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Chennai – 47

AFFILIATED TO THE TAMILNADU DR. M.G.R MEDICAL UNIVERSITY
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A STUDY ON
VARAL KARAPPPAN

(DISERTATION SUBJECT)

For the Partial fulfillment of the
requirement to the Degree of

DOCTOR OF MEDICINE (SIDDHA)
BRANCH – IV KUZHANTHAI MARUTHUVAM

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INTRODUCTION

Health is defined by the world Health Organisation as the “State of Complete Physical, Mental and Social Well being and not merely the absence of disease and infirmity”.

The Siddha System is serving the mankind to all of its physical and mental, social and spiritual components of human being. The advantage and unique feature is the removal of root causes of the disease and perfect for body and mind. Siddha is a Tamil Word that is derived from the root ‘Chit’ which means perfection in life or heavenly bliss.

In the world, every substances both visible or invisible, animate or inanimate is said to be formed of panchaboothas, otherwise called the five kinds of elements viz., Pirthivi, Appu, Theyu, Vayu and Akash.

A close relationship is found existing between the external world and the internal system of human being. This is mentioned in Siddha literature as

The whole body is governed by their physiological factors called “Three Thathus’ namely Vatham, Pitham and Kabam held in the ratio of 1: 1/2: 1/4.

Vatham = Air + Space
Pitham = Fire
Kabam = Earth + Water

If these thathu are provoked by any external and internal factors, it will result as disease. At this condition these Thathus are called ‘Three Doshas’ or ‘Three Dhodam’.

The life time of the Child is divided into various stages or paruvam. They are:
In Siddha System, the Pediatric science is known as Balavagadam or Kuzhanthai Maruthuvam. But only a very little amount of literature is available for us.

“சுருக்க இன்றைய பிறப்பு காலம்

பிறங்கால காலம் காட்சியை அடையாது”

- பிறங்கால காட்சியை அடையாது

Which means a child’s health is decided even at the time of conception. They have also told that the Physical and Mental condition and diet of the mother even during pregnancy and lactation directly affects the child health and this is a causative factor of a disease or weakness of child.

Diseases can occur in the child from his fetal life and it is classified under காலம் காட்சியை இன்றையக் காலம் sub divided by அந்தக் காலம் காட்சியை மருத்துவக் காலம்.

Based on the treatment aspect, Pediatric Medicines mostly consist of Oils, Pills, decoctions, Chooranam, Legium, and nei which forms it can be easily absorbed.
Infectious diseases mostly affect the Children’s health during their growth and development. ‘Varal Karappan’ is one of the infectious diseases which are most common.

Siddha Medicines are more effective in Skin Disease. That’s why I have selected one of the skin disease ‘Varal Karappan’ as my dissertation work.

Skin acts as a linking media between our body and the outer world. The skin is the first organ affected by any change in the universe. Because the skin is closely related with mind even a slightest distress or strain of the mind will be reflected by skin, in the form of itching and so on.

The author hopes that the work on ‘Varal Karappan’ would provide better information about the clinical trails with in selected days.

1. Internal Drug: Karappan Chooranam 250 gm - 1 gm. (Twice a day with honey)
2. External Drug: Milagu Ennai - External application
AIM AND OBJECTIVES

AIM

About 20 to 30 percent problems in children pertain to dermatology. Lot of interest has been developed in the field of pediatric dermatology. Varal karappan is one of the major skin diseases affecting the pediatric age group in developing countries like India. Varal karappan is closely related to cultural, food habits and socio-economic status. The patient having physical and mental disturbances leading to school failure. Hence this study was carried out with an intention to formulate an apt treatment for Varal Karappan (வரல் கரப்பன்).

At the pediatric stage of life, the integument differs from that of adults in important essentials, hence the proneness and development of diseases varies in several respects, infections are common; immunological development is incomplete and psychosomatic system immature and stable.

Together with, the poor socio-economic status, unhygienic dwelling and lack of personal counselling tend to aggravate the dermatological problem in children.

Uncontrolled skin eruptions in children may further involve the other systems making them vegetative individuals in the society. Hence the special attention in controlling and preventing the dermatological problem is necessary.

