyllene, a sesquiterpene alcohol, piplartine, Piperundecalidine, Sylvatin and diaeudesmin <sup>23</sup> .

## CONCLUSION

Based on various Siddha text reviews, the ingredients of Thippili Nei have bitter, pungent taste and hot potency which balances the Kapham humour. The pharmacological activities of ingredients are most found as anti-inflammatory, antioxidant, antihistamine,

antimicrobial, analgesic, bronchodilator, anti-asthmatic and expectorant activities. Therefore, the formulation could be very effective in the management of Swasakasam (Bronchial Asthma). The drug is easily available to prepare, cost effective and safer in Bronchial Asthma. Further clinical studies and statistical data analysis help in exploring this polyherbal Siddha formulation.

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