

# **A STUDY ON SIRANGU**

*Dissertation submitted to*

**THE TAMILNADU DR. M.G.R MEDICAL UNIVERSITY  
Chennai-32**

*For the partial fulfillment of the requirements to the Degree of*

**DOCTOR OF MEDICINE (SIDDHA)  
(Branch IV - Kuzhanthai Maruthuvam)**



**DEPARTMENT OF KUZHANTHAI MARUTHUVAM  
GOVERNMENT SIDDHA MEDICAL COLLEGE  
PALAYAMKOTTAI – 627 002.**

**MARCH - 2009**

## **ACKNOWLEDGEMENT**

First of all I wish to register my deep sense of gratitude to god the Almighty and my parents for their abundant blessings and immeasurable grace which enabled me to complete the dissertation work successfully.

I gratefully record my debt to the **Vice chancellor**, The TamilNadu Dr. M.G.R. Medical University, Chennai and to the **Special Commissioner**, Commissionerate of Indian System of Medicine and Homeopathy, and to the **Joint Director**, Indian System of Medicine and Homeopathy, Chennai.

I owe my debt of gratitude to **Dr. R.Devarajan M.D(S)**., The Principal and **Dr. S.Soundarajan M.D(S)**., The Vice Principal for permitting me to do this dissertation work.

I place on record my deep sense of thankfulness to **Dr. N.Chandra Mohan Doss M.D(S)**., Head of the Department of Kuzhanthai Maruthuvam, Govt. Siddha Medical College, Palayamkottai for having imparted necessary guidelines and scholarly comments which helped me in the successful completion of this dissertation.

With a deep sense of gratitude I thank **Dr. R.Patturayan M.D(S)**., Former HOD, Department of Kuzhanthai Maruthuvam, Govt. Siddha Medical College, Palayamkottai for his guidance

I am very happy to express my gratitude to **Dr. D. K. Soundararajan M.D(S).**, Lecturer, PG Department of Kuzhanthai Maruthuvam, Govt. Siddha Medical College, Palayamkottai for the valuable suggestions.

It gives me great pleasure to thank **Dr. K.Shyamala M.D(S).**, Assistant Lecturer, P.G. Department of Kuzhanthai Maruthuvam, Govt. Siddha Medical College, Palayamkottai for her auspicious support and great help in this dissertation.

I express my special and sincere thanks to **Dr. Kathir Subramaniam M.D. D.CH.**, HOD and **Dr. Mathivanan M.D., D.C.H.**, Assistant Professor, Department of Pediatrics, Tirunelveli Medical College, Palayamkottai for their kind opinions in the dissertation work.

My cordial thanks to **Mr. M.Kalaivannan M.Sc.**, HOD and all the technicians of the Department of Pharmacology for having helped me in several ways in this dissertation study.

My sincere thanks goes to Prof. **Mrs. N.Nagaprema M.Sc.,M.Phil.**, HOD and the technical experts of Department of Biochemistry, Govt. Siddha Medical College, Palayamkottai for their help in Biochemical analysis.

My thanks goes to **Dr. S. Bagirathi M.B.B.S.**, Department of Clinical pathology, Govt Siddha Medical College, Palayamkottai for her guidance in doing laboratory studies.

My thanks to **Dr.V.S. Padma M.B.B.S.**, DMRD, and other staffs, Department of Radiology, Govt Siddha Medical College, Palayamkottai for her suggestions.

I express my thanks to our Librarian **Mrs. Poonkodi M.A, B.Lib.Sc.**, and all library staffs, Govt. Siddha Medical College, Palayamkottai for their help in literary collections.

I express my special thanks to **Dr.R.Napoleon B.Sc.,M.D.**, Malar Micro Diagnostic centre,Palayamkottai, for his help in doing Anti Microbial Studies.

My special thanks to **my friends** and **colleagues** who gave me the constant support and kind co-operation during my study.

My thanks goes to **Broad Band Net cafe (BBNC)** staffs for their kind co-operation to bring out this work in an excellent format.

## INTRODUCTION

Life is man's most valuable possession and next in order of value is health. Health is the chief basis for the development of the ethical, economical, artistic and spiritual sides of man. The wealth of a country depends not merely on its natural resources but also on the vitality of its people.

The science of medicine is of fundamental importance to man's well being and his survival which might have originated with man and developed gradually as civilization advanced.

From the very ancient days, there were many systems of medicines to cure the diseases. Siddha system of medicine is one among the ancient medical science which is propounded and practiced by eminent spiritual scientists called "Siddhars". They were the man of highly cultured intellectual and spiritual combined with divine aspects.

Medicine is one which prevents physical illness, maintains perfect mental health, saves one individual from further illness and prolongs the longevity. This is quoted by great Siddhar Thirumoolar as,

“மறுப்பதுடல் நோய் மருந்தெணலாகும்  
மறுப்பதுள நோய் மருந்தென்சாலும்  
மறுப்பதினி நோய் வாராதிருக்க  
மறுப்பது சாவையு மருந்தெனலாமே”

The basic emphasis of siddha system is to prevent diseases by careful dieting and proper relaxation of the mind to achieve a totality of health that assures not only longevity but also immortality. It is explained by Thirumoolar in Thirumanthiram as,

“உடம்பர் அழியில் உயிரர் அழிவர்  
திடம்பட மெய்ஞானம் சேரவும் மட்டர்  
உடம்பை வளர்க்கும் உபாயம் அறிந்தே  
உடம்பை வளர்த்தேன் உயிர்வளர்த்தேனே”

Balavagadam is that branch of medical science of Siddhars that deals with the disease of children their essential nature, especially on the functional changes together with planetary influence, morbid diathesis etc and the treatment. In Balavagadam diseases are classified according to the stage of development.

Skin diseases are a common occurrence which amounts for a great deal of misery, suffering, economic loss and mental stress. SIRANGU is one of the serious contagious disease encountered in Pediatric practice in densely populated countries like India. This work attempts to find an effective and economic drug therapy for the disease **Sirangu** through clinical and pharmacological trials.

## **AIM AND OBJECTIVES**

Though diseases of various systems affect the human race, the most incapacitating disease of all is the disease of the skin, which is considered to be largest organ of the body.

Scabies is worldwide health problem. Prevalence is more in developing countries. It is known that overcrowding, poor socio economic status, illiteracy, lack of personal hygiene in the rural population leads to its higher incidence.

The Prime aim of the present study is to alleviate the sufferings of sirangu patients by administering one of the efficacious medicine said in the siddha literature. The study would involve trial and observation of the action of CHIRUTHETKODUKILAI CHOORANAM (internal Medicine) and SIRANGU ENNAI(External Medicine) for this disease.

### **In brief the objectives were,**

- To collect literary evidences in both siddha and modern aspects.
- To establish a correlation with the modern concepts of the disease Sirangu Noi with Scabies regarding etiology, classification, symptoms and the diagnostic methods.
- To obtain an idea of the incidence of Sirangu with reference to age, sex, socio-economic status, habits, family history and seasonal changes.

- To do complete study of Sirangu under the topics of Mukkutram, Udalkattukal, Envagai thervu etc. in order to evaluate the pathology.
- To utilize the possible diagnostic tools in the confirmation of the diagnosis and prognosis of the disease.
- To bring out the efficacy of trial drugs through pharmacological analysis.
- To study the bio-chemical analysis and establish phytochemical standards of the drugs
- To study the anti- microbial activity of the trial medicine and establish its efficacy
- To highlight the influence of the factors like nature of land, seasonal changes, personal hygiene and diet over the severity of the diseases.
- To establish awareness among the patients through health education and manage the disease by altering the personal hygienic measures.



# REVIEW OF LITERATURE

## SIDDHA ASPECTS

### Synonyms (வேறு பெயர்)

Sori, Pun

### Definition (இயல்):

முதலில் அரிப்புண்டாகி, அவ்விடத்தில் வேர்க்குரு போல் ஒன்று அல்லது பல குருக்கள் தோன்றி அவை சிறிய நீர்க் கொப்புளங்களாக மாறுவதும் சில சமயம் சீழ்கொப்புளங்களாக மாறுவதுமான இயல்புடையது.

Sirangu is a disease characterized by itching followed by one or more papules, which then change into vesicles and sometimes pustules and are commonly seen in interdigital areas of fingers, wrist, folds of axilla, penis and buttocks etc.

### Aetiology (நோய் வரும் வழி)

According to Siddha maruthuvam sirappu, there are two kinds of thoughts.

1. Due to excessive heat of the body the blood is altered to produce sirangu.
2. A type of kirumi causes sirangu.

Due to excess heat of the body, a type of kirumi penetrates the muscle to produce sirangu and also the excessive heat impures the blood results in pruritis and itching. It is well quoted in the text Guru naadi as.

“உட்டிணமே அதிகம் வருமிந்திரிய போகத்தா  
லூனுருகியத்திலே வேவு கொண்டு  
நட்டணமாய் வெந்ததொரு மச்சை தன்னில்  
நாட்டமிட்ட கிருமியதுயணுகும் போது  
மட்டுடனே கிருமியெல்லாம் பறந்தங்கேறி  
வகையுடனே மாங்கிஷத்தைத் துளைத்துமேவும்  
திட்டமுடன் விடகரப்பான் பறந்துமேவே  
தினவுடனே பரபரத்துச் சொறியுண்டாமே”

“வயல் தனிலே பூநாகமண்ணைத்தானே  
வருந்தியது புத்துப்போல வந்தையாகும்  
பயல்மொழி யீந்தேகத்தில் கிருமிதானே  
பறந்துருகி குட்டம் போல் புள்ளி காணும்  
மயல துவங்கிருமியுந்தான் நடந்து புகில்  
மேனியது சரசரென வெடித்துப் புண்ணாம்  
கயல் பெருகும்குழல் மடவீர் சொல்லக் கேளீர்  
கரகரத்துச் சொறி பெருகுங் கரப்பான் தானே:”

- குருநாடி நூல்

It is stated that in Siddha maruthuam noi nadal, some types of kirumi are responsible for skin disease like kuttam, sori, sirangu, padai, karappan, hair falling and fever.

“கிருமியால் வந்ததோடம் பெருகவுண்டு  
கேட்கிலதின் பிரிவதனைக் கிரமமாக  
பொருமிவரும் வாயுவெல்லாக் கிருமியாலே  
புழுக்கடிபோல் காணுமது கிருமியாலே.

செருமிவரும் பவுத்திரங்கள் கிருமியாலே

தேகமதில் சொரிக் குட்டங் கிருமியாலே

துருமிவருஞ் சுரோணிதங் கிருமியாலே

சூட்சமுடன் கிரிசைப்பால் தொழில் செய்வீரே”

- குருநாடி நூல்

### 3. Dietary habits:

Intake of certain foods will produce sirangu. Some of them are,

#### **Kambu:**

Excessive use of kambu will produce sirangu. It is well noted from the verse,

“கம்பு குளிர்ச்சியெனக் கரசினியிற் சொல்லுவார்களாண்  
பம்பு சொறி சிரங்கை பாலிக்கும் - வெம்பும்  
உடலின் கொதிப்பகற்றும் உட்பலத்தையுடன் டாக்கும்  
அடலயிற்கண் மாதே யறி”

#### **Cholam:**

Excessive use of cholam will produce sirangu. The verse is follows,

“சோளமெனப் பேர்படைத்த சோறுகளி னாலுடலில்  
மீளச் சொறிசிரங்கு விர்த்தியாகும் - நாளூங்  
கரப்பனுமுண்டாகுங் கனமருந்தும் பாழாம்  
பரப்பரணைய கண்மாதே பர்”

#### **Varagu:**

Using varagu in excess will produce sirangu. It is mentioned in the verse as,

“எரிகபத் தோடே பலநோ யெய்தும் வறட்சி  
சொறிசிரங்கு பித்தந் தொடரும் - நிறையுங்  
கரகமெனப் பூரித்த கச்சுமுலை மாதே  
வரக ரிசிச் சோற்றால் வழத்து”

### **Kathiri:**

Excessive use of this will produce sirangu. It is mentioned as,

“கத்தரிக்காய் பித்தந் கணன்றகபந் தீர்த்துவிடும்  
தொத்து சொறிசிரங்கைத் தூண்டி விடும்”

4. Changes in the external environment like bathing in certain waterbodies produce sirangu. In text, Noi illa Neri, it is stated that Allikulathu Neer Produce sirangu.

“அல்லிக் குளத்தினீ ரக்கக் கினிமஞ் தப்பேதி  
மெல்லச் சொறிசிரங்கு வெப்புடனே - தொல்லுலகில்  
தாலுதனி லட்சரமும் தாதுநட்ட முங்கொடுக்குங்  
கோல மலர்த்திரு வே கூறு.”

### **Occurrence of the periods:**

In Balavadagam, age of the children was divided into various paruvams. They are

<b>Duration</b>	<b>Name of the Paruvam</b>
0 – 6 Months	- Kaappu Paruvam
6 – 12 Months	- Senkeerai Paruvam
1 – 1½ Years	- Thaalattu Paruvam
1½ - 2 Years	- Sappani Paruvam

2 – 2½ Years	-	Mutha Paruvam
2½ - 3 Years	-	Varugai Paruvam
3 – 3½ Years	-	Ambuli Paruvam
3½ - 4 Years	-	Sitril Paruvam
4 – 4½ Years	-	Siruparai Paruvam
4½ - 5 Years	-	Siruther Viduthal Paruvam

<b>For Female Child</b>		<b>Name of the Paruvam</b>
3½ - 4 Years	-	Ammanai Paruvam
4 – 4½ Years	-	Neeraduthal Paruvam
4½ - 5 Years	-	Oonjal Paruvam
1 – 7 Years	-	Paethai Paruvam
8 – 11 Years	-	Pethumbai Paruvam

<b>For Male Child</b>		<b>Name of the Paruvam</b>
1 – 5 Years	-	Pillai Paruvam
5 – 11 Years	-	Siru Paruvam

In addition, diseases are also divided into Karuvil thondrum noigal, Pal unnum paruvathil thondrum noigal, Palum sorum unnum paruvathil thondrum noigal and Soru unnum paruvathil thondrum noigal. Sirangu Noi occurs in all the above Paruvams.

**Classification:**

In siddha maruthuvam sirappu, there are two types of classification. The two types are,

**1. Siru Sirangu:**

The lesions are small and the burrows also appear small

**2. Perum sirangu:**

The lesions are larger and the burrows also appear large which may be secondarily infected. This is also called as Yaanai Sirangu.

Another classification shows four types. The four types are,

**1. Adar Sirangu:**

Sirangu occurs densely in clusters.

**2. Ottu sirangu:**

If the sirangu develops by close physical contact, it is called Ottu sirangu.

**3. Kilaitha Sirangu:**

When the lesion develops adjacent to the primary one, it is called Kilaitha sirangu.

**4. Thutta Sirangu:**

It is found in patients with Meha noi and it is very difficult to treat.

Guru Naadi Saathiram - 235 classified sirangu into four types and the names of these types are not mentioned in the text, the verse for this is as follows,

“புண்ணினிற் சன்னியைந்து பொருந்திய வாழ் நீரைந்து  
கண்ணிய நரசிரோக நாலொடு மூன்று மென்னத்  
திண்ணிய வாதமெட்டுஞ் சிரங்கண நலதாகும்  
பண்ணிய ரோகஞ் சூழ்ந்து பாரிற்கும் வறறதாமே”.