So the author is much interested in choosing the disease varal karappan as the topic for dissertation and treating the same with the help of “Karappan chooranam” internally and “Milagu ennai” externally.
OBJECTIVES:

1. To collect various trust worthy ideas about Varal Karappan with deep observation of the etiology, clinical features, diagnosis, prognosis, complications based on both siddha and modern aspects.

2. To have an idea about the prevalence of Varal karappan with reference to age, sex, socio – economic status, family history etc.

3. To expose the siddha diagnostic principle in diagnosing the disease.

4. To evaluate the pharmacological study and bio-chemical analysis of the trial medicines.

5. To have a clinical trial on the patients with the selected drugs along with proper diet supporting the treatment.

6. To use modern diagnostic parameters in studying the progress of the patients.
PROTOCOL

1. INTRODUCTION

Varal karappan is the common skin disease in children. It is characterized by severe itching, vesicle formation, oozing and sleep disturbances.

In Agathiyar2000 text, and Gunapadam mooligai vaguppu there is preparation named Karappan chooranam which are collectively indicated for Varalkarappan, and in Balavagadam text, there is a preparation named Milagu ennai for external use. Both of these drugs are practiced not commonly. Karappan choornam and Milagu ennai is indicated for all types of Karappan. Since the efficacy of Karappan choornam is not known precisely, it is proposed to carry out a pilot clinical trial.

2. AIMS

a. Primary aim
To find out the efficacy of Karappan Choornam and Milagu ennai in Varalkarappan.

b. Secondary Aim
To find out the side effects of the drugs, if any.

3. POPULATION AND SAMPLE

The population consists of pediatric patients with Varalkarappan satisfying the inclusion and exclusion criteria mentioned below. The sample consists of patients attending the Ayothisoss Pandithar Hospital of the National Institute of Siddha, Chennai-47.

4. SAMPLE SIZE

The trial size will be 50 patients.
30 patients treated in OPD.
20 patients treated in IPD.
5. SELECTION CRITERIA

a. INCLUSION CRITERIA
   - Aged 3 to 12 years
   - Willing to give specimen of blood for investigation when required
   - Willing to be admitted in the Hospital or willing to attend OPD once in 7 days for 48 days
   - Itching
   - Papules
   - Vesicles
   - Pustules
   - Ulcer
   - Oozing
   - Hyperpigmentation
   - Sleep disturbances

b. EXCLUSION CRITERIA
   A patient is not eligible for admission to the trial if any of the following is applicable.
   1. Jaundice
   2. Patients with any other serious illness.
   3. Atopic dermatitis
   4. Photodermatitis

c. WITHDRAWAL CRITERIA
   1. Exacerbation of symptoms
   2. Occurrence of any serious illness.

6. TRIAL DRUG, DOSAGE, DURATION
   1. Internal Drug – Karappan Choornam 250mg-1gm, b.d., after food with honey.
   2. External Drug – Milagu ennai Q.s., twice application / day
   Trial Period – 48 days.
7. ASSESSMENTS & TESTS

a. CLINICAL ASSESSMENT

- Itching.
- Presence of papules / Vesicles / Pustules.
- Oozing.
- Sleep disturbance
- Hyperpigmentation.

b. INVESTIGATIONS

1) Siddha Assessment
   Nilam, Kaalam, Uyir thaathukkal, Udal thaathukkal, Envagai thervugal.

2) Investigations
   Blood Test: TC, DC, Hb, ESR
   Urine test: Albumin, sugar, deposits
   Motion test: Ova, cyst

3) Siddha Investigations
   Neerkuri, Neikuri.

8. CONDUCT

Varal karappan patients satisfying the inclusion and exclusion criteria will be included in the trial. Informed consent will be obtained from the parents of each patient. Photos will be taken and tests will be carried out before treatment and at the end of the treatment.

