

## **A Clinical Study on Suzhi Mantham**

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### **ABSTRACT**

Siddha medicine is one of the traditional systems of medicine in India found by Siddhars. There are totally 64 types of internal and external medicines in siddha system. It also speaks about the kuzhanthai maruthuvam [Paediatric medicine]. Suzhi mantham a respiratory disorder compared to Acute Respiratory Tract Infection –Nasopharyngitis and WALRI. Suzhimantham is one of the paediatrics illness followed by mantham [gastrointestinal disorder].

This study is about a trail drug shenbaga poo kuligai a herbomineral preparation. A preclinical study including biochemical analysis, anti-microbial activity, anti-spasmodic activity, anti-histamine activity is made on a trial drug and then followed by a clinical trial to analyse the effectiveness of a drug. As a result this study reveals shenbaga poo kuligai to be a highly effective medicine for **suzhi mantham** in siddha aspect.

**KEYWORDS:** suzhi mantham, shenbagapoo kuligai, clinical trial, mantham.

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### **INTRODUCTION**

Siddha system of medicine speaks about the diseases of the children under Pillaipini Maruthuvam or Kuzhanthai maruthuvam. Siddhars says that the child may have disease from embryological stage (Karuvil Thondrum Noigal) the pediatric illness are classified into

1. Agakkarana Noigal
2. Purakkarana Noigal

Mantham is one of the Agakkarana Noi which is classified into mainly 21 types. **Suzhi Mantham** is one of the types of Mantham. **Suzhi mantham** is specifically taken for the research topic which probably correlates with Acute Respiratory Disease (Naso pharyngitis, Wheeze Associated Lower respiratory infection) in children. Mantham is a group of Gastro intestinal disturbances. **Suzhi mantham** is a respiratory disease followed by digestive disorders which may produce malnutrition and retardation of growth in children. It is mainly due to changes of food habits, unhygienic environment, low economic status, under nutrition, stress and strain.

The trial drug **shenbaga poo kuligai** are chosen on the basis of classical attributes of respective ingredients according to the specific action which may correct the vitiated humors in **Suzhi Mantham**.

### **AIM**

The main aim of the present study of **Suzhi Mantham** with clinical study is to evaluate the efficacy of trial medicine **shenbaga poo kuligai** in the treatment of **Suzhi Mantham** without any side effects and to create awareness about the siddha science among the public.

### **SYMPTOMS OF SUZHI MANTHAM**

- Intermittent fever
- Fever with wheeze
- Sleeplessness
- Cough
- Hic cough
- Rib retraction
- Loss of appetite
- Diminished color of the body

### **MODERN ASPECT REVIEW OF MODERN LITERATURE**

The definition for **Suzhi Mantham** said in Siddha Literature correlates more or less with the clinical features of **Acute Respiratory Infection (Naso pharyngitis, Wheeze associated lower respiratory infection of Children)** in modern aspect. Some patients have symptoms that resembles

## A Clinical Study on Suzhi Mantham

Nasopharyngitis in ARI and some patient have symptoms that resembles Walriin ARI.

### ACUTE RESPIRATORY INFECTION

Acute respiratory infection is a serious infection that prevents normal breathing function. It usually begins as a viral infection in the nose, trachea (windpipe), or lungs. If the infection isn't treated, it can go to the entire respiratory system.

### NASO PHARYNGITIS (Common Cold)

Common cold is a frequent illness in childhood and usually caused by infections of the upper respiratory tract with adeno

viruses, influenza, rhino viruses, para influenza or respiratory syncytial viruses.

### WALRI (Wheeze Associated Lower Respiratory Tract Infection)

Wheezing is most often due to heightened sensitivity of the respiratory tract. Infection of the lower respiratory passages may cause bronchospasm in these patients. Attacks of wheezing are always preceded by a cold or acute respiratory disease. This is most frequent between 3 and 8 years of age and become less frequent thereafter. These attacks are relieved by bronchodilators.