- குருநாடி சாத்திரம் - 235

Sirangu is classified into 6 types in T.V. Sambasivam pillai dictionary. They are,

1. Aaanai Sirangu – Itching with red scaly patches
2. Sori Sirangu – Itching with scales
3. Namuttu Sirangu – Itching with pustules
4. Thotar Sirangu – Confluent itching
5. Perum Sirangu – Itching with wide vesiculation
6. Parangi Sirangu – Syphilitic itch

Pulipani Vaidhyam – 500 classified sirangu into two types. They are,

1. Siru Sirangu
2. Perum Sirangu

The verse for this as follows,

“நேராக பத்தியந்தா னிச்சா பத்தியம்  
நிச்சயமாயைந்து நாளேழு நாளாம்  
சீராக தலைமுழுகி வருவாயாகில்  
சிறுசிரங்கும் பெருஞ்சிரங்கும் நிலலாதோடும்  
பேராக பேகருட கடாட்சத்தாலே  
பேசினேன் புலிப்பாணி பேசினேனே.”

- புலிப்பாணி வைத்தியம் - 500

#### **Sites of Occurrence (காணப்படும் இடங்கள்):**

According to Pararasa seharam, the commonly affected areas are kai, viral idukkugal, puttam, arai idukkugal, marmasthanam, kongai etc.

#### **Clinical Features (குறிகுணங்கள்)**

Pararasa seharam (Bala Roga Nithanam) describes the clinical features of sirangu as follows.

1. The lesions occur over the webs of fingers, wrist, inguinal region, buttocks etc
2. There is intense itching.
3. The lesions like vesicles filled with fluid.
4. The lesions may also occur over the waist, breast and near the eyes.

The verse for this is as follows,



“சிறுவனுறுங் கைத்தலத்திற் புறங்கை தன்னிற்  
சேறுமறை முதலான மறுதானத்தில்  
விறுவிறெனச் சொறிந்து தண்ணீர் கட்டிப் பின்பு  
மிகுந்ததின வுண்டாக்கும் விளிம்பு கிற்றாய்  
இறுகுமிடை சிறுகுறாதல் வரை நேர் கொங்கை  
யிருவிழியும் பயினமலை யிகனு நல்லாய்  
கருவுதல் சேருஞ் சிரங்கின் குணமிதென்று  
கட்டுரைப்பார் மறையுணர்ந்த காட்சியோரே”

- பரராச சேகரம் (பாலரோக நிதானம்)

In the text siddha maruthavam sirappu, the clinical features of sirangu are mentioned as,

1. Itching
2. Vesicles
3. Pus may be formed
4. Lesions commonly occur over the webs of fingers and toes, wrist, folds of axillae, penis, buttocks and inner part and thigh.

### **Places (திணை)**

It is important to know the geographical variation in relation to the disease manifestations, their preventions and curative measures for the ailments. In our system the thinai denotes land, and in each region some ailments are endemic based on the climate. The fertile and infertile land

condition can be compared with the well being and the occurrence of the disease in a specific area.

It is of five types,

**Kurinci:**

Hilly regions – Inhabitants of this thinai are prone to fever affecting the blood, enlargement of liver and spleen and increase of kabha.

**Mullai:**

Plain forests and surroundings – shrubs are quiet common in this land. Inhabitants of this thinai are prone to pitha and vatha diseases. Liver enlargement is also common.

**Marutham:**

This is an ideal place for living. All the three dhosas are in proper proportion in this thinai.

Majority of the patients covered in this study were from Marutha nilam.

This deviates from our concept. This may be due to environmental pollution, change of life style, and usage of pesticides etc.

**Neithal:**

The place in and around seashore is called as Neithal. Vatha diseases are quiet common in this land. Inhabitants are also prone to excessive flatulence, enlargement of liver, obesity etc.

**Palai:**

This is not a suitable place for living. Inhabitants of this thinai are prone to vatha, pitha and kabha diseases.

**Seasons (காலங்கள்)**

In accordance with the position of sun, the year is divided into a cycle of six seasons.

1. Kaar Kaalam - Aavani and Puratasi
2. Koothir Kaalam - Iyppasi and Karthigai
3. Munpani Kaalam - Margazhi and Thai
4. Pinpani kaalam - Masi and Panguni
5. Elavenil Kaalam - Chitirai and Vaigasi
6. Muthuvenil Kaalam - Aani and Aadi

According to climatic condition, normally changes will occur in the land, water, plants and human beings in every season.

With reference to the seasonal changes humours vatham, pitham and kabam also shows variations. This will modify the physiology and make humans susceptible to certain disease.

<b>Mukutram</b>	<b>Thannilai Valarchi</b>	<b>Vaetru nilai Valarchi</b>	<b>Thannilai adaithal</b>
Vatham	Muthuvenil kaalam	Kaar kaalam	Koothir kaalam
Pitham	Kaar kaalam	Koothir kaalam	Munpani kaalam
Kabam	Pinpani kaalam	Elavenil kaalam	Muthuvenil kaalam

Thus with the help of seasons we can study the periods at which the disease sirangu will aggravate.

In case of sirangu, the prevalence of the disease is in Muthuvenil kaalam due to elevation of vatha by the coding of Theraiyar,

“வாதமலரது மேனி கெடரது”.

### **Panchabootha theory:**

The universe is made up of five fundamental principles called **panchaboothams**.

They are,

- Prithivi
- Appu
- Theyu
- Vayu
- Aagayam

### **Prithivi:**

Prithivi is represented as the primordial element in the formation of the bone, skin, muscles, hair, blood vessels etc.

### **Appu:**

The appu is represented as the blood, cholesterol, urine, seminal fluid and marrow.

### **Theyu:**

Theyu is represented as the excessive mental activities, fear, proudness, laziness and sleep.

**Vayu:**

The vayu is represented as walking, general posture, day to day activities, limb movements and body languages.

**Aagayam:**

Aagayam is represented as excessive feeling of one's behaviours like anger, sexual lust, quarrel etc.

**Mukkutra Theory:**

The siddha system of medicine is based on the Thridhosa theory. This include the three humours viz. Vatham, Pitham and kabam. This three humours are essential constitutional factors of the human body and they exist in 1: 1/2: 1/4 ratio respectively in the normal body. This normal existence is responsible for the proper functioning of the body systems. Any alteration in the above ratio can cause diseases.

“உற்றதோர் உடலின் கூறு  
உறுப்புடன் விரவி நின்று  
முற்றுமே நோய்கள் எல்லாம்  
முதிற் பெறத் தோன்றும் போது  
பற்றுமே வாத பித்த  
சிலேற்பனந் தன்னில் ஒன்றையும்  
பற்றியே தோன்றும் என்று  
பகர்ந்தனர் முனிவர் தாமே.”

- அகத்தியர் குருநாடி

### **Relation of Panchaboothams and Mukkutram:**

Vatham	-	Vayu & Aagayam
Pitham	-	Theyu
Kabam	-	Prithivi & Appu

### **Formation of Suvai by Panchaboothams:**

Inippu	-	Prithivi + Appu
Pulippu	-	Prithivi + Theyu
Uppu	-	Appu + Theyu
Kaippu	-	Vayu + Aagayam
Kaarppu	-	Vayu + Theyu
Thuvarppu	-	Prithivi + Vayu

If there is alteration in Suvai through diet, there will be alteration in mukkutram, which leads to diseases.

### **Tridhosas:**

#### **Vatham:**

Vatham represents vayu residing in the lower part of the body (i.e) below the level of umbilicus.

Vatham is located in the abanan, face, idakalai, spermatic cord, pelvic bone, skin, joints, nerves, hairs and muscles.

**Classification:****Piranan (Uyir Kaal):**

Controls knowledge, mind and five objects of sense. Responsible for breathing and digestion.

**Abanan (Keezh nokku kaal):**

Responsible for passing urine, stools, sperm and menstrual flow. Transfers the digested food to their respective places.

**Uthanan (Mel nokku kaal):**

Transport the digested food to different parts of the gut. Responsible for vomiting, sneezing, cough etc.

**Viyanan (Paravu kaal):**

Spreads all over the body in all nerve endings causing contraction and relaxation. Responsible for movements of all parts of the body.

**Samanan (Nadu Kaal):**

Neutralizes the above four vayus. Aids proper digestion.

**Naagan:**

Responsible for higher intellectual functions like learning, thinking, singing etc., and also for opening and closing of eyelids.

**Koorman:**

Responsible for vision, yawning and lacrimal secretion.

**Kirugaran:**

Produces secretion from mouth and nose. Responsible for appetite, sneezing and cough.

**Devathathan:**

Responsible for laziness, sleep and anger.

**Thananjayan:**

Responsible for swelling of the body after death and it escapes on the third day by bursting the cranium.

In Sirangu, viyanan and samanana are affected.

**Pitham:**

Pitham represents “Theyu” residing in the middle part of the body.

It is located in pirana vayu, pingalai, bladder, moolakkini, heart, umbilical region, stomach, abdomen, sweat, saliva, blood, eyes and skin.

**Classification:****Anar Pitham:**

Responsible for proper digestion. Increases the appetite.

**Ranjagam:**

It gives colour to the blood

**Saathagam:**

It controls the entire body function

Responsible for completing the desired activities.



**Aalosagam:**

Responsible for vision

**Prasagam:**

Gives complexion to the skin

In sirangu Prasaga pitham is affected.

**Kabam:**

Kabam represents Appu, Prithivi and is situated in the upper part of the body.

Kabam is located in samana vayu, sperm, head, tongue, uvula, fat, bone marrow, blood, nose, chest, nerves, bones, large intestine, brain, eyes and joints.

**Classification:****Avalambagam:**

Responsible for the proper functions of other four types of kabam.

Helps in respiration.

**Kilaethagam:**

Makes the food moist and soft to help digestion.

**Pothagam:**

Responsible for identifying taste in the tongue

**Tharpagam:**

Responsible for coolness of the eyes

**Santhigam:**

Responsible for the lubrication and aids free movements of the joints.

**Udal Vanmai:**

Udal Vanmai is classified into three types as follows.

**Iyarkai Vanmai:**

Natural resistance of the body, by birth.

**Seyarkai Vanmai:**

Improving the health by the intake of nutritional food materials, activities and medicines.

**Kaala Vanmai:**

This is the development of immunity according to age, season and environment.

When udal vanmai is affected, Sirangu may occur.

**Udal Kattugal:**

According to Siddha system, body is made up of seven important constituents, called Udal Kattugal. They are necessary for proper functioning of the body. They are

**Saaram:**

Saaram is responsible for the growth and development. It keeps the individual in good spirit and it nourishes the blood.

**Senneer:**

Senneer is responsible for intellectual nourishment, strength and helps in determining the colour and sound of the body.

**Oon:**

Oon gives shape to the body according to the requirement for physical activity.

**Kozhuppu:**

Kozhuppu acts as a lubricant for different organs and helps in their proper function.

**Enbu:**

Enbu supports the body system and is responsible for the posture, movement and structure of the body.

**Moolai:**

Moolai occupies the bony spaces and gives strength to the bone.

**Sukkilam / Suronitham:**

Sukkilam/suronitham is responsible for reproduction.

In sirangu Saaram and Senner are affected.

**Mukkuutra Pathology:**

In Siddha system the manifestation of all diseases are the results of derangement of mukkutram due to various aetiological diet, activities, habits etc.

Theraiyar stated in his Noikana mudal karam as,

“வரதமலரது மேனி கெடரது”

Therefore, in sirangu the principal factor, involves is vatham which accompanies with pitham and kabham produces the clinical symptoms.

Viyanan one of the ten types of vatham spreads over the body responsible for sensation and functioning of this skin. As skin having the function of excretion through sweat, the derangement of viyanan accompanying abanan affect the excretion of viyarvai (Sweat) which results in itching.

As pitham resides in viyarvai its affection deranges the prasaga pitham causing changes in lustre and complexion of skin.

Kabam which resides in senneer (Blood) affected causing hypervitiation. This leads to the formation of pustules and vesicles.

### **Diagnosis (Piniyari Muraimai):**

The diagnostic tool adopted to evaluate diseases in siddha medicine is termed as Piniyari muraimai. It is based upon three main principles.

They are,

- Poriyalarithal
- Pulanaaltherthal
- Vinaathal

Pori is considered as the five senses of perception namely.

- Nose
- Tongue
- Eye
- Skin
- Ear

Pulan are five objects of senses. They are,

- Smell
- Taste
- Sight
- Sensation
- Sound

Physician's Pori and pulan are used as the tools for examining the Pori, pulan of the patient.

Vinaathal is obtaining the informations regarding the history of the disease, its clinical features etc., from the patient or his immediate relatives who are taking care of him, when the patients is a child or when the patient is not in a position to speak.

The above principles correspond to the methodology of interrogation, inspection, palpation of modern medicine in arriving at a clinical diagnosis of the disease.

Siddhars have developed a unique method of diagnosing the disease by Envagai thervugal

“நாடிப்பரிசம் நாதிரம் மொழிவிழி  
மலம் மூத்திரமிவை மருத்துவராயுதம்”.

- நோய் நூடல் நோய் முதல் நூடல்

Hence the following makes the diagnosis,

1. Naadi
2. Sparisam
3. Naa
4. Niram
5. Mozhi
6. Vizhi
7. Malam
8. Moothiram

**Naadi:**

The three ‘Uyir thathukkal’ are formed by the combination of three Naadi with three Vayu.

Idakalai	+ Abanan	-	Vatham
Pingalai	+ Piranan	-	Pitham
Suzhumunai	+ Samanan	-	Kabam

Naadi can be felt one inch below the wrist on the radial side by means of palpation with tips of index, middle and ring fingers. The verse is as follows,

“கரிமுகனடியை வளழ்த்திக் கைதனில் நாடி பர்க்கில்  
பெருவிரலங் குலத்தில் பிடித்தடி நடுவே தொடடால்  
ஒரு விரலோடில் வாதமுயர் நடுவிரலிற் பித்தம்  
திருவிரல் மூன்றிலோடில் சேத்தும நாடிதானே”

- நோய் நூடல் முதல் பாகம்

But it is stated in sathaga Nadi that the correct Naadi for children cannot be felt.

The verse is as follows,

“கொண்டிடவே கயரோகி கசரோகி  
குறிப்பாக சிற்றின்பம் செய்த பேர்கள்  
அண்டிடவே தரித்திரர்கள் விருத்தர் பாலர்  
அன்பாகத் தண்ணீரில் முழுகினோர்கள்  
கொண்டிடவே இவர்களது உறுப்பின் தாது  
கூறவே முடியாது எவர்க்குக் இட்டும்  
பண்டிடவே யிப்பீட்சை யாந்தான் காண்பார்  
பராபரத்தின் மகிமையிது பாருபாரே”

- நோய் நூடல் முதல் பாகம்.

So Naadi does not play a vital role in the diagnosis of sirangu in children.

**Sparisam:**

This reveals about the warmth, chillness, dry, weeping, soft, rough, tenderness, fissures, pigmentation and changes in the skin.

In sirangu, thinavu, kurukkal etc., can be noticed at the affected areas.

**Naa:**

The colour, salivation, ulceration, coating, movements, taste etc., is noted for diagnosis.

**Niram:**

Colour of the skin is noted for diagnosis. In sirangu, the affected site becomes brownish than the remaining normal site.

**Mozhi:**

Indicates the speech of the patient.

**Vizhi:**

The eye is noted for colour, lacrimation, and irritation.