For OP patients, the trial drugs will be issued for 7 days at a time. They will be asked to attend the OOD once in 7 days. Also, they will be instructed to bring back un Consumed trial drugs and return them during their next visit.
9. FORMS

Form I – Selection Proforma
It is used before admission of the patients to the trial

Form II- Assessment Proforma
It is used once in 7 days during treatment

10. ANALYSIS

Changes in subjective parameters will be analyzed using Paired $X^2$- test and changes in objective parameters will be analyzed using Paired t-test.
REVIEW OF LITERATURE

SIDDHA ASPECT

VARAL KARAPPAN is one of the eighteen types of Karappan which affects the children. This skin disease was described by various Siddhars in detail about the general aetiology, signs, symptoms and prognosis.

(Definition)

VARAL KARAPPAN

In take of Karappan foods like corn, plantain, millet, bitter guard, fish.
In addition to this,

“சுருக்கு சொல்ல மூவர்கள் மாகாணம்
புது காண விளக்கம் சாயாக
 ஒரு வரவு போது நோய் செய்து
விலங்குப் பொருந்து நிலையிட்டு”

This means a child’s health is affected even at the time of conception. They have also told that the physical and mental condition and diet taken by the mother during pregnancy and lactation directly affects the child and thus it may be a factor for the disease or weakness of the child.

Development of immunity of a child starts in the intra – uterine life itself. Therefore the drugs taken by the pregnant woman every month have to be dealt with.
The predominance of panchaboothas, gunas and mukkutram at the time of fertilization decides the constitution (or) bio–typology of the individual one throughout the life time. The physical constitution of an individual depends upon the following factors,

- Condition of sperm and ovum at the time of conception.
- Nature and condition inside the uterus.
- Food and other regimens adopted by mother during pregnancy.
- Nature of the elements comprising the foetus.

In take of fish, mutton, rhizomes, tubers of some plants taken by the mother produces Karappan in the child due to breast feeding.

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...A+fp itj;jpa rpe;jhkzp
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- Excessive intake of fish, meat, cereals like ragi, maize, rhizomes.

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- Airborne infection.
- Excessive intake of jaggery, Fish, mangoes.
- Poisonous bites may cause the disease.
In Balavagadam – Karappan is classified into eighteen types:

1. Vatha karappan (வத்தா கரப்பன்)
2. Pitha karappan (பிவ்தா கரப்பன்)
3. Sethuma karappan (சேதுமா கரப்பன்)
4. Ari karappan (ஏறிக் கரப்பன்)
5. Oothu karappan (ஓற்று கரப்பன்)
6. Soolai karappan (சூலை கரப்பன்)
7. Vedi karappan (வெடிக் கரப்பன்)
8. Mandai karappan (மண்டைக் கரப்பன்)
9. Pori karappan (போரிக் கரப்பன்)
10. Sattai karappan (சாட்டைக் கரப்பன்)
11. Odu karappan (ஓடுக் கரப்பன்)
12. Karung karappan (கார்ஊன்க் கரப்பன்)
13. Senkkarappan (சென்கக் கரப்பன்)
14. Kolli karappan (கொல்லி காரப்பண்)
15. Thoda karappan (தொடா காரப்பண்)
16. Valai karuppan (வளை கார்ப்பன்)
17. Varal karappan (வரால் காரப்பண்)
18. Veengu karappan (வெங்கு காரப்பண்)

**In Gurunaadi Sasthiram**
Karappan is classified into eighty five as follows,

“பொண்ட்ல் புழுச்சிகள் பொண்ட்ளுக் கார்பண்ணுகளுக்கு
தொடரும் விளக்கம் பேசுகின்று காலங்களுக்கு
தொடரும் விளக்கம் காலங்களுக்கு வருவது
தொடரும் விளக்கம் பொண்ட்ளுக் கார்பண்ணு
தொடரும் விளக்கம் பொண்ட்ளுக் கார்பண்ணு”

- கருணாதேசியன் - 235

**In Agasthiyar 2000**
It was mentioned that karappan are sixty six in numbers

“சிறந்தே கார்பண்ணுக்கு கருணாதேசியன்
லகையுலகத் தலைமுக பெருக்காமலாயும் காலங்களுக்கு
கார்பண்ணு புழுச்சிகள் பொண்ட்ளுக் கார்பண்ணு
கார்பண்ணு பொண்ட்ளுக் கார்பண்ணு”