### MODERN CORRELATION OF SYMPTOMS OF SUZHI MANTHAM

Clinical features of suzhi mantham	Clinical Features of Acute Respiratory Infection (Naso pharyngitis,WALRI)
Fever with intermittency	Intermittent Fever
Fever with wheezing	Fever with wheezing
Cough and Sleeplessness	Cough may interfere with sleep.
Wheezing	wheezing
Hic cough	Hic Cough
Rib retraction due to rapid respiration	Retraction are common features for air way obstruction depending on the severity they may be present over the sub costal, inter costal, suprasternal area.
Loss of appetite	Breathing difficulty may interfere with feeding
Diminished colour of the body	Diminished colour of body due to Hypoxia.

### MATERIALS AND METHODS

To find the efficacy of **shenbaga poo kuligai** the following studies were carried out in the present investigation.

1. Collection, Identification and confirmation of the raw drugs for the preparation of "**Shenbaga poo kuligai**".

2. Purification and processing of raw drugs.
3. Preparation of trial drugs.
4. Bio chemical analysis of trial drugs.
5. Pharmacological studies of trial drugs.
6. Anti-microbial studies of trial drugs.
7. Clinical trials.

### Shenbagapoo Kuligai

S.No	Botanical Name/English Name	Tamil Name
1	Michelia champaca	Shenbagam
2	Saussurea lappa	Kostam
3	Plectranthus amboinicus	Vilamichaiver
4	Elettaria cardamomum	Ealam
5	Fel bovinum purifactum	Korosanai
6	Ferruginous shale	Sathra bedi
7	Glycyrrhiza glabra	Adhimadhuram
8	Vetiveria zizanioides	Vetiver
9	Artemisia nilagirica	Masipachiai

### METHOD OF PREPARATION

The siddha formulation Shenbagapoo kuligai is prepared as per SOP in Government Siddha Medical College, Palayamkottai. All the raw drugs are collected, properly identified and purified according to the purification process of each drug. They are made into powder and grinded smoothly using the juice of vetiver stem, then the mixture is made into tablet form and allowed to dry and properly stored.

### SELECTION OF DRUG AND ITS ADMINISTRATION

Selection of drug was made after the in-depth study of various Siddha Literatures. The trial drug **shenbaga poo kuligai**. The drugs prepared carefully according to siddha literature and given to all 40 patients thrice a day dosage and duration are adjusted according to the **age and weight** of the patient and **severity** of the disease.

Pharmacological analysis of trial drug was done at the Department of Pharmacology, KM College of Pharmacy, Madurai.

## A Clinical Study on Suzhi Mantham

Bio chemical analysis was done at the Department of Bio chemistry, Govt Siddha Medical College, Palayamkottai. The anti-microbial activity of the trial drug was also carried out.

### Ingredients of shenbagapoo kuligai

Ingredients of shenbagapoo kuligai	Suvai[taste]	Thanmai [character]	Pirivu [category]
Shenbagapoo	Kaippu [bitter]	Veppam [heat]	Karppu [hot]
Vilamichu ver	Kaippu [bitter]	Seetham [cold]	Innipi [sweet]
Kostam	Kaippu	Veppam	Karppu
Yaelum	Karppu	Veppam	Karppu
Korasanum	Kaippu	Veppam	Karppu
Athimathuram	Innipu	seetham	Innipu
Vetiver	Innipu	Seetham	Innipu
Masipathiri	Thuvarppu [astringent]	Veppam	Karppu

Ingredients of shenbagapoo kuligai according to the body's sadarakkini sakthi major ingredients falls on karppu[hot] pirivu and few ingredients fall on innipu [sweet]pirivu.

#### Karppu:

- Balances kabham.
- Clears the secretion of unwanted fluid due to kabham.
- Excretes the faecal matter.

#### Innipu:

- Balances pitha and vatha.
- Cures throat infection.
- Control TB infection of all age groups.

So the Shenbaga poo kuligai reduce the symptoms of Suzhi mantham.

### SELECTION OF CASES

20 inpatients, 20 outpatients. In patients will be given medicine and provide hospital diet. Outpatients provide medicine and dietary regulations.

The cases were selected from the Post graduate outpatient departments of Kuzhanthai Maruthuvam according to the symptoms and signs mentioned in the Siddha texts. Certain criteria were followed for the selection of patients to admission.