**Malam:**

Quantity, colour, odour, froth, abnormal consistency including indigestion, frequency, constipation etc., should be noted for diagnosis.

**Moothiram:**

Neerkuri and Neikuri are done to help diagnosis.



**Neerkuri:**

Niram	-	Colour of the urine
Edai	-	Specific gravity of urine
Manam	-	Smell of urine
Nurai	-	Frothy nature of urine
Enjal	-	Quantity of urine

**Neikuri:**

Prior to the day of urine examination for Neikuri, the patient is advised to take a balanced diet and the quantity of food must be proportionate to his appetite. The patient must have a good sleep.

“அருந்துமறிரதமும் அவிரோதமதாய்  
அ.:கல் அலர்தல் அகாலவூண் தவிர்ந்தழற்  
குற்றளவருந்தி உறங்கி வைகறை  
ஆடிக்கலசத் தாவியே காது பெய்  
தொருமுகூர்த்தக் கலைக்குட்படு நீரின்  
நிறக்குறி நெய்க்குறி நிருமித்தல் கடனே.”

- நோய் நூடல் முதல் பாகம்

Next day the urine is collected in a glass container in the early morning. This specimen should be examined within one and half hours.

A drop of gingelly oil is dropped on the surface of urine collected as above and the spreading of the oil should be observed. The verse is as follows.

“நிறக்குறிக் குரைத்த நிருமன நீரிற்  
சிறக்க வெண்ணையோர் சிறுதுளி நடுவிடுத்  
தென்றுறத் திறந்தொலி யேகாதமைந்ததி  
னின்றதிவலை போம் நெறிவிழியறிவும்  
சென்றது புகலுஞ் செய்தியை யுணரே”.

- நோய் நாடல் முதல் பாகம்

**Vatha neer:**

“அரவென நீண்டின.:தே வாதம்”

When the drop of oil spreads like a serpent it indicates vatha neer.

**Pitha neer:**

“ஆழி போல் பரவின் அ.:தே பித்தம்”

When the drop of oil spreads like a ring it indicates pitha neer.

**Kapha neer:**

“முத்தொத்து நிற்கின் மொழிவதென் கபமே”

When the drop of oil remains as a pearl it indicates kaba neer.

**Thontha neer:**

When the drop of oil shows two shapes enclosed with in one another it indicates thontha neer.

**Mukkuutra neer:**

When the drop of oil drowns into the urine it indicates mukkuutra neer.

In majority of the cases the oil spreads like a pearl. In some cases oil spreads like serpent.

Besides Envagai thervugal, Uyir thathukkal, Ezhu Udal kattugal, Paruvakalangal, Thinaigal also helps in making diagnosis.

### **Complications:**

Pararasa seharam says that sirangu, if untreated can cause Mahothara karappan. The features are,

- Itching gets reduced.
- Odema of the body
- Oliguria
- Impaired defecation
- Hoarsenes of voice
- Dyspnoea
- Loss of appetite
- Polydypsia
- These symptoms get exaggerated during night.

The verse is as follows,

“சிரங்கின் மகோதரக் கரப்பான் செயுங் குணந்தான்  
றினவடங்கி வீங்கி மல சலமும் வற்றி  
உரம்பயிலு முதா முறவுற் முட்டாகி  
யுவாதி மிகுந்தரி குரலாய் மிடறும் விக்கி  
வரம்பயிறு மூச்சு மிகு சுவாத முண்டாய்  
வாயு மிகுந்தூண் மறந்து தாகமிஞ்சி  
இரங்குறவே களை சோக மிகுதியுண்டா  
யிராக் காலத் ததிகரிக்கு மியம்புங் காலே.”

- பரராச சேகரம்

Although sirangu is easily manageable it may become complicated. This is mentioned as one of the kutramulla viyathigal in the Ankathi patham. The verse is as follows.

“மூலமுறு கிரந்தியுடன் மூலரோக  
முதிநிலிங்கப் புற்றுடனே யிலிங்க சூலை  
சூலை முறு நீரழிவு கபால வீச்சுக்  
சொல்லறு மகோதர கரப்பான் காயசேற்பப்  
சீலமுறு முள்ளூறுக்கி யுலற்று சூலை  
சிரங்கின் முந்தியிர்வாத சன்னி காசம்  
கோல முறு வெண்குட்டம் வெள்ளூரோகங்  
கொடிய கெர்ப்ப ரோக முதலிரத்த குன்மம்”.

- அங்காதி பாதம்

### **Differential diagnosis:**

Sirangu must be differentiated from Varal karappan and Ari karappan.

### **Varal karappan:**

Balavagadam describes Varal karappan as one of the eighteen types of karappan.

The symptoms are sirangu like lesions all over the body, oozing of fluid, itching and insomnia.

“உச்சிமுத லுள்ளங்கா லுற்றளவி லெவ்விடமும்  
நச்சுச் சிறுசிரங்கு நண்ணியே - நிச்சல்  
வெடித்துநீர் மேவுநமை மேவா தூறக்கம்  
கடிந்தவரட் சிக்கரப்பான் காண்”.

- பாலவாகடம்

Unlike sirangu there are lesions all over the body. There is no severe disturbance of sleep in sirangu, whereas the sleep is disturbed in Varal karappan.

**Ari karappan:**

The initial lesions occur over the penis and vulva. It ulcerates further and eventually erodes the adjoining tissues, which becomes puttru (malignancy).

The verse for this is as follows.

“உற்ற அரிகர்ப்பான் ஓதக்கேள் ஒண்டொடியீர்  
மற்றலிங்க யோனிகளில் வந்திடும் புற்றுடலில்  
ஆறாமற் புண்ணரிக்கும் உருவழிக்கும்  
மாராது இக்குணத்தின் வாறு”.

- பாலவாகடம்

Only resembling feature is the early sirangu like lesions over the penis or vulva. All other features are distinguished from sirangu.

## MODERN ASPECT

### ANATOMY

#### **The Skin:**

The skin or integument covers the body and is continuous with the membranes lining the body orifices. The skin has a surface area of about 1.5 to 2cm<sup>2</sup> in adults and it contains glands, hair and nails.

It consists of a layer of dense connective tissue the dermis and an external covering of epithelium termed the epidermis or cuticle.

Between the skin and underlying structures there is a layer of subcutaneous fat.

#### **Development:**

The epidermis and its appendages are derived from the ectoderm, the dermis is of mesodermal origin.

About the fifth week of fetal development, the epidermis is formed with two layers and the papillae of true skin about the sixth month.

The nails are formed at the third month and begin to project about the sixth month.

The hairs appear between the third and fourth months. About the fifth month the fetal hairs (Lanugo) appear first on the head and then on the other parts. They drop after birth and give place to permanent hairs.

All the sweat glands are fully formed at birth, they begin to develop as early as the fourth month.

## **STRUCTURE**

### **Epidermis (Cuticle, Scarf Skin)**

It is the most superficial layer and is composed of stratified epithelium which varies in thickness in different parts of the body. The average thickness of the skin is about 1 to 2mm. It is thickest on the palms of the hands and soles of the feet. There are no blood vessels or nerve endings in the epidermis but its deeper layers are bathed in interstitial fluid from the dermis.

The surface of the epidermis is ridged by projections of cells in the dermis called the papillae. The pattern of ridges is different in every individual and the impression made by them is the finger print.

The stratified squamous epithelium of the epidermis is composed of several layers named according to various properties such as shape of cells, texture, composition and position.

#### **Beginning with the deepest, they are**

1. Stratum Basale
2. Stratum Spinosum
3. Stratum Granulosum
4. Stration Lucidum
5. Stratum Corneum

**Stratum basale:**

[Stratum Cyclindrium, Stratum Germinativum]

It is composed of columnar or cylindrical cells. The ends of the cells are in contact with basement membrane and appear to anchor the cells to the underlying dermis. The cells undergo divisions by mitosis supplying new cells and the dead cells which are constantly being rubbed off and replaced by certain.

**Stratum Spinosum:**

It is composed of several layers of polygonal cells depending upon the area of the body. The cells in this layer adhere to its neighbours at particular points called desmosomes and these points are drawn into the spines by shrinkage.

**Stratum granulosum:**

Composed of two to three rows of flat cells that lie parallel with the surface. They are composed of keratohyalin, a substance that apparently is transformed into keratin.

**Stratum Lucidum:**

It appears to be a homogenous translucent band much thinner than other stratum. The cells in this layer contain droplets of eleidin.

**Stratum corneum:**

It is composed of squamous plate of scales fused together to make the outer horny layer. These plates are the remains of the cells and contain a fibrous protein keratin.



**Pigmentation:**

The colour of the skin is due to the presence of pigment in the cells of the epidermis. The pigment is especially distinct in the cells of stratum basale.

Melanin, a dark pigment secreted by melanocytes in the deep germinative layer, is absorbed by surrounding epithelial cells. The amount varies between different races and between members of the same race. Melanin protects the skin from the harmful effects of sunlight.

**Dermis: (Corium, Cutis Vera)**

The dermis is tough, flexible and elastic. It is very thick in the palms of the hands and soles of the feet. In the eyelids, scrotum and penis it is exceedingly thin and delicate.

The dermis consists of felted connective tissue, composed of collagen with a varying amount of elastic fibres and numerous blood vessels, lymphatics and nerves. The collagen fibres bind water and give skin its tensile strength. The connective tissue is arranged in two layers – a deeper or reticular layer and superficial or papillary layer.

**Blood Vessels:**

Arterioles form a fine network with capillary branches supplying sweat glands, sebaceous glands, hair follicles and the dermis. The epidermis has no blood supply. It obtains nutrition and oxygen from blood vessels in the papillae of the dermis.

**Lymphatic Vessels:**

It form two networks, superficial and deep, which communicate with each other and with those of the subcutaneous tissue by oblique branches.

**Nerve endings:**

Nerve impulses generated in the nerve endings are conveyed to the spinal cord by sensory (somatic cutaneous) nerves, then to the sensory area of the cerebrum where the sensations are perceived.

**GLANDS OF THE SKIN****Sebaceous Glands:**

The glands are small, sacculated, glandular organs lodged in the substance of the dermis. They are most numerous in the skin of the scalp, face, axillae and groins. The glands pour their oily secretion sebum into the hair follicles. In some areas face, lips, nipple, glans penis and labia minora these glands open directly into the exterior.

Sebum contains free fatty acids, triglycerides, squalene, sterols, waxes and paraffin. It has antibacterial and antifungal actions and it keeps the skin smooth and oily.

**Sweat glands (Sudoriferous glands)**

3-4 Million sudoriferous glands release their secretions by exocytosis and empty them on to the skin surface through pores or into

the hair follicles. They are divided into two main types, as eccrine and apocrine based on their structure, location and type of secretion.

### **Eccrine Sweat Glands:**

The eccrine gland is a tubular, coiled formed by single layer of cuboidal or columnar cells. They are distributed throughout the body. They secrete a clear watery sweat which is increased during emotional conditions and in higher temperature. Sweat contains water, sodium chloride, urea and lactic acid. Their main function is regulating body temperature.

### **Apocrine Sweat Glands:**

Apocrine glands are situated only in limited areas like axilla, pubis, areola and umbilicus. They have the same structure as eccrine glands. These glands start functioning only at the time of puberty. The sweat is thick, milky and odorless. When microorganism grows in this secretion, it develops a characteristic odour. It is increased only in emotional condition.

Glands of eyelids, glands of external auditory and mammary glands are the modified apocrine glands.

## **APPENDAGES OF THE SKIN**

### **Hairs:**

These are formed by a down growth of epidermal cells into the dermis or subcutaneous tissue called hair follicles. At the base of the

follicle there is cluster of cells called the bulb. The hair is formed by the multiplication of cells of the bulb and when the cells die, become keratinized. The part of the hair above the skin is the shaft and the remainder, the root.

The colour of the hair is genetically determined and depends on the amount of melanin present.

**Arrectores Pili:**

These are little bundles of involuntary muscle fibres attached to the hair follicles. Contraction makes the hair stand erect and raises the skin around the hair causing goose flesh. These muscles are activated in response to fear and cold.

**Nails:**

The nails are derived from the same cells as epidermis and hair and consist of a hard horny type of keratinized dead cell. They protect the tips of the fingers and toes.

The root of the nail is embedded in the skin, covered by the cuticle, and forms the hemispherical pale area called the lunula.

The body of the nail is exposed part which has emerged from the germinative zone called the nail bed.

Finger nails grow more quickly than toe nails and growth is quicker when the environmental temperature is high.

# PHYSIOLOGY OF SKIN

## The Functions of the Skin are

1. Protective function
2. Role as a sense organ
3. Storage function
4. Synthesis of Vitamin –D
5. Regulation of body temperature
6. Regulation of water balance.
7. Excretory function
8. Absorptive function
9. Secretary function.

### 1. Protective Function:

Skin forms the covering of all the organs of the body and protects the organs from,

- a) Bacteria and toxic substances – The keratinized stratum corneum is responsible for the protection. It offers resistance to the skin against toxic chemicals like acids and alkalis. The sebaceous glands secreting oily sebum contain bactericidal chemicals that kill the surface bacteria.
- b) Protection from mechanical blow-The Skin is not tightly placed over the underlying organs. It becomes loose and moves over the tissues in response to any blow.
- c) The pigment melanin absorbs ultraviolet rays of sunlight.

## **2. Role as a Sense Organ:**

Skin is the largest sense organ in the body. Cutaneous receptors are stimulated by the sensations of touch, pain, pressure and temperature and convey them to the brain through the afferent nerves.

## **3. Storage**

Skin can store fat, water, chloride and sugar. It can also store blood by the dilation of the blood vessels.

## **4. Synthesis of Vitamin – D.**

Vitamin D<sub>3</sub> is synthesized in the skin by the action of ultraviolet rays on cholesterol. Vitamin D is essential for skeletal development.

## **5. Regulation of Body Temperature:**

Excessive heat is lost from body through skin by radiation, conduction, convection and evaporation. Sweat glands in the skin take active part in heat loss by secreting sweat. The lipid content of sebum prevents loss of heat from the body in cold environment.

## **6. Regulation of Water Balance:**

Skin regulates water balance and electrolyte balance by excreting water and salts through sweat.

## **7. Excretory function:**

Skin can excrete small quantities of waste materials like urea, salts and fatty substance through sweat. About 400 ml of water evaporates through skin daily.

### **8. Absorptive Function:**

The absorption of water soluble substances through skin is negligible. But certain fat soluble substances like fat soluble vitamins (A,D,E and K) Oxygen, carbon dioxide gases and ointments, toxic materials, organic solvents like acetone, carbon tetrachloride, salts of heavy metals can also be absorbed.

### **9. Secretory Function:**

Skin secretes sweat through sweat glands and sebum through sebaceous glands. By secreting sweat, skin regulates body temperature and water balance. Sebum keeps the skin smooth and moist.

# SCABIES

## **Definition:**

Scabies is an intensely pruritic skin infestation caused by the host specific mite, *Sarcoptes scabiei* var *hominis*, an obligate human parasite. (Sar, koptein means to smite or cut) (Scabere means to scratch).

## **Etiology and epidemiology:**

Scabies affects persons of all ages, races and socio-economic groups.

Over crowding, poverty, poor hygiene and poor public education, delayed diagnosis and treatment contribute to their prevalence. Incidences are higher in children than others. Persons with poor sensory perception due to conditions like leprosy, and immuno compromised persons due to conditions such as status post transplantation, HIV disease and old age all at particular risk for the crusted scabies.