- ஆகத்து - 2000

**In Agasthiyar Rana Nool**
There are eighty varieties of karappan

“சிறந்தே கார்பண்ணுக்கு கருணாதேசியன்
லங்களுக்கு பெருக்காமலாயும் காலங்களுக்கு
புழுச்சிகளுக்கு கார்பண்ணு
கார்பண்ணு பொண்ட்ளுக் கார்பண்ணு
கார்பண்ணு பொண்ட்ளுக் கார்பண்ணு”

- ஆகத்து - ஆகத்து

**In Yugi vaidhya chintamani**
Karappan is classified into seven types,

“சிறந்தே கார்பண்ணு
அல்லாஹ் கார்பண்ணு
கார்பண்ணு
கார்பண்ணு
கார்பண்ணு
கார்பண்ணு
கார்பண்ணு”

- ஆகத்து - ஆகத்து
In Agasthiar 2000 part III
Karappan has been classified into six varieties.

They are,
1. Vatha karappan (வது காரப்பன்)
2. Sori karappan (சொரி காரப்பன்)
3. Varal karappan (வாரல் காரப்பன்)
4. Silethuma karappan (சிலேதுமா காரப்பன்)
5. Mandai karappan (மந்தை காரப்பன்)
6. Varatchi karappan (வராத்தி காரப்பன்)

General signs and symptoms of Varal Karappan.
According to ‘BALA VAGADAM’

• Itching, Oozing, papules in the body.
• Insomnia.
• Bullae present in the whole body.
Details about the other types of karappan.


dryness of mouth, fever.
• itching and pain all over the body.
• vesicles, oozing, bullae, papules, bleeding in the lesion.

Vomiting, headache, fever.
• itching, oliguria.
• constipation.

Ulcers in the mouth.
• chest pain.
• ulcers in the trunk.
Ulcers in the genital organs.

Itching and oozing in the inner aspect of the thigh.

Emaciation.

Fever with rigor.

Tumours in the body.

Itching and ulcers in the nose.

Generalised oedema.

Ulcers and pain in the body.

Difficulty in moving both knee and elbow joints.

General debility.
Swelling in the body.
• Pain and swelling all over the joints.
• Itching, headache.
• Fever.

Ear discharge.
• Headache, fever.
• Loss of weight.
• Pain in the throat.

Papules in the body.
• Dryness of mouth.
• Altered sensorium.
• Pain in all the joints.
• Yellow colouration of the skin.
• Itching and oozing in the lesion.
• Constipation, headache.
• Fever.

• Pain and swelling in all the joints.
• Constipation.
• Itching, swelling in the body.

• Discolouration of the skin.
• Crying, fever.
• Oedema in the face and lower limbs.
• Itching in the body.
• Macules and papules are present.
• Blackish discolouration in the face.

Abdominal swelling.
• Dyspnoea, constipation.
• Hiccough.

• Fever with rigor.
• Papules and nodules in the body.
• Generalised oedema.
Swelling in various parts of the body.

Burning sensation in the site of the lesion.

Itching and oozing.

Pain in the lower extremities.

Appearance of vesicles, oozing bullae, papules.

Foul smelling discharge in the ulcers.

Ulcer present in all over the body.

Oozing.

Itching.

Sleep disturbance.

**Prognosis of Karappan** (நீர்ப்பசோனம் - காரப்பனம்)

நீர்ப்பசோனம் - காரப்பனம்

நீர்ப்பசோனம் - சதுர் 17 மாதகாலம்
(Pathogenesis)

(Classification)

(Vatham)

2. (Location of vatham in the body)
4. உத்தனன் (Uthanan)  
(சிவன் ஜூகுத்தாரான்)  
- பண்பனால் தற்போது அம்சையிட நூற்றாண்டு.  
- பொறியாய்ப்பின்றியது, கல்விமாடு மாற்றும் வசையம்.