### INCLUSION CRITERIA

1. Age: 1-12years
2. Sex : Both Male and Female
3. Fever.
4. Cough with or without expectoration.
5. Rhinitis ,malaise, sore throat.
6. Difficulty in breathing due to respiratory cause only.
7. Loss of appetite.
8. Wheeze of respiratory origin.

Patients and their parents who are willing for admission and

### SELECTION OF TRIAL DRUG

Author select the **shenbaga poo kuligai** as a trial drug because of Pharmacological action of trial drug both siddha and modern aspect.

stay in inpatients department or willing to attend outpatient department patient who are willing to undergo blood, urine, and stool investigation.

Patients and their parent who are willing to sign the informed consent form before starting that he/she will stick to the treatment.

### EXCLUSION CRITERIA

- Age above 12 years and Below 1year
- Cough with haemoptysis
- Wheeze other than respiratory origin
- Dyspnoea associated with cyanosis and clubbing
- Abdominal distension any other illness
- Sudden reduce of weight.

### WITHDRAWAL CRITERIA

- Patient turned unwilling to continue in the course of clinical trial.
- Poor response of the drug
- Development of adverse reactions during the drug trial.

### ASSESSMENT AND INVESTIGATIONS

- Clinical assessment
- Laboratory Investigations.
- Siddha assessment.

### CLINICAL ASSESSMENT

A case sheet prepared on the basis of siddha and modern methodology to diagnosis the disease and individual case sheet maintain for each patient.

### SIDDHA DIAGNOSTIC METHOD

- Poriyalarithal
- Pulanalarithal
- Vinathal

## A Clinical Study on Suzhi Mantham

- Envagai thervu
- Mukutram
- Ezhu udarkattukal
- Thinai
- Paruvakalanganal

### LABORATORY INVESTIGATIONS

#### 1. Routine Investigations

##### Blood

- Total WBC count
- Differential count of WBC
- Erythrocyte Sedimentation rate (ESR)
- Hb%

##### Urine

- Albumin
- Sugar
- Deposits.

#### Specific Investigation Microscopic Examination of Stools

##### Motion

- Ova
- Cyst
- Occult blood

#### Special Investigation

- Mantoux test
- Sputum AFB

#### Radiological Investigation

- Chest X-ray PA view

### CLINICAL TRIALS

#### 1. Distribution of patients according to Paruva Kaalam:

Table shows the distribution of patients according to Paruvakaalam

S.No.	Paruva Kaalam	Month	No. of cases (Out of 40cases)	Percentage%
1.	Kaar Kaalam	Aavani and purattasi (Aug to Sep)	-	-
2.	Koothir Kaalam	Iyppasi and Karthigai (Oct to Nov)	-	-
3.	Munpani Kaalam	Markazhi and Thai (Dec to Jan )	6	15
4.	Pinpani Kaalam	Maasi and Panguni (Feb to Mar)	25	62.5
5.	Elavenil Kaalam	Chithirai and Vaigasi (April to May)	9	22.5
6.	Muthuvenil Kaalam	Aani and Aadi (June to July)	-	-

**Inference:** This table shows that more prevalence of the disease under Pinpani kalam

#### 2. Distribution of patients according to age

Table shows the distribution of the patients according to age.

S.No.	Age and Paruvam	No. of cases out of 40	Percentage%
1.	0-1 year [Kappu paruvam, Senkeerai Paruvam]	-	-
2.	1-3 years [varugai paruvam, Thaalaattu paruvam, Sappani paruvam, mutha paruvam]	12	30
3.	4-6 years [ Ambuli paruvam, Chitril Paruvam , Siruparai Paruvam, Siruther paruvam]	18	45
4.	7 to 10 years [Pethumbai paruvam, chiru paruvam ]	8	20
5.	11 to12 years[Mangai (female),vaaliba paruvam(male)]	2	5

**Inference:** Therefore the above table indicate that children under the age group 4-6 (45%) are mostly affected.

### Siddha Assessment

#### • Envagai thervu

1. Naadi
2. Sparism
3. Naa
4. Niram
5. Mozhi
6. Vizhi
7. Malam
8. Moothiram – Neerkuri, Neikuri.

### CASE PROFORMA

The signs and symptoms of Suzhi Mantham, history of present and past illness, personal history, nutritional history, family history, birth history, immunization history, laboratory investigations and managements were systematically recorded in a proforma for analysis.