## **Mode of Transmission:**

The efficient means of transmission of scabies is via direct and prolonged physical contact with an infected individual. Mites can survive several days away from human skin, so fomites present in infested bedding or clothing are an alternate source of transmission.



**Parasitology:**

Class	-	Arachnida
Subclass	-	Acari
Order	-	Astigmata
Family	-	Sarcoptidae
Name	-	Sarcoptes scabiei var hominis.

**Characters of Sarcoptes Scabiei:**

The adult female has a hemispherical body marked by transverse corrugations, brown spines and bristles on the dorsal surface. The male mite is similar in configuration but smaller.

The female measures 0.4mm in length and the male mite are approximately one half of her size.

The mite has four sets of legs. The anterior 2 pairs end as elongated peduncles tipped with small suckers.

**Lifecycle:**

*Sarcoptes scabiei* undergoes its lifecycle on the skin surface. The male mite has a short life span. It dies shortly after copulation. The adult female, after impregnation, burrows into the skin and forms a tunnel in the horny layer (Stratum Corneum).

The mite burrows at the rate of 1-5mm per day. Two days after fertilization, she starts laying eggs along her course in the burrow at the rate of 2-3 eggs during her life span of 30 days.

The female mite exudes a keratolytic substance and burrows into the stratum corneum. The tract is extended by 0.5-5mm/24 hour within stratum granulosum and she deposits 1-3 oval eggs and numerous brown fecal pellets (Scybala) daily.

The egg hatches in 3-4 days producing a larva that moves to the skin surface. It then molts through various stages of oclpod nymph into an adult mite. The entire life cycle can be completed in 10 to 14 days.

The average number of adult female mites on an individual suffering from scabies is usually less than 100. Only in crusted scabies there are large numbers of mites present.

**Pathogenesis:**

The mites move through the top layers of skin by secreting proteases that degrade the stratum corneum. They feed on dissolved tissue but do not ingest blood. Scybala (faeces) are left behind as they travel through the epidermis creating linear lesions clinically recognized as burrows.

**Histological Findings:**

The histologic features revealed by the excision of a burrow shows mites, larvae, ova and faeces within the stratum corneum. Superficial and deep dermal infiltrate show lymphocytes, histiocytes, mast cells and eosinophils. Spongiosis and vesicle formation with exocytosis of eosinophils and occasional neutrophils are present.

Crusted scabies demonstrates massive hyperkeratosis of the stratum corneum with innumerable mites.

Nodular scabies reveals a dense, mixed superficial and deep dermal inflammatory cell infiltrate.

### **Immunology:**

Allergic sensitivity to the mite or its products appears to play an important role in determining the development of lesions other than burrows and in producing pruritis.

Immunological reactions mediated by antibodies of IgG, IgM and especially IgE classes may be involved. None of these reactions may have been shown to eliminate all mites but locally these reactions may prevent the epidemic multiplication of scabies organism.

### **Clinical Features:**

Clinical findings include both primary and secondary lesions. Primary lesions are the first manifestation of the infestation and these include,

1. Itching.
2. Burrows
3. Papules and Vesicles
4. Nodules

**Itching:**

Itching is the primary symptom of scabies and it may be due to type IV hypersensitivity to the mite or its products. Usually itching appears after 4-6 weeks of initial infection, due to development of sensitization to the mite or its products (Scabin in saliva) which takes much time.

Itching is characteristically worse at night. This nocturnal periodicity is usually due to the movement of the young acarus to reach the pores favoured by the warmth of the bed. And also the mast cell degranulation at night may be another reason for itching worsened at night.

**Burrows:**

Burrows represent the intra epidermal tunnel created by the moving female mite. They appear as serpiginous, greyish thread like elevations ranging from 2-10mm long. The distribution of lesions is characteristic include flexor aspects of interdigital spaces of the finger, wrists, elbows, axillae, belt line, dorsal feet, buttocks, scrotum in men and nipple area in women. In infants burrows are commonly located on the palms and soles.

**Papules and Vesicles:**

Erythematous, papules and vesicles 1-3mm sized are seen in typical distribution. The vesicles are discrete lesions filled with clear fluid. Papules are common on the shaft of the penis in men and on the areolae in women and they rarely contain mites.

### **3. Nodules (Nodular Scabies):**

Common in young children. They are pinkish brown or red nodules ranging from 2-20mm, eczematous eruption primarily seen on the trunk. The nodules may develop due to deeper penetration by the acarus or a severe dermal reaction to the toxins of the acarus.

### **Secondary Lesions:**

These are the result of scratching, secondary infection and the host immune response against the mites.

Other findings include excoriations, widespread eczema, honey-colored crusting, post-inflammatory hyper pigmentation, erythroderma, prurigo nodules and frank pyoderma.

### **Crusted scabies (Norwegian Scabies):**

It manifests with marked thickening and crusting of the skin in which the mite population is enormous. Lesions are often hyperkeratosis, crusted and cover large areas. Nail dystrophy and scalp lesions may be prominent. Predominantly affected persons are those with immunosuppression, elderly and bedridden patients.

### **Scabies in Infants:**

In infants the features differ from that of older children and adults. Bullae and pustules are more common and the palms, soles, face and scalp are often affected. Eruptions may also include wheals, papules and vesicles and superimposed eczematous dermatitis.

**Diagnosis:**

It is based on the following

- History of nocturnal itching
- History of exposure or multiple cases in the family
- The characteristic lesions distributed at the sites of predilection and the identifiable typical burrows.
- Light microscopic identification of mites, larvae, ova or scybala from the burrow.
- Skin scrapping

Application of a drop of mineral oil on the selection site, scrapping of it with No.15 blade and transfer them on the glass slide, covered with coverslip and examined under microscope 40 × magnifications.

- Clinically inapparent infection can be detected by amplification of sarcoptes DNA in epidermal scale by polymerase chain reaction.

**Differential diagnosis:**

Scabies is often confused with other papulo vesicular lesion like papular urticaria, Canine scabies, dermatitis herpetiformis, folliculitis, and eczematous diseases.

Nodular scabies is misdiagnosed as urticaria pigmentosa and histiocytosis.

### **1. Canine Scabies:**

The distribution of lesions is different but not transmitted between humans.

### **2. Eczematous disease:**

Eczematous lesions may mimic atopic dermatitis. Usually there is a history of eczema in the patient or the family.

### **3. Dermatitis herpetiformis:**

Similar in distribution but the vesicles and urticarial lesions are more prominent.

### **4. Pediculosis:**

It is also caused by a parasite and is excluded by the presence of lice and nits.

### **Complication:**

Complications of scabies generally result from vigorous rubbing and scratching. Disruption of the lesion makes the patient at risk for secondary bacterial invasion chiefly by streptococcus pyogenes and staphylococcus. Super infection with S. Pyogenes can precipitate acute post streptococcal glomerulonephritis. Common pyodermas include impetigo and cellulitis which may rarely result in sepsis.

### **Acute post streptococcal Glomerulonephritis:**

It is more common in tropical climates. Immune mechanism is responsible for nephritis and the pathologic changes are confined to the

glomeruli. The symptoms are dark coloured urine, peri-orbital odema, oliguria, general malaise, low grade fever and acute hypertension.

**Impetigo:**

This superficial pyoderma is due to group A  $\beta$ -haemolytic streptococci. It develops as vesicular lesions on the arms and legs or around mouth, nose and scalp which becomes pustules. Lymphangitis and regional lymphadenitis are also seen.



## **MATERIALS AND METHODS**

The clinical study on sirangu was carried out in the Post Graduate department of Kuzhanthai Maruthuvam in Government Siddha Medical College at Palayamkottai.

### **Selection of cases:**

The patients were selected according to the signs and symptoms of sirangu as mentioned in siddha aspects. The patients were treated either in OP and IP. 20 cases were admitted from both sexes of various ages upto 12 and 50 and more OP cases were seen.

### **Evaluation of Clinical Parameters:**

During admission, the patients were selected according to the clinical features of sirangu like,

- Itching
- Burrows
- Inflammatory papules
- Pruritic papules
- Vesicles
- Pustules

These symptoms are present in the webs of the fingers, wrist, ankles, buttocks, groin and the genital areas. Complete case history and details about the precipitating factors, family history, socio economic status, contact history, dietary and personal history were taken.

**Study on Siddha Mode of Diagnosis:**

A case sheet was prepared on the basis of siddha methodology (ie) Poriyalarithal, Pulanaaltherthal, Vinavuthal and envagai thervugal.

**Clinical Investigations:**

All the patients were subjected to the following routine laboratory investigations available at Government Siddha Medical College, Palayamkottai.

**Haematological Investigation:**

Total WBC Count

Differential Count

Erythrocyte sedimentation rate

Haemoglobin.

**Urine:**

Albumin

Sugar

Deposit

**Stools:**

Ova

Cyst

Efficacy of the trial drugs was found by biochemical analysis, carried out in the Department of the Bio-Chemistry, Government Siddha Medical College, Palayamkottai.

Pharmacological analysis of the trial drug was carried out in the Department of Pharmacology, Government Siddha Medical College, Palayamkottai.

Anti-microbial study was done to reveal the anti-bacterial activity of the trial drugs at Malar diagnostic centre, Palayamkottai.

**Trial Drugs:**

The patients were treated with chiruthetkodukilai chooranam with hot water thrice a day after meals. Sirangu Ennai was used as external application for twice a day.

All the patients admitted for the study were given uniform regular hospital diet.

At the time of discharge all the 20 patients were advised to attend the outpatient ward for follow up study.

## LINE OF TREATMENT

### The Line of Treatment for sirangu is as follows

- Bringing the three doshas into its equilibrium state
- Administration of internal medicine to arrest the disease process.
- Application of the external medicine topically over the lesions
- Pathiyam (ie) diet restriction to normalize the vitiated doshas and to maintain good drug action.
- Advising personal hygiene.

### Bringing the three doshas into its equilibrium state

To bring the three doshas in equilibrium – Nilavagai choornam –  
½ - 2 gm with hot water according to age and physical state.

### Administration of internal medicine:

All the twenty patients were given the trial drug chiruthetkodikilai chooranam with hot water thrice daily and regularly and the progress was noted.

### Dosage:

2 - 4 Years	-	250mg
4 - 7 years	-	500mg
7 - 12 years	-	1gm

Also the dosage was adjusted according to the severity and condition of the patient.

**Anupanam in Siddha system:**

“அனுபானத்தாலே யவிழ்தம் பலிக்கும்  
இனிதான சுக்கு கன்னல் இஞ்சி - மினுமுதகால  
கோமேயம் பால் முலைப்பால் கோநெய் தேன் வெற்றிலை நீர்  
ஆமிதை யாராய்த்து செய்யலாம்”.

- தேரையர் வெண்பா

Siddha system considers anupanam as an important adjuvant of the drug than the medicine itself. In this work, the author used hot water as anupanam.

**Application of External medicine:**

All the twenty patients were treated with Sirangu ennai externally twice a day, over the lesions.

**Pathiyam:**

Diet restrictions are important for good drug action and also to normalize the vitiated dhaosas. For sirangu the patients were strictly advised to avoid,

Agathi Keerai

Pagal Kaai

Poosani Kaai

Perum Payuru

Kaanam

Motchai

Palapazham.

Also the sirangu provoking food items, or factors like Kathirikaaai, Kambu arisi, Cholam, Senchemba, Pudalangaai, Maangaai, Varagu Satham, allikulathu neer, certain type of fish and dry fish were strictly avoided.

**Management:**

The following measures were advised to follow for the early cure and to avoid reoccurrence.

1. Patients were advised to take bath atleast once a day with luke warm water.
2. They were advised to avoid bathing in public tanks.
3. They were advised to use Nalungu maa, Paasipayaru maa or Kadalai paruppu maa instead of soap.
4. Patients were advised not to wear other clothes and to change clothes daily.
5. All the family members affected by this disease were advised to take medicines at the same period.
6. School going children were advised to take medicines at the same period.
7. Infested bedding and clothes should be washed and dried in sun light.

**Control of sirangu:**

After recovery all the patients were advised with health education like,

1. Environmental modifications such as avoiding overcrowding.
2. Maintaining personal hygiene for the prevention and control of sirangu.
3. Improving patient's general health by taking rich diet with greens and vegetables.

## **OBSERVATION AND RESULTS**

**Results were observed with respect to the following criteria.**

1. Sex Distribution
2. Age Distribution
3. Kaalam
4. Paruva kaalam
5. Distribution of Lands (Thinai)
6. Religion Reference
7. Socio Economic status
8. Diet Reference
9. Etiology
10. Clinical features
11. Site of infection
12. Duration of illness
13. Tridhosha Theory
14. Ezhu udarkattugal
15. Envagai Thervugal
16. Neikuri
17. Gradation of total result
18. IP Case Report
19. Investigation Chart

The observations recorded with the above said criteria were given in the tabular column form.



**Table 1: Sex Distribution**

**1. Sex Distribution:**

S. No.	Sex	No. of cases	Percentage
1.	Male children	15	75%
2.	Female Children	5	25%

Among the 20 patients selected, 75% of patients were male children and 25% of patients were female children.

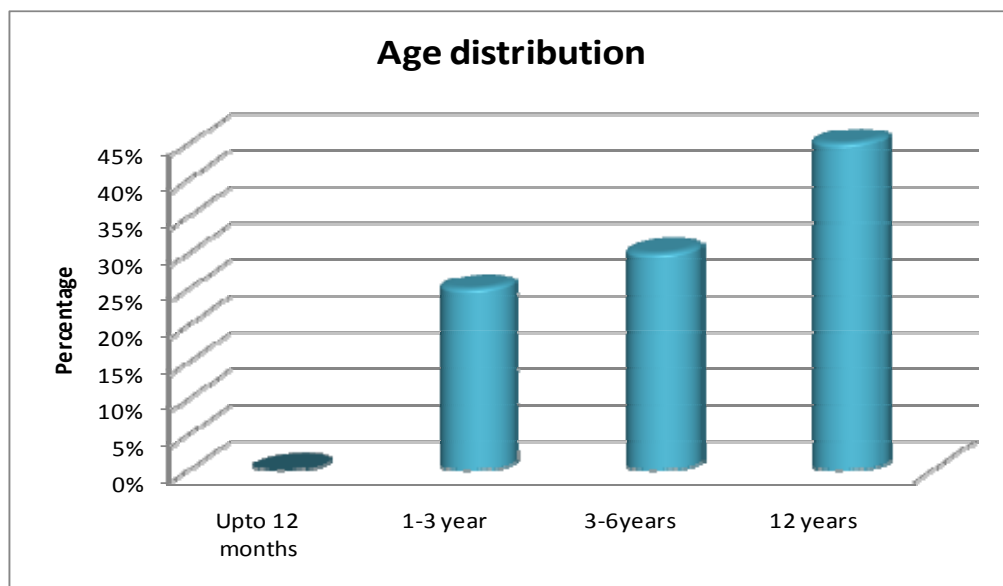


**Table 2: Age Distribution**

**2. Age distribution:**

S. No.	Age	No. of cases	Percentage
1	Upto 12 months Kaappu and Senkeerai Paruvam	-	-
2.	1-3 year (Thaalattu, Sappani, Mutha, Varugai, Paruvam).	5	25
3.	3-6years (Ampuli, Ammanai, Neeraduthal, Oonjal, Paethai for female child Ampuli, Sitril, Siruparai, Siruther for male child).	6	30%
4.	6-12 years (Paethumbai –for Female child Siru Paruvam for male child).	9	45%

The percentage was highest in the age group of 6 - 12 years, the percentage was 45%, between the age group 3 – 6 years the percentage was 30%. 25% belonged to the age group 1-3 years.