5. சமன் (Samanan) (சுருக்கம்)  
- வகுப்புகள் பின்னக்களச் செய்யப்பட்டது குறிப்பிட்டியது.  
- தொடர்ச்சியாக அறிமுகக்கூறு பொறியாய்ப்பில் பல்முறை வசையம்.

6. நான் (Nagan)  
- இயல் வருவதால்.  
- பூச்சி பல்கலைக்கழகம் பகிர்ந்தது.  
- கல்விக்கு ரியல் சுற்றுச்செய்யப்பட்டது.  
- நம்பிக்கை கருத்திகள் பல்கலைக்கழகத்தில்.

7. கூர்மன் (Koorman)  
- பிரெசோம்பர் வெளிப்படுத்தப்பட்டது.  
- குரோன் வீரமுறையில் பரிசு.  
- கல்விக்கு முதுச்சள பல்கலைக்கழகம் கல்விக்கு பகிர்ந்தது.  
- கல்விக்குறிக்கு வேள் விளம்புப் பல்கலைக்கழகம்.

8. கிருவாரன் (Kirukaran)  
- மறையுறுத்தலால், போற்றப்படும் கருவையால் மாற்றம்.  
- பொறியாய்ப்பு மாற்றம்.  
- தொடர்ச்சியாக குறிப்பிட்டியது வசையம்  
- பொறியாய்ப்பு வசையம்.  
- குறிப்பிட்டியது, பொறியாய்ப்பு மாற்றம்.

9. தேவதகதன் (Thevathathan)  
- கல்வியால் பரிசு.  
- பொறியாய்ப்பு மாற்றம்.  

10. சுருக்கம் (Dhananjeyan)  
- பொறியாய்ப்பில் குறிப்பிட்டு வளப்படுத்தப்பட்டது தனியால் பல்கலைக்கழகம்  
- கல்வியால் வசையம்.  
- கல்வியால் மாற்றம் பல்கலைக்கழகம் பல்கலைக்கழகத்தில் தொடர்கை வசையம் விளங்கும் வசையம்.
பின்னம் (PITHAM):

பின்னம் என்பது கோவை உள்ளான்:

- பின்னம்
- கோவை
- சிற்றணை
- தூற்று

பின்னம் வடிவம் தவறு : (Location of pitham in the body),

பின்னத்துல
பின்னவாளப்பு
முனிவை
சுருக்கநிலை
சுருக்கம்
தோற்ற

<table>
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<th>பின்னக்கல் (Location)</th>
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<tbody>
<tr>
<td>1. அணல்பின்னம்; (Anala Pitham)</td>
<td>தலை எல்லா பின்னக்கல் பின்னம்.</td>
</tr>
<tr>
<td>2. ராண்டாகம் (Ranjagam)</td>
<td>பின்னக்கல் பின்னக்கல்.</td>
</tr>
<tr>
<td></td>
<td>உலகன் தலை பின்னக்கல் பின்னக்கல்.</td>
</tr>
<tr>
<td>3. சாதாகாம் (Sathaga Pitham)</td>
<td>பின்னக்கல் பின்னக்கல் பின்னக்கல்.</td>
</tr>
<tr>
<td></td>
<td>முடியத்தை முடியத்தை பின்னக்கல் பின்னக்கல் பின்னக்கல்.</td>
</tr>
<tr>
<td>4. அலோசாகாம் பின்னம்; (Alosaga Pitham)</td>
<td>கைத்தல் பின்னக்கல் பின்னக்கல் பின்னக்கல்.</td>
</tr>
<tr>
<td>5. பிறாகாம் பின்னம் (Pirasaga Pitham)</td>
<td>முடியும் முடியும் பின்னக்கல் பின்னம்.</td>
</tr>
</tbody>
</table>

பின்னக்கல் குரட்டமைல்கள் பின்னக்கல் பின்னக்கல் பின்னக்கல் பின்னக்கல் பின்னம் அல்லது காரணத்தான். |
அகாம் (கம்) (KABAM):

அகாம் வடிவங்களம்:

<table>
<thead>
<tr>
<th>தலையில் பிள்ளை</th>
<th>உட்புறம் பிள்ளை</th>
<th>வட்ட பிள்ளை</th>
<th>போதாகாயம்</th>
<th>தொழில் பிள்ளை</th>
</tr>
</thead>
</table>

1. ஆவல்லாதம் (Avalambagam)
- உட்புறத் தொலைகள் பிள்ளை விளக்கம் மூலம்
2. கிலேதம் (Kiletham)
- போதாகாயம் விளக்கம், உட்புறத் தொலைகள்
3. பொத்தாதம் (Pothagam)
- தொழில் விளக்கம் கூட்டப்பட்டு
4. தார்பாதம் (Tharpagam)
- தொழில் விளக்கம் கூட்டப்பட்டு
5. சஞ்சிகம் (Santhigam)
- பொத்தாகாயம் விளக்கம் கூட்டப்பட்டு

Location of kabam in the body:

### Seven Udar Thathukkal:

<table>
<thead>
<tr>
<th>பிள்ளையோட்டங்கள் (Seven Udar Thathukkal):</th>
<th>பிலகுரைகள்</th>
</tr>
</thead>
</table>
| 1. பால் (Saram) | • பாலலிபோல், பாலமலர் தவறாறு பவுலதா.
| 2. சென்றி (Senneer)) | • குருலி, குருலக், குரு, குரு நூறுக்கு வெளிக்கை இருக்கக்கோ பவுலதா. |
| 3. ஓவி (Oon) | • ஓவிக் பாலமல் அல்லது நூற்சுற்றுக்கு ஆறுந்தைகள், கொடை மோகன்குறுட்கா.
| 4.கோழுப்பு (Kozhuppu) | • கோழுப்பு சுழல் துரை வெளிக்கை நூற்கு கொடை வெளிக்கை இருக்கு கோழுப்பு காண வலம் என்கின்றான.
| 5. குண்டி (Enbu) | • குண்டி குண்டி பால நூற்றுக்கு வெளிக்கை.
| | • மோகன்குறு பெருமானியம் பான்குறுட்கா.
| | • குண்டி குண்டி பெருமானியம் பான்குறுட்கா.
| 6. மூலை (Moolai) | • மூலை பிள்ளைக் குண்டி குண்டி வெளிக்கை மோகன்குறு பான்குறு.
| 7. வென்றேய (Venner) | • வென்றேய வென்றேய மூலை பிள்ளைக் குண்டி குண்டி வெளிக்கை மோகன்குறு பான்குறு.
Diseases are diagnosed mainly with the help of signs and symptoms. In addition there are eight important factors which help in finding out the disease and the imbalanced life factors.

"தம் பாதியை நாறு வகையான விளக்கம் தெரியும் பாதியை நாறு வகையான விளக்கம் மலர் தெரிவிவுக்கு முன்னேக்கும் தெரிவிவுக்கு
- வேறுபட்டு விளக்கம் (1 மு பட்டம்)

"நாறு விளக்கங்களில் இந்த நாறு விளக்கங்களில் அவற்றின் தெரிவியைக் குறித்து விளக்கம் மலர் தெரிவிவுக்கு மலர் தெரிவிவுக்கு
- வேறுபட்டு விளக்கம் (1 மு பட்டம்)

