



**Review Article**

**LITERATURE REVIEW ON SIDDHA MEDICINE FOR THE MANAGEMENT OF NEERKANA MAANTHAM WITH UTTHAMANI KUDINEER- A DRUG REVIEW**

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**ABSTRACT**

Siddha medicine is an ancient and traditional system of medicine.. When the three humors (*Vatham, Pitham, Kabam*) are in proper balance then the person experiences good health; any imbalance of three humors leads to disease. Acute Nasopharyngitis defines an inflammation of the mucous membrane of the naso pharynx. It is characterized by rhinorrhea, nasal obstruction, sneezing, malaise, fever, headache, & myalgia. It may be correlated with *Neerkana maantham*, one of the 31 types of *Maantham* in children mentioned in Siddha literature *Balavagadam*. The symptoms of *Neerkana mantham* can be managed by Siddha herbal formulation *Utthamani kudineer*. The main ingredients of the *Utthamani kudineer* are *Chukku, Milagu, Thippili, Omam, Sutta Vasambu, Utthamani leaf, Velai ver, Nochi thulir, Murungai eerku, Nuna eerku*. The ingredients of this formulation possess anti-inflammatory, antiviral, anti microbial, antipyretic activities. All the ingredients of trial drug are purely herbals only. It is easily prepared, palatable, assimilates quickly and also safe for pediatric usage in the treatment of *Neerkana maantham*. Hence, this article gives an insight on the efficacy of *Utthamani kudineer* for *Neerkana maantham* (Acute Nasopharyngitis) based on review of various literatures and scientific studies. This review further focuses to improve the research on Siddha herbal medicines.

**INTRODUCTION**

Siddha system is a ancient and unique system which defines health as a prefect state of physical psychological social and spiritual well being of an individual. The Siddha science is based on the principles of 96 *Thathuvams* which consist of *Pancha boothas, Mukkunam, Five Kosam, Uyir thathukkal, 6 Adharangal* and *7 Udal thathukkal*. According to *Panchapootham* theory the universe is created up of five elements of nature. Alteration of the three vital humours *Vali, Azhal* and *Iyam* which leads to disease manifestation.<sup>[1]</sup>

In Siddha Medicine importance has been given to child care. The diseases is classified depending on the age of the children. As per Siddha literature, *Neerkana maantham* is one among the 21 types of *Maantham*. It is common in children between the ages 1 to 3 years. It is marked by cough, nasal discharge, low grade fever, diarrhea, malaise as per the text book *Balavagadam*. These symptoms maybe correlated with Acute Nasopharyngitis. According to *Mukkuttram* concept *Neerkana maantham* is considered as *Kaba* disease. In *Siddha*, *Neerkana maantham* in children presents with symptoms of Acute Nasopharyngitis, such as cough, nasal discharge, fever, diarrhea and malaise.<sup>[2]</sup>

Acute Nasopharyngitis is an inflammation of the mucous membrane of the naso pharynx.<sup>[3]</sup> This is the most common infection in childhood. Though the infection is occurring throughout the year, the peak of is during rainy and autumn season. This infection occurs throughout the year but peak of occurrence is in. In India, on an average, adults get 4 to 6 colds per year, while children get 6 to 8 of them.<sup>[4]</sup>

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The frequency of acute nasopharyngitis varies directly with the number of exposures to the affected children in nursery schools and day care centers. Susceptibility may be increased by poor nutrition and purulent complications are increased by malnutrition. The disease may spread as a droplet infection.<sup>[5]</sup> In Siddha Medicine importance has been given to child care. The disease is classified depending on the age of the children.