**Table 3: Kaalam****3. Kalam**

S. No.	Kaalam	No. of cases	Percentage
1	Vatham	20	100%
2.	Pitham	-	-
3.	Kapham	-	-

In this study, all the 20 patients were in Vatha Kaalam since all the patients belong to children age group.

**Table 4: Paruva Kaalam****4. Paruva Kaalam**

S. No.	Paruva kaalam	No. of cases	Percentage
1.	Kaar kaalam (Aavani & Purattasi) (Aug.16 - Oct.15)	9	45%
2.	Koothir kaalam (Iyppasi & Karthigai) (Oct.16 - Dec.15)	2	10%
3.	Munpani kaalam (Markazhi & Thai) (Dec.16 - Feb.15)	-	-
4.	Pinpani kaalam (Masi & Panguni) (Feb.16 - April 15)	-	-
5.	Elavenil kaalam (Chithirai & Vaigasi) (April – 16 - June 15)	2	10%
6.	Muthuvenil kaalam (Aani & Aadi) (June 16 – Aug.15)	7	35%

Among the 20 cases selected, 45% of cases were admitted in Kaar kaalam, 10% of cases were admitted in Koothir kaalam and Elavenil kaalam and 35% of cases were admitted in Muthuvenil Kaalam.

**Table 5: Distribution of Lands (Thinai)**

**5. Thinai**

<b>S. No.</b>	<b>Thinai</b>	<b>No. of cases</b>	<b>Percentage</b>
1	Kurunji (Hill area)	-	-
2.	Mullai (Forest area)	-	-
3.	Marutham (Fertile area)	19	95%
4.	Neithal (Coastal area)	-1	-5%
5.	Paalai (Desert area)	-	-

Among 20 cases admitted, 19 cases belonged to Marutham and 1 case belonged to Neithal.

**Table 6: Religion Distribution**

**6. Religion Distribution**

<b>S. No.</b>	<b>Religion</b>	<b>No. of cases</b>	<b>Percentage</b>
1	Hindu	17	85%
2.	Christian	2	10%
3.	Muslim	1	5%

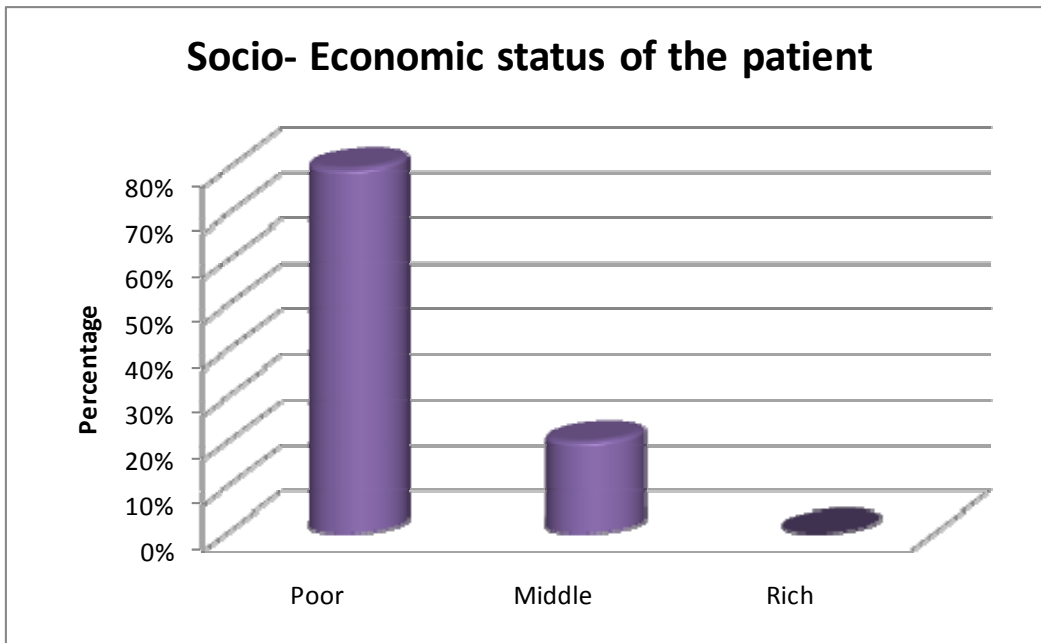
Out of 20 cases 85% were Hindus, 10% were Christians and 5% were Muslims.

**Table 7: Socio- Economic status of the patient**

**7. Socio – Economic Status of the Patient**

S. No.	Socio-Economic Status	No. of cases	Percentage
1	Poor	16	80%
2.	Middle	4	20%
3.	Rich	-	-

Out of the 20 patients, 80% of cases were poor and 20% were middle class people.



**Table 8: Diet**

**8. Diet**

<b>S. No.</b>	<b>Diet</b>	<b>No. of Cases</b>	<b>Percentage</b>
1.	Vegetarian	1	5%
2.	Non Vegetarian	-	-
3.	Mixed	19	95%

95% of cases have mixed diet and 5% of cases have vegetarian diet.

**Table 9: Aetiological Factors**

**9. Aetiological Factors**

<b>S. No.</b>	<b>Aetiological Factors</b>	<b>No. of Cases</b>	<b>Percentage</b>
1.	Poor hygiene	14	70%
2.	Contact	10	50%
3.	Over crowding	9	45%
4.	Poverty	16	80%

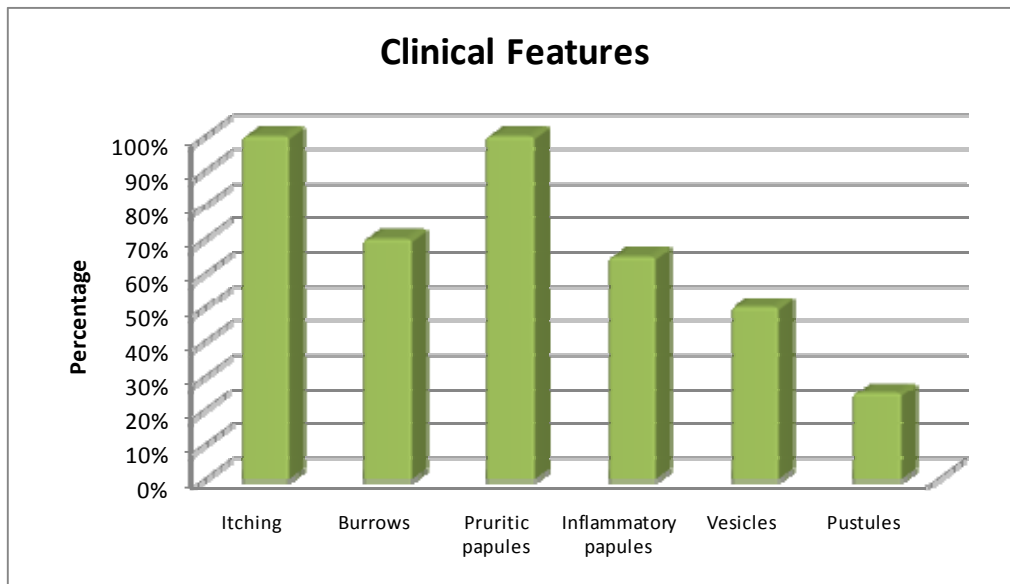
Poor hygiene was noted in 70% of cases Poverty was noted in 80% of cases, contact history was noted in 50% of cases. Overcrowding was noted in 45% of cases.

**Table 10: Clinical Features**

**10. Clinical Features**

S. No.	Signs and Symptoms	No. of cases	Percentage
1	Itching	20	100%
2.	Burrows	14	70%
3.	Pruritic papules	20	100%
4.	Inflammatory papules	13	65%
5.	Vesicles	10	50%
6.	Pustules	5	25%

100% of cases had Itching and Pruritic papules. 70% of cases show burrows 65% of cases had Inflammatory papules. 50% of cases had vesicles. 25% of cases had Pustules.



**Table 11: Site of Infection**

**11. Site of Infection**

<b>S. No.</b>	<b>Signs and Symptoms</b>	<b>No. of cases</b>	<b>Percentage</b>
1	Webs of fingers		
	- Upper limb	16	80%
	- Lower limb	11	55%
2.	Buttocks	6	30%
3.	Groin	4	20%
4.	Around axillae	-	-
5.	Periumbilical region	-	-
6.	Joints (Knee/ankle)	4	20%

80% of cases were affected in the webs of fingers of upper limb.

55% of cases were affected in the webs of fingers of lower limb.

30% of cases were affected in Buttocks.

20% of cases were affected in Groin.

20% of cases were affected around knee of ankle joint.

**Table 12: Duration of Illness**

**12. Duration of Illness**

<b>S. No.</b>	<b>Duration (Days)</b>	<b>No. of cases</b>	<b>Percentage</b>
1	1-5	3	15%
2.	6-10	10	50%
3.	11-15	4	20%
4.	16-20	2	10%
5.	21 and above	1	5



15% of cases were affected for 1-5 days

50% of cases were affected for 6-10 days

20% of cases were affected for 11-15 days

10% of cases were affected for 16-20 days

5% of cases were affected for 21 days and above.

**Table 13: Distribution of Tridhosam**

**13.a Table shows the Derangement of Vaatha**

S. No.	Classification of Vaatha	No. of cases	Percentage
1.	Pranan	-	-
2.	Abaanan	-20	100%
3.	Viyaanan	20	100%
4.	Uthaanan	-	-
5.	Samaanan	20	100%
6.	Naagan	-	-
7.	Koorman	-	-
8.	Kirukaran	4	20%
9.	Devathathan	2	10%
10.	Thananjeyan	-	-

According to the derangement in the types of Vatha, in 100% of the cases Viyaanan and Samaanan were affected. Abaanan and Devathathan were affected in 10% of the cases. Kirugaran was affected in 20% of cases.

### 13.b Table show the Derangement of Pitha

S. No.	Pitham	No. of cases	Percentage
1.	Anar Pitham	4	20%
2.	Ranjagam	5	25%
3.	Sathagam	-	-
4.	Prasagam	20	100%
5.	Alosagam	-	-

Among the cases studied Anilam was affected in 20% of the cases, Ranjagam was affected in 25% of the cases and Prasagam was affected in 100% of the cases.

### 13.c Table shows the Derangement of Kabha

S. No.	Kapham	No. of cases	Percentage
1.	Avalambagam	-	-
2.	Kilethagam	4	20%
3.	Pothagam	-	-
4.	Tharpagam	-	-
5.	Santhigam	-	-

Among the twenty cases, Kilethagam was affected in 20% of the cases.

**Table 14: Ezhu Udarkattugal Reference**

**14. Ezhu Udarkattugal**

<b>S. No.</b>	<b>Udarkattugal</b>	<b>No. of cases</b>	<b>Percentage</b>
1.	Saaram	20	100%
2.	Senneer	20	100%
3.	Oon	-	-
4.	Kozhuppu	-	-
5.	Enbu	-	-
6.	Moolai	-	-
7.	Sukkilam/Suronitham	-	-

Saram and Senneer were affected in 20 patients due to the derangement of Vaatha and Pitha.

**Table 15: Envagai Thervugal Reference**

**Envagai Thervugal**

<b>S.No.</b>	<b>Envagai Thervugal</b>	<b>No.of cases</b>	<b>Percentage</b>
1.	Naa	5	25%
2.	Niram	10	50%
3.	Mozhi	-	-
4.	Vizhi	5	25%
5.	Malam	2	10%
6.	Moothiram	-	-
7.	Naadi	-	-
8.	Sparisam	20	100%

Naa and Vizhi were affected in 25% of the cases. In 75% cases Niram was affected. In 50% of the cases Vizhi was affected. Sparisam was affected in all cases.

**Table 16: Neerkuri and Neikuri**

**16. Neerkuri and Neikuri**

<b>S.No</b>	<b>Type of test</b>	<b>No. of cases</b>	<b>Percentage</b>
1.	Neerkuri Vaikkol Niram	20	100%
2.	Nei Kuri Aravena Neendathu Muththothu nitral	5 15	25% 75%

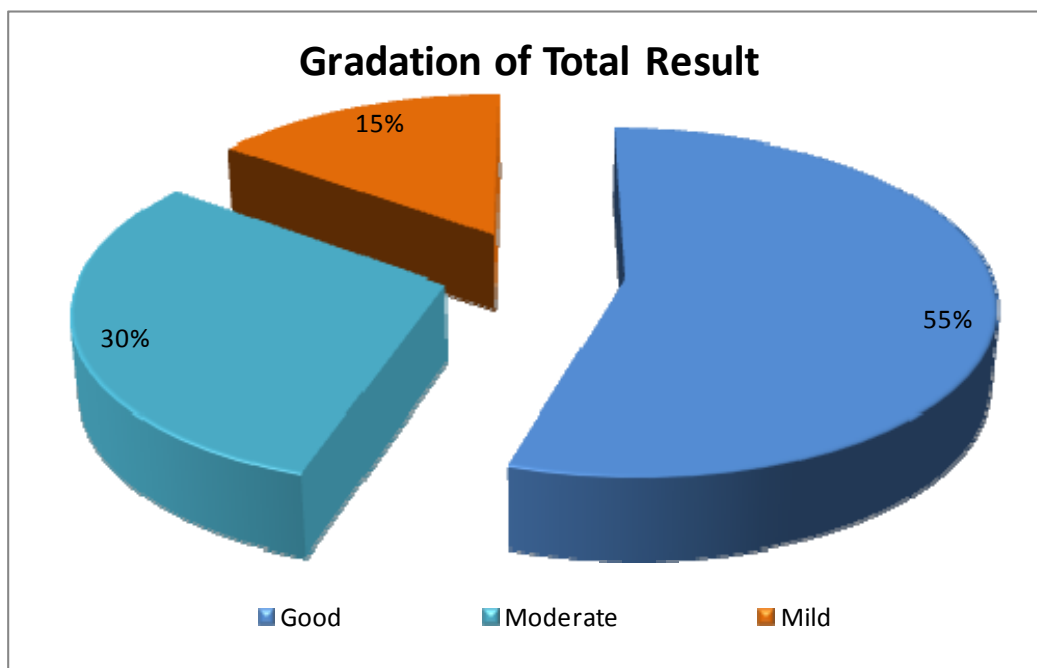
In Neikuri analysis 25% of patients show vatha neer and 75% of patients show kabha neer.

**Table 17: Gradation of Total result**

**17. Gradation of Total Result**

S. No.	Gradation	No. of Cases	Percentage
1.	Good	11	55%
2.	Moderate	6	30%
3.	Mild	3	15%

Among the 20 patients selected, 60% of cases showed good response 30% of cases showed moderate response and 10% of cases showed mild response.