<table>
<thead>
<tr>
<th>No.</th>
<th>Tamil Word</th>
<th>English Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>தம்</td>
<td>Tongue</td>
</tr>
<tr>
<td>2</td>
<td>விளக்கம்</td>
<td>Colour</td>
</tr>
<tr>
<td>3</td>
<td>விளக்கம்</td>
<td>Speech</td>
</tr>
<tr>
<td>4</td>
<td>விளக்கம்</td>
<td>Eyes</td>
</tr>
<tr>
<td>5</td>
<td>விளக்கம்</td>
<td>Faeces</td>
</tr>
<tr>
<td>6</td>
<td>விளக்கம்</td>
<td>Urine</td>
</tr>
<tr>
<td>7</td>
<td>விளக்கம்</td>
<td>Pulse</td>
</tr>
<tr>
<td>8</td>
<td>விளக்கம்</td>
<td>Touch</td>
</tr>
<tr>
<td>Eight Parameters</td>
<td>Features to be Observed</td>
<td>Features Found in Varal Karappan</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>1. மூடு - (Tongue)</td>
<td>Colour, character, condition</td>
<td>-</td>
</tr>
<tr>
<td>2. பாருது - (Colour)</td>
<td>Signs of mukkutram colour, cyanosis, pallor, yellowish-discolouration</td>
<td>Colour Change in Lesions of the skin</td>
</tr>
<tr>
<td>3. வாசிப்பாறு - (Speech)</td>
<td>Coherence, tone</td>
<td>-</td>
</tr>
<tr>
<td>4. கணை - (Eyes)</td>
<td>Motor and sensory functions</td>
<td>-</td>
</tr>
<tr>
<td>5. மூது - (Faeces)</td>
<td>Signs of mukkutram, colour and consistency</td>
<td>-</td>
</tr>
<tr>
<td>6. காய்ச்சல் - (Urine)</td>
<td>Colour, odour, deposit, frequency, specific gravity</td>
<td>-</td>
</tr>
<tr>
<td>7. ஊர்ந்து - (Pulse)</td>
<td>mukkutra Signs</td>
<td>&quot;நக்கமன்கை வைத்திய பதையல்&quot;</td>
</tr>
<tr>
<td>8. முதைசு - (Touch)</td>
<td>Heat (or) Cold</td>
<td>Heat to touch</td>
</tr>
</tbody>
</table>

புதுக்கோவாலக்கல்கள் (Seasons):

The whole year is constituted by 6 seasons. They are

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>முதல்பாரி</td>
</tr>
<tr>
<td>2</td>
<td>பாருதுபாரி</td>
</tr>
<tr>
<td>3</td>
<td>காய்ச்சல் பாரி</td>
</tr>
<tr>
<td>4</td>
<td>காய்ச்சல் பாரி</td>
</tr>
<tr>
<td>5</td>
<td>முதல்பாரி காய்ச்சல்</td>
</tr>
<tr>
<td>6</td>
<td>பாருதுபாரி காய்ச்சல்</td>
</tr>
</tbody>
</table>

In every season, changes will occur in the land, water, plants, animals and human beings, which will modify the physiology and make them susceptible to certain specific diseases which are common in that season.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Season 1</th>
<th>Season 2</th>
<th>Season 3</th>
<th>Season 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>முதல்பாரி</td>
<td>பாருதுபாரி</td>
<td>காய்ச்சல்</td>
<td>காய்ச்சல்</td>
</tr>
<tr>
<td>2</td>
<td>காய்ச்சல்</td>
<td>பாருதுபாரி</td>
<td>காய்ச்சல்</td>
<td>காய்ச்சல்</td>
</tr>
<tr>
<td>3</td>
<td>முதல்பாரி</td>
<td>பாருதுபாரி</td>
<td>காய்ச்சல்</td>
<td>காய்ச்சல்</td>
</tr>
</tbody>
</table>

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Diagnosis:
The various methods involved in the diagnosis are,
1. அணைமைப்பேருபெறும்
2. புலவலுபெறும்
3. தீந்துகை

அணைமை - These are the five sense organs.
புலவல் - These are the functions of the sense organs.
தீந்துகை - Method of interrogation.

Treatment:
Apart from treating the disease with medicines, Siddhars have emphasized the two main parts of a diseaseless life – prevention and improving the body condition.

- கருப்பு - (Prevention)
- இருக்கம் - (Treatment)
- நிதிகுறை - (Restoration)

The aim of Pinineekam is based on,

- To bring the mukkutram in equilibrium.
- Treatment of the disease and its symptoms by internal medicines, external applications of medicated oil and powder.