The *Utthamani kudineer* is a specific medicine indicated for *Neerkana mantham* in the Siddha text book *Balavagadam*<sup>[2]</sup>. *Utthamani kudineer* is used in the effective management of *Neerkana mantham* (Acute Nasopharyngitis). In the textbook of *Pothu Maruthuvam* the humoral changes of *Neerkana maantham* is quoted as "*Suramathe Kabamathagum*". From this it is clear *Iyam* humor is increased in this disease<sup>[6]</sup>

Taste such as *Kaarppu* (pungent), *Kaippu* (bitter), *Thuvarppu* (astringent) is said to balance the *Iyam* humor<sup>[7]</sup>. Most of the ingredients in *Utthamani kudineer* have *Kaarppu* (pungent), *Kaippu* (bitter) taste which helps in decreasing the *Iyam* humour<sup>[8]</sup>. It is easily prepared, palatable, assimilates quickly and also

safe for pediatric usage in the treatment of *Neerkana maantham*. Most of the ingredients have expectorant, carminative, stimulant, anti-septic, anti-infective, germicide action which helps in relieving the symptoms of *Neerkana maantham*. All the ingredients of trial drug are herbals only. If this medicine is proved to have a good impact on this condition, it will serve as a great benefit to pediatric population suffering from *Neerkana maantham*.

#### INGREDIENTS

- Chukku (Zingiber officinale)* - 5 g
- Milagu (Piper nigrum)* - 5 g
- Thippili (Piper longum)* - 5 g
- Omam (Trachyspermum roxburghianum)*-5 g
- Sutta Vasambu (Acorus calamus)* - 5 g
- Utthamani leaf (Pergularia daemia)* - 35 g
- Velai ver (Cleome viscosa)* - 35 g
- Nochi thulir (Vitex negundo)* - 35 g
- Murungai eerku (Moringa oleifera)* - 35 g
- Nuna eerku (Morinda tinctoria)* - 35 g
- Poduthalai leaf*- 35 g

**Table 1: Ingredients of Utthamani Kudineer<sup>[9]</sup>**

Drug Name	Botanical Name	English Name	Family	Parts Used
<i>Chukku</i>	<i>Zingiber officinale</i>	Dried ginger	Zingiberaceae	Root Tuber
<i>Milagu</i>	<i>Piper nigrum</i>	Black pepper	Piperaceae	Dried fruit
<i>Thippili</i>	<i>Piper longum</i>	Long pepper	Piperaceae	Dried spikes
<i>Omam</i>	<i>Trachyspermum roxburghianum</i>	The Bishops weed	Apiaceae	Seed
<i>Sutta Vasambu</i>	<i>Acorus calamus</i>	Sweet-flag	Araceae	Dried Rhizome
<i>Utthamani leaf</i>	<i>Pergularia daemia</i>	Dog's bane white low plant	Asclepidaceae	Leaf
<i>Velai ver</i>	<i>Cleome viscosa</i>	Dog mustard	Capparaceae	oot
<i>Nochi thulir</i>	<i>Vitex negundo</i>	Five leaved chaste tree	Verbenaceae	Leaf
<i>Murungai eerku</i>	<i>Moringa oleifera</i>	Drum stick tree	Moringaceae	Petioles
<i>Nuna eerku</i>	<i>Morinda tinctoria</i>	Indian Mulberry	Rubiaceae	Petioles
<i>Poduthalai leaf</i>	<i>Phyla nodiflora</i>	Purple lippie	Piperaceae	Leaf

#### Purification of Raw Drugs

*Chukku*- Soaked in limestone water for 3 hrs dried, and the outer layer is peeled off.

*Milagu*- Soaked in sore butter milk for 1 to 1 1/4 hours and then fried

*Thippili*- Soaked in lemon juice and then fried.

*Omam*-Soaked in lime stone water for 3 hrs, and dried in sunlight.

*Vasambu*- Burnt in light flame and made into a charcoal form.

*Utthamani leaf*- Washed in water.

*Velai ver*- Cleaned with pure water.

*Nochi thulir*- Washed in water.

*Poduthalai leaf*- Washed in water.

*Murungai eerku* - Cleaned in water and wiped with clean cotton cloth.