**TABLE 40: INPATIENT CASE REPORT OF TWENTY CASES FOR THE DISEASE 'SIRANGU'**

S.No	LP No	Name	Age/Sex	Signs and Symptoms	DOA	DOD	No. of days treated	Results
1	1388	Thangaraj	6/MC	Itching, inflammatory papules, burrows present in the interdigital areas of both hands and wrist	01.06.08	0.9.06.08	9	Good
2	1556	Rajalakshmi	12/ FC	Itching, mild burrows, vesicles inflammatory papules present in the webs of the fingers and in the feet	15.06.08	18.06.08	4	Moderate
3	1803	Karthiga merlin	2/FC	Small papules, burrows itching present in the webs of the fingers dorsal foot and in the elbows.	11.07.08	14.07.08	4	Moderate
4	1826	Akash	3/MC	Itching, inflammatory papules, vesicles, mild burrows own in the inter digital areas of both hands.	14.07.08	18.07.08	5	Good
5	1847	Ramesh	10/MC	Itching, pruritic papules, vesicles present in the ankle, dorsal feet and in the knee joint.	17.07.08	21.07.08	4	Mild
6	1853	Moorthy	3 ½ / MC	Inflammatory papules and vesicles itching present in both buttocks, groins, and in the feet.	17.07.08	21.07.08	5	Good
7	1980	Mani	5/MC	Pruritic papules and vesicles, burrows, itching present in the wrist, webs of fingers, knee joint and in the foot	29.07.08	07.08.08	10	Good
8	2048	Jegadeesh	3/MC	Itching, pruritic papules, pustules, burrows present in the fingers, wrist and in the dorsal feet	07.08.08	14.08.08	8	Good
9	2076	Ebinezar	3/MC	Inflammatory and pruritic papules, vesicles, itching mild burrows present in the interdigital space of fingers, wrist and in the foot.	11.08.08	19.08.08	9	Good
10	2278	Ananthkumar	7/MC	Itching, burrows, inflammatory papules, present in the fingers small papules seen in the buttocks.	28.08.08	05.09.08	9	Moderate

11	2296	Jegan	3/MC	Small inflammatory papules, itching present in the knees, ankles dorsal foot and in the webs of fingers.	30.08.08	05.09.08	7	Good
12	2373	Isaki	8/MC	Itching, pruritic, inflammatory papules and vesicles, pustules burrows present in interdigital areas, fingers, wrist and in buttocks.	08.09.08.	13.09.08	6	Moderate
13	2532	Lakshmi	12/FC	Itching, inflammatory papules, present in the webs of the fingers and in the feet of both legs.	24.09.08	01.10.08	8	Good
14	2543	Annamalai	12/MC	Pruritic papules vesicles seen in the buttocks, groins and in the genitalia. Burrows, itching also present	25.09.08	29.09.08	4	Moderate
15	2549	Sudalai Muthu	9/MC	Itching, inflammatory, pruritic papules, vesicles, pustules burrows present in the interdigital spaces, fingers, wrist, ankles and in the foot of both limbs.	25.09.08	04.10.08	10	Good
16	2550	Udayakumar	10/MC	Small papules, itching present in the elbows, wrist and in the fingers of both hands.	25.09.08	28.09.08	4	Mild
17	2662	Barveen	4/FC	Mild burrows, itching, inflammatory papules, pustules in the fingers and webs of the fingers.	08.10.08	12.10.08	5	Good
18	2701	Balan	7/MC	Small papules and pruritic papules, itching present in the fingers, buttocks and in the feet.	13.10.08	17.10.08	5	Moderate
19	2736	Selvam	4/MC	Itching, mild burrows, inflammatory papules pustules present in both buttocks, genitalia and in the webs of fingers and wrist	20.10.08	29.10.08	10	Good
20	2832	Lakshmi	4/FC	Itching, inflammatory papules, vesicles, burrows present in the inter digital areas of both fingers, and in the foot.	04.11.08	11.11.08	8	Good

### Laboratory Investigations of 20 Inpatients

S.no	I.P.no	Name	Age/sex	Blood test										Urine				Stools					
				Before Treatment				ESR/mm		After Treatment				ESR/mm		BT		AT		Ova	Cyst		
				TC/cu-mm	DC			Hb%	1/2 hr	1/hr	TC/cu-mm	DC			Hb%	1/2hr	1hr	Alb	Dep	Alb	Dep		
	P%	L%	E%					P%	L%	E%													
1	1388	Thangaraj	6/MC	9300	62	33	5	66	4	8	9400	63	35	2	67	3	7	Nil	NAD	Nil	NAD	Nil	Nil
2	1556	Raja Lakshmi	12/FC	8800	58	37	5	59	9	18	8800	61	35	4	60	6	12	Nil	NAD	Nil	NAD	Nil	Nil
3	1803	Karthika Merlin	2/FC	9200	46	50	4	70	6	12	9200	50	49	1	69	5	10	Nil	NAD	Nil	NAD	Nil	Nil
4	1826	Akash	3/MC	9000	64	32	4	64	5	9	9100	61	35	4	64	4	7	Nil	NAD	Nil	NAD	Nil	Nil
5	1847	Ramesh	10/MC	8600	55	40	5	66	6	9	8400	55	43	2	67	2	3	Nil	occ.epi cells	Nil	NAD	Nil	Nil
6	1853	Moorthi	3 1/2/MC	8800	64	34	2	68	4	9	8600	66	32	2	68	4	6	Nil	NAD	Nil	NAD	Nil	Nil
7	1980	Mani	5/MC	7900	68	26	6	70	7	14	7800	70	26	4	71	4	9	Nil	NAD	Nil	NAD	Nil	Nil
8	2048	Jegadesh	3/MC	8000	63	34	3	56	6	12	8100	60	37	3	58	5	10	Nil	NAD	Nil	NAD	Nil	Nil
9	2076	Ebinezar	3/MC	9100	71	25	4	73	5	10	9200	72	26	2	74	3	8	Nil	NAD	Nil	NAD	Nil	Nil
10	2278	Ananth Kumar	7/MC	9800	58	40	2	68	4	8	9700	56	41	3	70	4	8	Nil	NAD	Nil	NAD	Nil	Nil
11	2296	Jegan	3/MC	8700	69	35	7	72	6	13	8700	72	36	3	71	6	9	Nil	Few puscell	Nil	NAD	Nil	Nil
12	2373	Isaki	8/MC	8100	54	38	8	61	11	12	8300	55	41	4	62	7	15	Nil	NAD	Nil	NAD	Nil	Nil
13	2532	Lakshmi	12/FC	10200	70	24	6	74	5	10	10300	69	26	5	74	4	8	Nil	NAD	Nil	NAD	Nil	Nil
14	2543	Annamalai	12/MC	9600	61	35	4	65	3	7	9900	61	36	3	63	3	6	Nil	NAD	Nil	NAD	Nil	Nil
15	2549	Sudalai Muthu	9/MC	10000	58	34	8	71	5	11	10000	62	36	2	72	3	8	Nil	NAD	Nil	NAD	Nil	Nil
16	2550	Udayakumar	10/MC	8900	52	43	5	72	8	15	9000	52	43	5	70	4	9	Nil	2-4 epi cells	Nil	NAD	Nil	Nil
17	2662	Barveen	4/FC	9200	57	38	5	60	7	14	9500	56	41	3	60	5	10	Nil	NAD	Nil	NAD	Nil	Nil
18	2701	Balan	7/MC	8600	58	40	2	62	3	6	8600	60	38	2	63	2	3	Nil	NAD	Nil	NAD	Nil	Nil
19	2736	Selvam	4/MC	9900	62	35	3	58	9	5	9800	61	38	1	60	3	8	Nil	NAD	Nil	NAD	Nil	Nil
20	2832	Lakshmi	4/FC	9500	74	20	6	69	3	7	9700	74	22	4	70	3	8	Nil	NAD	Nil	NAD	Nil	Nil



## DISCUSSION

Sirangu one of the common skin diseases found in paediatric practice resembles in its clinical features with scabies in modern medicine caused by *sarcoptes scabiei*. In siddha literatures thinavu, neer kortha kurrukkal, seezhkortha koppulam are described as the main clinical features. These clearly coincide with scabies.

The author had collected the details about sirangu from pararasa seharam, siddha Maruthuvam sirappu, Noi Illa Neri, Guru Naadi Saathiram 235 and Pulipani vaidhyam 500.

Twenty cases were selected for admission of various ages upto 12 and according to the clinical features mentioned in pararasa saharam Bala Roga Nithanam and Siddha maruthuvam sirappu. Siddha method of diagnosis was carried out for all the patients.

The drugs used to treat this disease were CHIRUTHETKODUKILAI CHOORANAM internally and SIRANGU ENNAI externally.

### **Sex distribution:**

Among the 20 cases studied 75% of cases were male children and 25% of cases were female children.

### **Age distribution:**

Of the 20 cases admitted, 25% of cases were of age 1-3 years, 30% were of from 3-6 years and 45% were of from 6-12 years.

**Kaalam and Paruvakalam:**

Since prediatric practice limits itself in vatha kaalam, all cases were in vatha kaalam.

In this study, 35% of cases were reported in Muthuvenil Kaalam, 45% were reported in Kaar kaalam.

**Thinai:**

Most of the cases 95% were from Marutha nilam and 5% were from Neithal Nilam.

**Religion:**

85% of cases were Hindus, 10% were Christians and 5% were Muslim.

**Socio Economic Status:**

Most of the patients belonged to poor socio-economic condition.

**Duration of illness:**

In most of the cases 50% duration of illness ranged from 6-10 days, 20% of cases ranged from 11-15 days.

**Clinical Features:**

Among 20 patients, 20 of them had itching, 70% of cases show burrows, 100% of cases had pruritic papules, 50% of cases had vesicles.

**State of Mukkutram:**

In vatham, viyanan and Samanan were affected in all cases. Abanan and Devathathan were affected in 10% of cases and kirugaran was affected in 20% of cases.

In pitham, prasagam was affected in all cases. Anar pitham and Ranjagam were affected in 20% and 25% of cases respectively.

In kabham kilaethagam was affected in 20% of cases.

**State of Udalkattugal:**

In Udalkattugal Saaram and Senneer were affected in all cases.

**Envagai Thervugal:**

In Envagai thervugal, sparisam was affected in all cases. Niram was affected in 50% of cases Naa and vizhi were affected in 25% of cases. Maalam is affected in 10% of cases.

The available laboratory investigations were carried out in all 20 cases.

Usually scabies can be diagnosed clinically. As skin scraping test for sarcoptes scabiei is not available here, it was not done.

In this clinical study the following drugs were given to the patients,

1. Chiruthetkodikilai Chooranam – 250mg – 1gm thrice a day with hot water (Dose was altered according to the age and the severity of disease).
2. Sirangu Ennai for external application

Reference is from Pathartha Guna vilakam and seekhicharathna Deepam.

The patients were advised pathiyam, good personal hygiene, and to avoid sharing of clothes, close physical contact. They were advised to take luke warm water bath daily and to use paasi paruppu maa or Nalungu maa instead of soaps.

It was observed that itching was completely arrested within 3-4 days and all other symptoms were disappeared in 6-10 days of treatment.

The efficacy of the trial drugs were shown by the pharmacological studies carried out in the department of pharmacology, Government Siddha Medical College, Palayamkottai. The internal medicine, Chiruthetkodukilai Chooranam had significant Antihistamine action, significant Acute Anti-inflammatory and significant Chronic Anti-inflammatory action.

The external medicine, Sirangu ennai had significant acute anti-inflammatory action.

The biochemical studies of the trial drugs reveal the presence of phytochemicals like calcium, ferrous iron and unsaturated compound. It shows the drug Chiruthetkodukilai Chooranam having essential nutrients and also improves the patients general health.

Anti- microbial study was done and the drug chiruthetkodukilai Chooranam showed sensitivity to staphylococcus and therefore having good anti-bacterial activity.

#### **Clinical Assessment:**

Among 20 cases, it was observed that 12 cases showed good response, six cases showed moderate response and two cases showed mild response.

Therefore, the results were found to be satisfactory in all cases.

## SUMMARY

The clinical study on Sirangu with reference to its aetiology, classification, clinical features, treatment and prognosis in both siddha system as well as modern system of medicine were carried out in the Inpatient ward of post graduate department of Kuzhanthai Maruthuvam.

All the patients were treated with Chiruthetkodukilai Chooranam 250mg – 1gm thrice a day after meals as internal medicine and sirangu ennai externally.

They were treated for four to ten days depending upon the severity of illness. They were also advised to attend the out-patient ward for further follow up.

Routine laboratory investigations available in the college were done and the prognosis of the patient was noted daily.

The trial drugs had corrected the clinical features and restored the skin to normal. In this study twelve cases had good relief, six had moderate relief and two cases had mild relief.

The herb is available in almost all seasons and the preparation of medicine is very simple. The ingredients of the trial medicine are very cheap and economic.

Clinically the drugs were free from adverse effect during the course of the treatment.

Pharmacological study showed that the internal medicine Chiruthetkodukilai Chooranam had significant Anti-histamine, significant acute and chronic Anti – inflammatory Action.

The external medicine sirangu ennai had significant acute anti-inflammatory action.

The trial drug Chiruthetkodukilai chooranam had good anti-bacterial activity to staphylococcus.

This ensures the efficacies of the trial drugs, which were also proved clinically.

## CONCLUSION

In this clinical study results were found to be satisfactory.

60% of cases showed good response, 30% of cases showed moderate response and only 10% of cases showed mild response.

The trial drugs were very effective to the patients and there was no recurrence of symptoms.

Clinically the drugs are free from adverse effects and so they are useful for long term therapy for pediatrics.

The drugs are also very cheap and easily available.

So it is concluded that sirangu is a controllable and curable diseases with Chiruthetkodikilai Chooranam and Sirangu ennai along with good personal hygiene.

# PREPARATION AND PROPERTIES OF THE TRIAL DRUGS

## சிறுதேட்கொடுக்கிலை சூரணம்

**தேவையான சரக்கு:**

சிறுதேட்கொடுக்கிலை

**செய்முறை :**

இலைகளை நீரில் கழுவி நிழலில் உலர்த்தி பின் உரலில் இட்டு இடித்து சலித்து பின் வெள்ளை துணியில் வஸ்திரகாயம் செய்து எடுத்துக் கொள்ள வேண்டும்.

**அளவு :**

250 மில்லிகிராம் - 1 கிராம் (நோயினன் வயது, எடை மற்றும் நோயின் வன்மைக்கு தக்கவாறு) மூன்று வேளை, உணவிற்கு பின்.

**அனுபானம்:**

வெந்நீர்

**தீரும் நோய்:**

சொறி, சிரங்கு

**ஆயுட்காலம்:**

மூன்று மாதங்கள்

**ஆதாரம்:**

பதார்த்த குண விளக்கம் பக்கம் 349.



## சிரங்கு எண்ணெய்

### தேவையான சரக்குகள்:

புளி இலை	-	35 கிராம்
கருஞ்சீரகம்	-	35 கிராம்
ஆவாரை வேர்ப்பட்டை	-	35 கிராம்
வசம்பு சுட்ட கரி	-	35 கிராம்
கார்போகரிசி	-	35 கிராம்
நல்லெண்ணெய்	-	350 கிராம்

ஆடுதீண்டாப்பாளை சாறு- தேவையான அளவு.

### செய்முறை:

சரக்குகளை நன்கு சூரணித்து அதனை ஆடுதீண்டா பாளை சாறுவிட்டு அரைத்து நல்லெண்ணெயில் கலக்கி மூன்று நாட்கள் ரவிமுகத்தில் வைத்து பின் வடிகட்டி எடுத்துக் கொள்ளவும்.

### பிரயோகம்:

வெளிப்பிரயோகம்

### தீரும் நோய்:

சொறி, சிரங்கு, கரப்பான்

### ஆயுட்காலம்:

1 வருடம்

### ஆதாரம்:

வைத்திய சிந்தாமணி சிகிச்சாரத்ன தீபம் பக்கம் - 205.