### OBSERVATION AND RESULTS

Results were observed according to the following criteria.

- Biochemical analysis.
- Pharmacological studies.
- Antimicrobial studies.
- Clinical trial.
- Paruva kalam
- Sex
- Age
- Religion

## A Clinical Study on Suzhi Mantham

### 3. Distribution according to the sex

Table shows the distribution of patients according to sex.

S.No.	Sex	No.of cases (Out of 40)	Percentage(%)
1.	Male	20	50
2.	Female	20	50

Inference: Among 40 cases of study 20 were Male and 20 were Female

### 4. Distribution according to the religion

Table shows the distribution of patients according to the religion

S.No	Religion	No. of cases (Out of 40)	Percentage(%)
1.	Hindu	30	75
2.	Christian	8	20
3.	Muslim	2	5

Inference: Based on religion 30 patients were Hindus and 8 patients were Christians, 2 patients were muslim among 40 patients.

### 5. Distribution according to Thina

Table shows the distribution of patients according to Thina

S. No.	Thina	No. of Cases (Out of 40)	Percentage (%)
1.	Kurinji (Hill)	1	2.5
2.	Mullai (Forest)	-	-
3.	Marutham (Fertile)	36	90
4.	Neithal (Coastal)	3	7.5
5.	Palai (Desert)	-	-

Inference: Regarding the distribution of patients on the basis of Thina, Since Tirunelveli town and surrounding villages belong to Marutham. Patients out of 40, 36 patients belong to Marutham and 3 patients belong to Neithal which is a nearby district (Tuticorin District) and 1 patient from Kurinji.

### 6. Distribution according to the Mukutra Kaalam

When Mukutra Kaalam is considered, all the inpatients taken for the present study were children and so they belonged to Vatha kaalam.

### 7. Distribution of patients according to the socio economic status

Table shows the distribution according to their socio economic status.

S. No	Socio economic status	No. of cases out of 40	Percentage
1.	Poor	30	75
2.	Middle Class	5	12.5
3.	Rich	5	12.5

Inference: When the socio economic status of the patients were analysed, it is found 30 patients were from poor families, 5 patients were from middle class families, and 5 patient were from rich family.

### 8. Distribution according to the food habits

Table shows the distribution according to the food habits.

S. No.	Food Habits	No. of cases (out of 40)	Percentage
1.	Vegetarian	8	20
2.	Mixed	32	80

Inference: As far as present diet habits are concerned, 40 patients are vegetarian and 32 patients are mixed diet.

## A Clinical Study on Suzhi Mantham

### 9. Distribution according to the clinical presentations:

Table shows the distribution according to the clinical presentations

S.No.	Signs and symptoms	No.of cases(Out of 40)	Percentage (%)
1.	Fever	30	75
2.	Wheezing	30	75
3.	Cough with or without expectoration	36	90
4.	Loss of appetite	40	100
5.	Difficulty in breathing	10	25

**Inference:** Major clinical symptoms reported are loss of appetite, fever, cough with or without expectoration and wheezing. Most of the clinical sign were relieved after treatment.

### 9. Distribution according to mukkutra nilai:

Table shows the distribution according to mukkutra nilai.

S.No.	Type of Vaatham	No.of cases(Out of 40)	Percentage (%)
1.	Pranan	40	100
2.	Abanan	25	62
3.	Viyanan	30	75
4.	Uthanan	36	90
5.	Samanan	40	100
6.	Nagan	36	90
7.	Koorman	-	-
8.	Kirukaran	40	100
9.	Devathathan	40	100
10.	Dhananjeyan	-	-

**Inference:** Out of 40 patients Pranan, Samanan, Kirukaran, Devathathan were affected in all patients.

### 10. Distribution according to pitham:

Table shows derangement of Piththam

S.No.	Types of Piththam	No.of cases (Out of 40)	Percentage
1.	Anal Pitham	40	100
2.	Ranjagam	5	12.5
3.	Saathagam	40	100
4.	Prasagam	-	-
5.	Aalosagam	-	-