*Nuna eerku*- Cleaned in water and wiped with clean cotton cloth.<sup>[10]</sup>

### Standard Operating Procedure

Utthamani leaf, Velai ver, Nochi thulir, Poduthalai leaf, Murungai eerku, Nuna eerku were taken in equal quantity and fried in medium flame. Chukku, Milagu, Thippili, Omam, Vasambu were taken in equal ratio, purified and all the ingredients were made into coarse powder and stored in wide mouth glass container.

### Method of Preparing Kudineer

5-10gm of decoction powder was added to 40ml - 80ml of water and boiled till it was reduced to one eighth of its volume and the decoction was filtered.

**Dosage:** 5ml (BD) – 1-2 years

10ml (BD) - 2-3years

**Duration:** 7 days

**Indication:** All types of *Maantham*

Plants	Actions	Image	Chemical Constituents
<i>Chukku</i>	Stimulant, Carminative, Stomachic		Monoterpenoids (B-phellandrene, camphene, cineole, geraniol, curcumene, citral, terphineol, borneol, cineole, geranyl acetate, limonene, linalool) and sesquiterpenoids, zingiberol. <sup>[11]</sup>
<i>Milagu</i>	Stimulant, Carminative, Acrid, Antiperiodic, Rubifacient, Resolvent, Antivatha, Antidote		Piperonal (2E,4E)-N-isobutyl-2,4-decadienamide. Piperine, Piperanine, piperettine, piperylin A, piperolein B, pipericine, flavanoids, alkaloids, phenolic amides. <sup>[12]</sup>
<i>Thippili</i>	Stimulant, Carminative		Alkaloids- Cepharadione A Cepharanone B aristolactum A 11 norcepharadione B and 2 hydroxy 1 methoxy 4 H dibenzoquinone-4,5 (6H) dione, lignins, Piperine, pipartine, piperenonoline, pipericide B-sitosterol dihydrostigmasterol L-tyrosine, L- cysteine, hydrochloride, L-aspartic acid, palmitic, hexadecenoic, stearic, linoleic, oleic, linolenic high saturated acids arachidic and L-tyrosine. <sup>[13]</sup>
<i>Omam</i>	Stomachic, Antispasmodic, Carminative, Antiseptic, Stimulant, Tonic, Sialogogue		Carvacrol, Oxalic acid, Thymol, alpha Terpine, Alpha-terpinolene <sup>[13]</sup>

<i>Vasambu</i>	Stimulant, Carminative, Stomachic, Antiperiodic, Nauseant, Emetic, Disinfectant, Germicide		B-asarone (11%), Alpha-asarone, elemicine, cisioelemicine, camphene, P-cymene, calaccorene, acorone, acreonone, Acoradin, galangin 2,4,5-trimethoxybenzaldehyde, calamendiol, sitosterol, Acetic acid, enriched(E)-B-ocimene (3.28%), camphor(1.54%), calarene (1.42%) <sup>[14]</sup>
<i>Utthamani leaf</i>	Expectorent, Anthelmintic, Emetic		B-sitosterol, Putranjivadione, Oleanolic acid, Lupeol acetate, Lupeol Triterpene-3B hydroxyfriedelan. <sup>[15]</sup>
<i>Velai ver</i>	Rubefacient, Anthelmintic, Carminative, Diaphoretic.		The root consists of two glycoflavanones as naringen-4-galactoside-1 and dihydrokaemferol-4f-galactoside-2, Glycoside-7,3r-4-trihydroxyflavanone-5-0-a-L-rhamnopyranoside-3, Narigenin. <sup>[16]</sup>
<i>Nochi thulir</i>	Diuretic, Astringent, Expectorant, Alterative, Vermifuge, Refrigerant, Febrifuge		Friedelin, Vitamin-C, carotene, casticine, artemetin terpinen-4-ol betulinic acid, urosolic acid, camphrene, stearic acid, flavanone. <sup>[17]</sup>
<i>Poduthalai Leaf</i>	Demulcent, Deobstruent, Diuretic, Astringent, Expectorent, Tonic		Piperamine, Piperamide, Pipericide, Sarmentosine, Piperine, Piperonal, PiperoleineB (2E,4E)-N-isobutyl-2,4-decadienamide <sup>[18]</sup>
<i>Murungai eerku</i>	Antispasmodic, Stimulant, Expectorent, Diuretic, Tonic, Emmenagogue, Abortifacient, Acrid, Antilithic.		Polyphenol, tannins, vitamins, carotenoids, phenolic acid, flavonoids, alkaloids, saponins, B-carotene, magnesium, iron, Vitamin B <sub>1</sub> . <sup>[19]</sup>
<i>Nuna eerku</i>	Febrifuge, Deobstruent, Emmenagogue, Stimulant, Cathartic		Morindin, Morindone, Alanine, Tryptophan, Arginine, Glutamic Acid <sup>[20]</sup>