## PROPERTIES OF THE TRIAL DRUGS

### சிறுதேட்கொடுக்கு

Botanical Name	:	Heliotropium indicum
Family	:	Boraginaceae.
வளரியல்பு	:	குறுஞ்செடி
பயன்படும் உறுப்பு	:	இலை
சுவை	:	கைப்பு
தன்மை	:	தட்பம்
பிரிவு	:	இனிப்பு

#### செய்கைகள் :

சிறுநீர்ப் பெருக்கி	:	Diuretic
வறட்சியகற்றி	:	Emollient
துவர்ப்பி	:	Astringent

#### Chemical Constituents:

Leaves contain tannin, a non-crystalline organic acid and an alkaloid soluble in ether. It also contains alkaloids like heliotridine, Heleurine, Heleurine – N-oxide, Heliotridine – N-oxide indicine, Heliosupine, supinine and supinine – N-oxide.

## பொதுகுணம்.

“சிறுதேட்கொடுக்கதனைற் சேயிழையே கேளாய்

சொறிசிரங்கு புண்கரப்பான் சூலை - கொறுமந்தை

மேகவெட்டை பித்தவெட்டை மீள வெலும்புருக்கி

ஆகம் விட்டோடு மறி”

- பதார்த்த குண விளக்கம்

இதனால் சொறி, சிரங்கு, விரணப்புண், கரப்பான், கீல்வாதம், கொறுக்குப்புண், மாந்தம், வெள்ளை வெட்டை, எலும்புருக்கி ஆகியவை போம்.

The plant is bitter and astringent. It is used as a local application for ulcer, sores, wounds, gumboils, skin affections, stings of insects.

## - Nadkarni's Materia Medica

The decoction of the leaves is used in fevers and urticaria and is reported to be anti-scabious.

## - Wealth of India

### புளி

Botanical Name	:	Tamarindus indica
Family	:	Caesalpinnaceae
வேறுபெயர்	:	திந்துருணி, ஆம்பிரம், எகின், சிந்தகம்.
வளரியல்பு	:	மரம்
பயன்படும் உறுப்பு	:	இலை
சுவை	:	புளிப்பு
தன்மை	:	வெப்பம்
பிரிவு	:	கார்ப்பு

**செய்கைகள்:**

துவர்ப்பி : Astringent

வெப்பமுண்டாக்கி : Stimulant.

**Chemical Constituents:**

Leaves contain tartaric acid and malic acid.

**பொதுகுணம்.**

“அழுபண்ணை நீக்கும் அடல் சோபை மரற்றும்

எழுபாண்டு வைப்போக்கும் இப்பால் - முழுவதும்

அளியச் சிவந்த கண்ணோ யாற்றுக கனலாம்

புளியிலையை நன்றாய்ப் புகல்”

இது அழுகிய புண், சோகை, பாண்டு, சிவந்த கண்ணோய் இவைகளை நீக்கும்.

Decoction of the Leaves used as a wash for indolent ulcer promotes healthy action.

**ஆவாரை**

Botanical Name : Cassia auriculata

Family : Caesalpinnaceae

**வேறுபெயர்கள்:**

ஆவிரை, ஆகுலி, மேகாரி, ஏமபுட்டி, தலபோடம்.

வளரியல்பு : குத்துச் செடி

பயன்படும் உறுப்பு : வேர், பட்டை

சுவை : துவர்ப்பு

தன்மை : தட்பம்

பிரிவு : இனிப்பு

**செய்கைகள்:**

துவர்ப்பி	:	Astringent
குளிர்ச்சியுண்டாக்கி	:	Refrigerent
உடற்றேற்றி	:	Alterative.

Chemical Constituents: Bark Contains tannin and ash

**பொதுகுணம் :**

“மேகத்தி னாலே விளைந்த சலம் வெட்டையனல்  
ஆகத்தின் புண்ணோ டருங்கிரணி - போகத்தான்  
ஆவாரைப் பஞ்சகங்கொள் அத்திகரம் தாகமும் போம்.  
ஏவாரைக் கணமட மாதே.”

ஆவாரை இலையினால் நீரிழிவு, வெள்ளை உட்கூடு, புண், வெளி  
நிணக்கழிச்சல், எலும்பை பற்றிய சுரம், நீர்வேட்கை இவைபோம்.

It is useful to cure skin diseases, Leprosy, tumors and asthma

- Indian Medicinal plants

**கருஞ்சீரகம்**

Botanical Name	:	Nigella sativa
Family	:	Ranunculaceae

**வேறுபெயர்கள்:**

அரணம், உபகுஞ்சிகை

பயன்படும் உறுப்பு	:	விதை
சுவை	:	கைப்பு
தன்மை	:	வெப்பம்
பிரிவு	:	கார்ப்பு

### செய்கைகள்:

சிறுநீர்ப் பெருக்கி	-	Diuretic
புழுக்கொல்லி	-	Anthelmintic
தூக்குணிப்புழுக்கொல்லி	-	Parasiticide
வறட்சியகற்றி	-	Emollient.
வீக்கமகற்றி	-	Anti – inflammatory

### Chemical Constituents:

Seeds contain a yellowish volatile oil, albumin, sugar, metarbin, melanthin and organic acids.

### பொதுகுணம்.

“கருஞ்சீரகத்தான் கரப்பனாடு புண்ணும்

வருஞ்சிராய்ப் பீநசமு மன்றும் - அருந்தினால்

காய்ச்சல் தலைவலியுங் கண்வலியும் பேரமுலகில்

வாய்ச்ச மருந்தெனவே வை”

இதனால் மண்டை கரப்பான், புண், உட்கூடு, தலைநோய், கண்ணோய் இவைகளும் சிரங்கு, வயிற்றுபொருமல், குன்மம், வாந்தி, காமாலை ஆகியவை தீரும்.

### வசம்பு

Botanical Name : Acorus Calamus

Family : Araceae

### வேறுபெயர்கள்:

உக்கிரம், வசை, வேணி, பேர் சொல்லா மருந்து, பிள்ளைமருந்து, சுடுவான்.

வளரியல்பு	:	பூண்டு
பயன்படும் உறுப்பு	:	வேர்
சுவை	:	கார்ப்பு
தன்மை	:	வெப்பம்
பிரிவு	:	கார்ப்பு

**செய்கைகள்:**

வெப்பமுண்டாக்கி	-	Stimulant
பசித்தீத்தூண்டி	-	Stomachic
வாந்தியுண்டாக்கி	-	Emetic
தொற்றுப்புழுவகற்றி	-	Disinfectant
நுட்புழக்கொல்லி	-	Germicide.

**Chemical constituents:**

Rhizome Contain Volatile Essential Oil, Alkaloid Calamine, Glucoside acorin, eugenol.

**பொதுகுணம்:**

“பாம்பாதி நஞ்சற் புதப்புண் வலிவிடபாகங் குன்மம்

சூம்பா ரிரத்தபித் தம்முக நாற்றம்வன் சூலைசன்னி

வீம்பாம்பை கசம் பிலீகஞ் சிலிபதம் வீறிருமல்

தாம்பாங் கிருமி யிலையேகு மரசில சம்பினையே”

வசம்பினால் எல்லா நஞ்சுகள், புண் வகைகள், ஐவகைவலி, குன்மம், வாய்நாற்றம், சூலை, ஈரல் நோய்கள், யானைக்கால் ஆகியவை போம். அன்றியும் இது செரியாமை, கழிச்சல் சொறி, சிரங்கு, சுரங்கள் இவைகளையும் போக்கும்.

## கார்போகரிசி

Botanical Name : Psoralea corylifolia

Family : Fabaceae

### வேறுபெயர்கள்:

கார்புவா அரிசி, பாகுசி, காப்புவா அரிசி

வளரியல்பு : பூண்டு செடி

பயன்படும் உறுப்பு : விதை

சுவை : கைப்பு

தன்மை : வெப்பம்

பிரிவு : கார்ப்பு

### செய்கைகள் :

மலமிளக்கி - Laxative

வெப்பமுண்டாக்கி - Stimulant

புழுக்கொல்லி - Anthelmintic

சிறுநீர்ப்பெருக்கி - Diuretic

வியர்வைபெருக்கி - Diaphoretic

### Chemical Constituents:

Seeds contain straw-coloured essential oil, albumin, sugar, ash which containing trace of manganese.

### பொதுகுணம்.

“கார்போக மரமரிசி கண்டாற் கரப்பரன்புண்

பீச்சுவ நஞ்சிவைபோம் பித்தமுண்டாம் - பரமீதில்

வரத கபநமைச்சல் வன்சொறிசி ரங்குமறுஞ்

சீத மலர்க்குழலாய் செப்பு ”



இதை கடுவன், விரணம், சர்ப்ப விஷம், தினவு, யானைசொறி, சிரங்கு, கிரந்தி, கரப்பான் இவைகளுக்கு உபயோகிக்கலாம்.

### எள்

Botanical Name : Sesamum indicum

Family : Pedaliaceae

### வேறுபெயர்கள்:

#### திலம்

வளரியல்பு : சிறிய செடி

பயன்படும் உறுப்பு : விதை - எண்ணெய்

சுவை : இனிப்பு

தன்மை : வெப்பம்

பிரிவு : இனிப்பு

### செய்கைகள் :

வெப்பமுண்டாக்கி - Stimulant

உரமாக்கி - Tonic

மலமிளக்கி - Laxative

சிறுநீர்பெருக்கி - Diuretic.

### Chemical Constituents:

Seeds contain fixed oil which contains 70 p.c. of liquid fats consisting of the glycosides of oleic acid, linoleic acids, solid fats, stearin, palmitin, myristin, crystallin substance – sesamol, sesamin.

## பொதுகுணம்.

“எள்ளுமருந் தைக்கெடுக்கும் எறனலாஞ் திண்மைதரும்.

உள்ளிலையைச் சேர்க்கும் உதிரத்தைத் தள்ளுமிரு

கண்ணுக் கொளிகொடுக்குங் காசமுண்டாம் பித்தமுமாம்

பண்ணுக் கிடர்புரியும் பங்”

வெம்மை, காசம் ஐயம் இவற்றை பெருக்கும் கண்ணுக்கு ஒளியையும் உடலுக்கு வன்மையையும் தரும். குருதிப்பெருக்கை உண்டாக்கும்.

## ஆடுதிண்டாப்பாளை

Botanical Name : Aristolochia bracteolata

Family : Aristolochiaceae

## வேறுபெயர்கள்:

ஆடுதின்னாப்பாளை, பங்கம் பாளை, ஆடுதொடாப்பாளை,

வளரியல்பு : பூண்டு இனம்

பயன்படும் உறுப்பு : இலை

சுவை : கைப்பு (குமட்டல்)

தன்மை : வெப்பம்

பிரிவு : கார்ப்பு

## செய்கைகள்

புழுக்கொல்லி - Anthelmintic

வெப்பமுண்டாக்கி - Stimulant

நீர்மலம்போக்கி - Purgative

உடற்றேற்றி - Alterative

முறைவெப்பகற்றி - Antiperiodic.

**Chemical constituents:**

Contains an aromatic oil, alkaloid salts specially potassium chloride.

**பொதுகுணம்.**

“ஆடுதொடாப் பானைக் ககக்கிருமி வன்சிலந்தி

நீடுகருங் குட்டம் நிறைகரப்பான் - ஆடிடச் செய்

எண்பது வாய்வும் இகல்குட்ட முந்தீரும்

திண்பெறுநற் றாதுவுமளஞ் செப்பு.”

குடற்புழு, சிலந்தி, பூச்சி நஞ்சுகள், கரும்படை, கரப்பான், வாதநோய் -

80, பன்றிதோல் போன்ற படை ஆகியவை தீரும். பலமும் உண்டாகும்.

## BIO – CHEMICAL ANALYSIS

### BIO – CHEMICAL ANALYSIS OF CHIRUTHETKODUKILAI

#### CHORANAM

#### PREPARATION OF THE EXTRACT

5gms of Chooranam was weighed accurately and placed in a 250ml clean beaker. Then 50ml distilled water is added and dissolved well. Then it is boiled well for about 10 minutes. It was cooled and filtered in a 100ml volumetric flask and then it is made up to 100ml with distilled water. This fluid is taken for analysis.

#### Qualitative Analysis

S. No.	Experiment	Observation	Inference
1.	<b><u>Test for calcium</u></b> 2ml of the above prepared extract is taken in a clean test tube. To this add 2 ml of 4% ammonium oxalate solution.	A white precipitate is formed.	Indicates the <b>presence of calcium.</b>
2.	<b><u>Test for sulphate:</u></b> 2ml of the extract is added to 5% barium chloride solution.	No white precipitate is formed.	Absence of sulphate.
3.	<b><u>Test for chloride</u></b> The extract is treated with silver nitrate solution.	No white precipitate is formed.	Indicates the <b>Absence of chloride.</b>

4.	<b><u>Test for carbonate</u></b> The substance is treated with concentrated HCl.	No brisk effervescence is formed.	Absence of carbonate.
5.	<b><u>Test for Starch</u></b> The extract is added with weak iodine solution.	No blue colour is formed	Absence of starch.
6.	<b><u>Test for iron</u></b> <b><u>Ferric</u></b> The extract is treated with concentrated glacial acetic acid and potassium ferrocyanide.	No blue colour is formed.	Absence of ferric iron.
7.	<b><u>Test of iron :</u></b> <b><u>Ferrous:</u></b> The extract is treated with concentrated Nitric acid and ammonium thiocyanate.	Blood red colour is formed.	Indicates the presence of ferrous iron.
8.	<b><u>Test for phosphate</u></b> The extract is treated with ammonium molybdate and concentrated nitric acid.	No yellow precipitate is formed.	Absence of phosphate.
9.	<b><u>Test for albumin</u></b> The extract is treated with Esbach's reagent.	No yellow precipitate is formed.	Absence of albumin.

10.	<b><u>Test for Tannic acid</u></b> The extract is treated with ferric chloride reagent.	No blue black precipitate is formed.	Absence of Tannic acid.
11.	<b><u>Test for unsaturation</u></b> Potassium permanganate solution is added to the extract.	It gets decolourised.	Indicates the <b>Presence of</b> unsaturated compound.
12.	<b><u>Test for the reducing sugar</u></b> 5ml of benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts and added 8-10 drops of the extract and again boil it for 2 mts.	No colour change occurs.	Absence of reducing sugar.
13.	<b><u>Test for amino acid:</u></b> One or two drops of the extract is placed on a filter paper and dried it well. After drying, 1% Ninhydrin is sprayed over the same and dried it well.	No violet colour is formed.	<b>Absence of</b> amino acid.

### **Inference**

The given sample of “**CHIRUTHETKODUKILAI CHOORANAM**” contains calcium, ferrous iron and unsaturated compound.

**PHARMACOLOGICAL STUDIES**  
**ACUTE ANTI-INFLAMMATORY STUDIES ON**  
**CHIRUTHETKODUKILAI CHOORANAM**

**Introduction:**

In the Siddha System of Medicine, the drug under study is indicated in the condition of Sirangu Noi. Therefore, it was through appropriate screening of the drug for its acute inflammatory activity with the help of carrageenin induced Hind-paw edema and for chronic anti-inflammatory activity cotton pellet granuloma method.