**Inference:** In Piththam Anal piththam and Sathagam were deranged in 100% of cases.

### 11. Distribution according to kabham:

Table shows Derangement of Kabham

S.No.	Type of Kabham	No.of cases (out of 40)	Percentage
1.	Avalambagam	40	100
2.	Kilethagam	40	100
3.	Pothagam	30	75
4.	Tharpagam	-	-
5.	Santhigam	-	-

**Inference:** In Kabham Kilethagam was deranged in all 40 patients and Pothagam was deranged in 36 patients.

## A Clinical Study on Suzhi Mantham

### 13. Distribution according to Ezhu Udai Kattugal (Udal Thathukkal)

Table shows the distribution according to the Udai Kattugal

S.No.	Udal Kattugal	No of cases (out of 40)	Percentage (%)
1.	Saaram	40	100
2.	Senneer	40	100
3.	Oon	-	-
4.	Kozhuppu	-	-
5.	Enbu	-	-
6.	Moolai	-	-
7.	Sukkilam	-	-

**Inference:** Based on Udai Kattugal all patients (100%) had affected saaram and senneer.

### 14. Distribution according to Envagai Thervugal

In Envagai Thervugal, derangement of Nadi, changes in Sparisam, dryness of Naa, dullness of body and abnormality in Malam of the patients were observed.

Table shows the Envagai Thervugal

S.No.	Envagai Thervugal	No of cases(out of 40)	Percentage (%)
1.	Naadi Vaatha naadi Piththa Vaatham naadi	13 27	32.5 67.5
2.	Sparisam	30	75
3.	Naa	10	25
4.	Niram	-	-
5.	Mozhi	8	20
6.	Vizhi	4	10
7.	Malam	25	62
8.	Moothiram	14	35

**Inference:** According to Envagai thervugal Sparisam was affected in all 30 patients

### 15. Distribution according to Neikuri:

Table shows Neikuri examination of Urine of 40 patients.

S. No.	Character of Urine	Neikuri Inference	No.of cases (out of 40)	Percentage(%)
1.	Spreading like snake	Vaatha Neer	18	45
2.	Spreading like ring	Piththa Neer	5	12.5
3.	Spreading like pearl	Kabha Neer	17	42.5

**Inference:** Vaatha Neer was observed in 18 patients, Piththa neer was observed in 5 patients, and Kabha neer was observed in 17 patients.

## A Clinical Study on Suzhi Mantham

### 16. Efficacy of drug:

From all the above observational and results it is clear that in 34 patients, **Shenbaga pookuligai** have produced good effect in treating **Suzhi Mantham** to complete cure.

Table Shows the Clinical results of Shenbaga Poo Kuligai

S.No.	Clinical result of Shenbaga Poo Kuligai	No.of cases (Out of 40)	Percentage (%)
1.	Good	34	85
2.	Fair / moderate	6	15
3.	Poor	-	-

**Inference: 34 patients showed good results and 6 cases showed moderate response.**

### CLINICAL TRAIL

According to the signs and symptoms mentioned in siddha literature 40 cases were selected for treatment. Patients were treated both as inpatients and outpatients in Post Graduate Branch IV Kuzhanthai Maruthuvam Department, Govt. Siddha Medical College, Palayamkottai. A case sheet (based on siddha and modern aspect) was prepared and maintained individually for each patient.

For diagnostic purposes the parameters used in siddha system were Poriyal arithal, Pulanal arithal, Vinathal, Uyir thathukkal, Udal Kattukal, Envagai Thervu, Neerkuri, Neikuri etc. Regarding modern parameters, laboratory investigations were used for diagnostic purpose.

### Paruva Kaalam:

Of the 40 cases 25 were seen to develop the disease during Pinpanikalam, 9 were seen to develop the disease in Elavenirkalam, 6 cases were seen to develop the disease in Munpanikalam.

### Age Distribution:

Among the 40 cases, 30% of the cases belong to the age group of 1-3 years, 45% were in the age group of 4-6 years, 20% belong to 7-10 years 5% belong to 11-12 years.