## Pharmacological Activity

### 1. *Poduthalai*

- Anti Inflammatory Activity [23]
- Anti diarrhoeal activity[24]
- Anti microbial activity [25]

### 2. *Utthamani*

- Anti bacterial activity [26]
- Anti inflammatory activity [26]
- Anti pyretic activity [27]

### 3. *Notchi*

- Anti Inflammatory activity [28]
- Anti pyretic activity [29]
- Antibacterial activity [30]
- Antieosinophilic activity [31]
- Antimicrobial Activity [32]

### 4. *Nuna*

- Anti microbial activity [33]
- Anti inflammatory activity [34]
- Anti bacterial Activity [35]

### 5. *Omam*

- Anti viral Activity [36]
- Anti bacterial Activity [37]
- Bronchodilating Activity [38]
- Anti inflammatory effect[39]
- Anti microbial Activity[40]
- Anti Diarrhoeal Activity [41]

### 6. *Thippili*

- Anti microbial activity [42]
- Anti Viral activity [43]
- Anti inflammatory activity [44]
- Anti asthmatic activity [45]

### 7. *Chukku*

- Anti pyretic activity [46]
- Anti inflammatory activity [47]
- Anti viral activity [47]
- Anti diarrheal activity [48]
- Anti bacterial activity [48]

### 8. *Milagu*

- Anti pyretic activity [49]
- Anti inflammatory activity [50]
- Immuno modulatory activity [51]
- Anti microbial activity [52]

### 9. *Vasambu*

- Anti inflammatory activity [53]
- Anti Diarrhoeal Effect [53]
- Anti pyretic Activity [54]
- Bronchodilator Activity [54]
- Antibacterial Activity [55]

### 10. *Murungai*

- Anti asthmatic activity [56]
- Anti Microbial activity [57]
- Anti diarrheal activity [58]
- Anti inflammatory activity [59]

### 11. *Velai*

- Anti inflammatory activity [60]
- Antipyretic activity [61]
- Antibacterial activity [62]
- Anti diarrheal activity [63]

## CONCLUSION

It is well known that traditional system of medicine always played an important role in meeting the global health care needs. Here the formulation *Utthamani Kudineer* which has been specified for Acute Nasopharyngitis in children has been a boon for pediatric population. All the ingredients mentioned have anti-inflammatory effects, anti-viral and anti-microbial effects. Here I conclude the formulation *Utthamani Kudineer* will be the most useful way to treat basic respiratory illness in the field of pediatrics. The above mentioned medicine can be effectively used for the management of *Neerkana mantham* (Acute Nasopharyngitis). Besides all, the ingredients of the plants have expectorant, stomachic, carminative, stimulant, anti septic, anti infective, germicide action and Tonic. *Utthamani Kudineer* can be effectively used for the management of *Neerkana Maantham*.

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