**Aim:**

To evaluate the acute anti-inflammatory effect of Chiruthetkodikilai Chooranam by Carrageenin induced hind paw oedema method in Albino rats.

**Materials and Methods:**

2 gms Chiruthetkodikilai Chooranam was suspended in 10ml of distilled water with gum acacia as suspending agent.

**Carrageenin induced Hind Paw Method:**

Six healthy albino rats of either sex weighing between 80-100 gm were selected. The volume of each hind paw was measured by using the mercury – plethysmograph.

After the measurement of hind paw of all the rats, they were divided into the groups each containing two rats.

First group was kept as control by giving distilled water 1ml/100gm of body weight. The second group was given Ibuprofen 20mg/100gm body weight and kept as standard. Third group was given test drug Chiruthetkodukilai Chooranam 100gm/100gm body weight.

The drugs were administered orally. One hour after drug administration, 0.1ml 1% (w/v) of carrageenin suspension in water is injected in the plantar surface of Hind Paw of all rats.

All the animals thus given carrageenin injection subcutaneously.

Three hour after carrageenin injection the hind paw volume was measured once again. From the differences in the initial and final hind paw volume, the degree of the inflammation was calculated by taking the volume in the untreated control group as 100%.

The percentage of inflammation of the other group was calculated.

### **Results:**

The details of the experimental results shown in the table.



## EFFECT OF CHIRTHETKODUKILAI CHOORANAM :

Group	Drugs	Dose/100gm of body weight	Initial value	Final value	Mean difference	% Inflammation	% Inhibition
Control	Water	2ml	0.55	1.4	0.85	100	-
Standard	Ibuprofen	20mg/1ml	0.55	0.85	0.3	35.2	64.8
Test Drug	Chiruthet- -kodikilai Chooranam	100mg/1ml	0.9	1.25	0.35	41.1	58.9

### Inference:

The test drug Chiruthetkodikilai Chooranam has **Significant** Acute Anti –inflammntory action.

## **CHRONIC ANTI – INFLAMMATORY EFFECT OF CHIRUTHETKODUKILAI CHOORANAM**

### **Aim:**

To evaluate the chronic anti – inflammatory effect of Chiruthetkodukilai Chooranam in rats by cotton pellets granuloma method.

### **Materials and method:**

#### **Drug preparation:**

1gm of Chiruthetkodukilai Chooranam was suspended in 10ml of distilled water with gum acacia as suspending agent.

#### **Cotton pellet Granuloma method:**

#### **Procedure:**

Six healthy albino rats of either sex weighing between 80-100 gm were selected and divided into 3 groups each containing 2 rats.

In this procedure the drugs were given daily for 7 days. Before giving the drug cotton pellets each weighing 10 mg were prepared and sterilized in an autoclave for about one hour under 15 Pounds atmospheric pressure.

On the day of experiment, each rat was anaesthetised with ether to implant 10mg of sterilized cotton pellet subcutaneously in the lower abdomen two on each side after making suitable incision and sutured carefully.

First group was kept as control group by giving distilled water of 1ml/100gm of body weight. To the second group the standard drug Ibuprofen in a does of 20mg/100gm of body weight was given.

The third group of animals was given tested drug Chiruthetkodikilai Chooranam in a does of 100mg/100g of body weight.

On the 8<sup>th</sup> day of the experiment, all the rates were sacrificed and cotton pellets found to be surrounded by granulation tissue were removed and dried in hot air oven at 55<sup>0</sup>C-60<sup>0</sup>C.

**Results:**

The details of the experimental results are shown in the table.

## EFFECT ON CHIRUTHETKODIKILAI CHOORANAM

Groups	Dose/ 100gm body weight	Pellet weight	Pellet weight of the granuloma of drugs	% inflammation	% inhibition
Water	2ml	10mg	250	100	-
Ibu Brufen	20mg/1ml	10mg	55mg	22	78
Chiruthetkodu kilai Choranam	100mg	10mg	99	40	60

### **Result:**

The test drug Chiruthetkodukilai Chooranam has **Significant** Chronic Anti – inflammatory action.

## **ANTI – HISTAMINIC STUDY OF CHIRUTHETKODUKILAI CHOORANAM**

### **Aim:**

To study the Anti – histaminic effect of Chiruthetkodukilai chooranam.

### **Preparation of the test drug:**

1gm of Chiruthetkodukilai Chooranam was boiled with 20ml of water for 15 mins. 2ml of decoction was taken as the test drug.

### **Procedure:**

A guinea pig weighed about 350gm was starved for 48 hours. It was sacrificed by a blow on the head and external jugular vein was allowed to bleed. The abdomen was then cut and ileum was cut out and placed in a tray which contained warm tyrode solution (37<sup>0</sup>C) and continuously aerated. The contents of the lumen of the ileum were washed and utmost care was taken to avoid any damage to the gut muscle. An ileum segment having a length of about 3cm was taken and tied in both ends with thread. One end was tied in a ‘j’ tube and the other end was tied in a frontal lever. The tissue was put in an organ bath and the effect of drug on histamine induced contractions was recorded.

### **Inference:**

The drug Chiruthetkodukilai Chooranam has **significant** Anti-histamine action.

## **ACUTE ANTI-INFLAMMATORY STUDY OF**

### **SIRANGU ENNAI**

**(Externally)**

#### **BY HINDPAW METHOD IN ALBINO RATS**

##### **Procedure:**

Anti-inflammatory activity of Sirangu ennai was studied in healthy albino rats.

Six rats were selected and divided into three groups. To the first group distilled water was given and kept as control. The second group was given the standard drug Ibuprofen at a dose of 20mg/ 100gm body weight. The third group was treated with the test drug externally. Before the application of the drug the hindpaw volume of all rats was measured. This was done by dipping the hindpaw upto the tibio dorsal junction in a mercury plethysmography. Subcutaneous injection of 0.1 ml of 1% w/v carrageenin in water was made into plantar surface of both the hindpaw of each rat. Three hours after injection, the hindpaw volume was measured once again. The difference between the initial and final volume would show the amount of inflammation.

Taking the volume in the control group as 100% of inflammation, the inflammatory or anti-inflammatory effect of the test group is calculated.

<b>Drugs</b>	<b>Dose/100gm of body weight</b>	<b>Initial value</b>	<b>Final value</b>	<b>Mean difference</b>	<b>% Inflammation</b>	<b>% Inhibition</b>
Control (Water)	2ml	0.55	1.4	0.85	100	-
Standard (Ibuprofen)	20mg/1ml	0.55	0.85	0.3	35.2	64.8
Test Drug (Sirangu ennai)	External	0.87	1.15	0.28	32.9	67.1

**Inference:**

It is observed that Sirangu ennai has **significant** Acute Anti-inflammatory action.

## ANTI-MICROBIAL (BACTERIAL) ACTIVITY OF CHIRUTHETKODUKILAI CHOORANAM

**Aim:**

To identify the anti-microbial (Bacterial) activity of Chiruthetkodikilai Chooranam against Streptococcus, Staphylococcus, Proteus and Psuedomonas.

**Medium** : Muller Hinton agar

**Components of Medium:**

Beef extract	:	300gms /lit
Agar	:	17gms /lit
Starch	:	1.50gms /lit
Casein Hydroxylate	:	17.50gms /lit
Distilled Water	:	1000 ml
pH	:	7.6

**Procedure:**

The media was prepared from the above components and poured and dried on a Petri dish. The organism was streaked on the medium and the test drug (1 gm drug in 10 ml of Water) was placed on the medium. This is incubated at 37<sup>0</sup>C for one over night and observed for the susceptibility shown up clearance around the drug.



S.No.	Organisum	Susceptibility	Zone of inhibition in mm
1.	Staphylococcus	Sensitive	14t0 16 mm
2.	Pseudomonas	Resistant	
3.	Streptococcus	Resistant	

**Result:**

The test drug Chiruthetkodukilai Chooranam was **sensitive** against Staphylococcus.

**GOVERNMENT SIDDHA MEDICAL COLLEGE AND HOSPITAL**

**BRANCH IV – KUZHANTHAI MARUTHUVAM**

**PALAYAMKOTTAI – 627 002.**

**CASE SHEET PROFORMA FOR SIRANGU**

Name of the Medical unit:                      Nationality                      :

I.P. No.                      :                      Religion                      :

Bed. No.                      :                      Date of Admission                      :

Name                      :                      Date of Discharge                      :

Age/ Sex                      :                      Duration of treatment                      :

Occupation (Parents)                      :                      Diagnosis                      :

Income (parents)                      :                      Medical Officer                      :

Informant                      :

Address                      :

Complaints and duration :

History of present illness :

History of past illness :

Antenatal History :

Birth and Neonatal History :

Dietetic and Nutritional History :

Developmental History :

Family History :

Social History :

Immunization History :

Contact History :

**General Examination**

1. Consciousness :

2. Decubitus :

3. Anaemia :

4. Jaundice :

5. Cyanosis :

- 6. Clubbing :
- 7. Pedal oedema :
- 8. Lymphadenopathy :
- 9. Nourishment :
- 10. Skin changes :

### **Vital Signs**

- 1. Pulse
  - Rate :
  - Rhythm :
  - Volume :
  - Character :
- 2. B.P. :
- 3. R.R. :
- 4. Temperature :

### **Anthropometry**

- 1. Wt – Weight :
- 2. Ht – Height :
- 3. Mid arm circumference :
- 4. Head circumference :
- 5. Chest :
- 6. Skin fold thickness :

## **Siddha System - Clinical Examination:**

### **Poripulungal**

Mei	:
Vai	:
Kaan	:
Mookku	:
Sevi	:

### **Kanmendriyam – Kanmavidayam**

Kai	:
Kaal	:
Vaai	:
Eruvaai	:
Karuvaai	:

### **Gunam**

Sathuvam	:
Rajo	:
Thamo	:

### **Nilam**

Kurinchi	:
Mullai	:
Marutham	:
Neithal	:
Palai	:

**Paruva Kaalam**

Kar	:
Koothir	:
Munpani	:
Pinpani	:
Elavenil	:
Muthuvenil	:

**Utkayam – Athakayam**

Puyam	:
Sayam	:
Kaal	:
Paatham	:

**Pira Uruppugalin Nilai**

Moolai	:
Iruthayam	:
Puppusam	:
Kalleeral	:
Manneeral	:
Kudal	:
Siruneeragam	:
Kuri	:

**Mummalam**

Viyarvai	:
Malam	:
Moothiram	:

**Mukutra Udal**

Vaatha thegi	:
Piththa thegi	:
Kabha thegi	:
Kalappu thegi	:

**Udal thathugal:****Vaatham**

Piranan	:
Abaanan	:
Uthaanan	:
Viyaanan	:
Samaanan	:
Naagan	:
Koorman	:
Kirugaran	:
Devathathan	:
Dhananjeyan	:

**Pitham**

Anilam	:
Ranjagam	:
Sathagam	:
Alosagam	:
Pirasagam	:

**Kabam**

Avalambagam	:
Kiletham	:
Pothagam	:
Tharpagam	:
Santhigam	:

**Udal Kattugal**

Saaram	:
Senneer	:
Oon	:
Kozhuppu	:
Enbu	:
Moolai	:
Sukkilam/Suronitham	:



## **Envagai Thervugal**

Naadi	:
Sparisam	:
Naa	:
Niram	:
Mozhi	:
Vizhi	:
Malam	:
Moothiram	:

## **Neerkuri**

Niram	:
Manam	:
Nurai	:
Edai	:
Enjal	:

## **Neikuri** :

## **Malakuri**

Niram	:
Nurai	:
Elagal	:
Erugal	:

## **Clinical Examination of Skin**

Site of the lesion	:
Size	:
Shape	:
General colour of the skin	:
Colour of lesion	:
Pruritis	:
Erythema	:
Scaling	:
Oozing	:
Crusting	:
Lichenified	:
Hair follicular involvement	:
Exudation	:
Excoriation	:
Ulceration	:
Bleeding	:
Macule	:
Papule	:
Pustule	:
Nodule	:
- wheal	:
- Scar	:

## **Blister**

Vesicle	:
Bullae	:
Scald like	:
Haemorrhage	:

## **Examination of other systems**

CNS	:
CVS	:
RS	:
Abdomen	:

## **Lab Investigations**

### **1. Blood**

TC	:
DC	:
Hb	:
ESR	:
HIV	:
VDRL	:
Sugar	:
Urea	:
Cholesterol	:
IgE	:

**2. Urine**

Albumin :

Sugar :

Deposits :

**3. Motion**

Ova :

Cyst :

RBC :

Pus Cells :

**4. Skin Scrapping :**

**5. Skin clipping :**

**6. Skin biopsy :**

**7. Culture and sensitivity :**

**DIFFERENTIAL DIAGNOSIS :**

**PROGNOSIS :**

**MARUTHUVAMURAI :**

**DAILY PROGRESS :**

**ADVICE**



## GLOSSARY

IP	-	In-Patient
OP	-	Out-Patient
TC	-	Total White blood Corpuscle
DC	-	Differential Count
P	-	Polymorphs
L	-	Lymphocytes
E	-	Eosinophils
B	-	Basophils
M	-	Monocytes
ESR	-	Erythrocyte Sedimentation Rate
MC	-	Male Child
FC	-	Female Child
Sec	-	Seconds
Mts	-	Minutes
Hr	-	Hour
Alb	-	Albumin
Dep	-	Deposits

## BIBLIOGRAPHY

- ❖ Balavagadam – Dr. Pon Guru Sironmani
- ❖ Para rasa seharam – Bala roga nithanam
- ❖ Gunapadam – Mooligai Vaguppu-K. Murugesu Mudaliyar.
- ❖ Pathartha Guna Vilakam – Thavaru Varkam –C.Kannusamy Pillai.
- ❖ Sekhicha Ratna Deepam-C.Kannusamy Pillai.
- ❖ Siddha Maruthuvam Sirappu-Dr.Thiyagarajan
- ❖ Noi Naadal Noi Muthal Naadal – Part – I- Dr .M.Shanmuga Velu.
- ❖ Siddha Maruthuvanga Churukkam- Dr .K.S. Uttamarayan
- ❖ Noi illa neeri – Dr.G.Durairajan
- ❖ T.V. Sambasivam Pillai Agarathy
- ❖ Guru Naadi Saathiram – 235
- ❖ Pulipani Vaidhyam – 500
- ❖ Angathi Patham
- ❖ Practice of Dermatology – P.N. Bhel
- ❖ Roxburgh's Common skin diseases.
- ❖ Text Book of Dermatology – Pasricha
- ❖ Secrets of Dermatology.
- ❖ Text Book of Clinical Dermatology – Virendra N. Sehgal
- ❖ Gray's Human Anatomy

- ❖ Text Book of Human Anatomy – T.S. Ranganathan.
- ❖ Ross and Wilson Anatomy and Physiology in Health and Illness.
- ❖ Essentials of Medical Physiology –K.Chembulingam
- ❖ Nelson Text Book of Pediatrics.
- ❖ Essential Pediatrics – O.P. Ghai.
- ❖ Wealth of India – Volume III.
- ❖ Indian Materia Medica – K.M. Nadkarni
- ❖ Indian Medicinal Plants – Krithikar and Basu.
- ❖ Alkaloids and Alkaloids containing Plants.
- ❖ Indian Medicinal Plants.
- ❖ [www.wikipedia.com](http://www.wikipedia.com)
- ❖ [www.emedicine.com](http://www.emedicine.com)