### Sex Distribution:

Out of 40 cases, 20 cases were male and 20 were female.

### Thinai:

36 cases belong to Marutha nilam, 3 cases belong to Neithal nilam and 1 case belongs to Kurinji Nilam.

Even though as per siddha literature Marutha Nilam is said to be free from disease, here the patients developed diseases due to alteration in their food habits and their activities.

### Socio economic status:

The study of 40 cases majority of the cases belongs to the poor family, for whom dwelling places are congested and they have reported inadequate intake of healthy, hygienic diet.

### Diet:

8 cases were vegetarian and 32 cases were mixed diet habit.

### Uyir Thathukkal:

Uyirthathukkal include 3 vital humors namely Vatham, Piththam and Kabham. The derangement in any of the above three causes disease.

### Derangement of vatham

In vatham Pranana, Samanam and Kirugaran, Devathathan, were affected in all 40 cases, Uthanam, Nagan was affected in 36 cases, viyanam was affected in 30 cases and Abanam was affected in 25 cases. So there is cough with or without expectoration, wheezing, poor appetite, tiredness, constipation was there. All the above symptoms were present in the cases studied.

### Derangement of Pitham:

In Piththam, analpiththam, Sathagapiththam were affected in all cases. The affected Analpiththam produces loss of appetite or poor appetite. 8 patients were affected by Rangapiththam.

### Derangement of Kabham:

In Kabham, Avalambagam, Kilethagam was affected in all cases, Kilethagam and Pothagam was affected in 30 cases.

### Udal Kattugal:

Saaram and Senneer were affected in all the cases which show loss of appetite.

### Ennvagai Thervugal:

Patients Naadi found in 27 cases as Pitha vatham and 13 cases as Vatha naadi. Sparisam also affected in 30 cases as rise of body temperature. Naa was affected in 10 cases as dryness of tongue in some dehydrated. Mozhi affected in 8 cases, vizhi affected in 4 cases Malam affected as constipation in all 25 cases. Moothiram affected as voiding of urine as scanty in 14 cases.

### Neikuri

18 cases had Vatha neer, 5 cases had Piththa neer and 17 cases had Kabha neer.



## A Clinical Study on Suzhi Mantham

### Clinical manifestations:

The signs and symptoms of Suzhi Mantham were collected from the patients by Poriyal therthal, Pulanalarithal and Vinathal as per Siddha system.

The Suzhi Mantham patients had Fever in 75% of cases, wheezing in 75% of cases, cough with or without expectoration in 90% of cases loss of appetite in 100% of cases, Difficulty in breathing 25% and body pain in 62.5% of cases.

The clinical improvement was accurately noted and further follow up was made in outpatient department.

### RESULT

The clinical effort of **Shenbaga poo kuligai** on suzhi mantham was discussed here. Among the 40 cases 85% show good response and 15% showed fair response.

Thus clinically there was a satisfactory improvement in all cases and no toxic effect were noted.

### CONCLUSION

The Global burden of respiratory infection in children, increasing prevalence and its impact in reducing the quality of life in children has prompted the author to choose the efficient drug which is believed to influence the immune system.

### Biochemical analysis:

The Biochemical analysis of shenbaga poo kuligai prove that it has calcium, sulphate, chloride, starch, ferrous iron, phosphate, tannic acid, unsaturated compounds, and amino acids.

### Pharmacological analysis:

In the pharmacological studies the trial drug shenbaga poo kuligai have antispasmodic, antipyretic, anti-histaminic action.

### Antimicrobial activity:

The results in the present Anti-microbial study prove that the Shenbaga poo kuligai has significant antimicrobial activities against Escherichia coli and klebsiella pneumoniae. The treatment of Shenbaga poo kuligai for **Suzhi mantham showed good response.**

No adverse effects were noticed during the course of treatment. The trial medicine ingredients harmless to children.

So it is concluded that the drug **Shenbaga poo kuligai** has shown very good in view of efficacy, safely in the treatment of Suzhi Mantham. along with modalities of pranayama, yogasanas and patients education will benefit the society.

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