TREATMENT
"அபிலிக்கு மகிழ் அதிமுகாவார் குறிப்பிட்டு
துச்சுக்கு குறிப்பு மடுமையில் மண்டு
பிள்ளை தவறு பிறிவயலாமலையான்
நிறீங்கு குறிப்பிட்டு குருப்பாக விள்ளை
இருந்துப் பிள்ளை வளா முடி மாற்றாக
சிறுப்பான் தேவேன் நோசு மித்திரும்
"
Since siddha system of medicine is based on the **Mukkutra theory**, the treatment is mainly aimed to bring down the three mukkutram to its equilibrium state and restoring the physiological condition by mukkutram.

A large number of medicines for karappan are stated in different literatures. Among them, an economically inexpensive and simple medicine “**Karappan Chooranam**” (internally) and “**Milagu ennai**” (externally) are selected for the treatment.

“**Karappan Chooranam**” is mixed with honey given twice a day. “**Milagu ennai**” externally as required.

The dose of the medicine varies with age of the patient

<table>
<thead>
<tr>
<th>S.No</th>
<th>Age Group / According to body condition</th>
<th>Dosage / twice a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pre - school going children [3year – 5years]</td>
<td>250mg</td>
</tr>
<tr>
<td>2.</td>
<td>School going children [6 years – 8 years] [9years-12 years]</td>
<td>500mg 1gm</td>
</tr>
</tbody>
</table>

**Anupanam in Siddha system**

“**அனுபானம்பெறும் மருந்து பயன்படும்**

முக்குள்ளர் கல்லு விபத்து விளையாட்டு

கார்பன் சுருங்கம் வைணவப் பயன்பாடு செய்ய விளையாட்டு விளையாட்டு

அனுபானம் பல்பாவியல் வைணவப்”

- சுந்தர் சுந்தரன்

Anupanam which is also known as **THUNAI MARUNTHU** can be translated as vehicle, adjuvant, and supporting (or) concurrent drug therapy.

**Diet:**

During the course of treatment according to the drug administered to the patient and nature of the disease, the patients were advised to follow certain precautions regarding diet and physical activities. This type of medical advice in Siddha system of medicine is termed as ‘**PATHIYAM**’. This diet control was applied whenever necessary.
Siddhar’s advice regarding the diet for karappan patients is explained below.

**Sorghum vulgare**

“Siddhar’s advice regarding the diet for karappan patients is explained below.

- *Sorghum vulgare*

“Siddhar’s advice regarding the diet for karappan patients is explained below.

- *Dolichos biflours*

“Siddhar’s advice regarding the diet for karappan patients is explained below.

- *Memoridica charantia*

“Siddhar’s advice regarding the diet for karappan patients is explained below.

- *Psidium guajava*

“Siddhar’s advice regarding the diet for karappan patients is explained below.
குரு - **Solanum melogena**

“பலவு பலவு கீழினையடுப்பு பருத்தியுடன்,
வெண்மை வெண்மை கிளெனையடுப்பு பேருணக்காயில்.
பேருண பேருண கிளெனையால் பாவம்
கொல்ல வலிய கொத்டிக்காட்சிக்”

மருமை - **Magnifera Indica**

“சிற்றுறுக் கீழினையடுப்பு பலவு பலவு வெண்மையவாக.
அல்லது குளம்பு கால்நடையில் - மாறுகின்ற
வெண்மையால் பேருண பேருண கிளெனையனுடன்
கொல்ல கொத்டிக்காட்சிக.”

புத்தை - **Tamarindus Indica**

புத்தையும் மருமையும் வெண்மையான வல்லுணர்
புத்தையும் கயராயும் செய்ய பாவம் கடனாக நோக்கு
சிற்றுறுக் கீழினையடுப்பு பலவு தேடும்
செழுநூற்றுக் கீழினையடுப்பு பேருண.

**Sodium Chloride**

செழுநூற்றுக் கீழினையடுப்பு பேருணம்
செழுநூற்றுக் கீழினையடுப்பு பேருணம்
செழுநூற்றுக் கீழினையடுப்பு பேருணம்

**Gallus Domesticus**

செழுநூற்றுக் கீழினையடுப்பு பேருணம்
செழுநூற்றுக் கீழினையடுப்பு பேருணம்
செழுநூற்றுக் கீழினையடுப்பு பேருணம்

செழுநூற்றுக் கீழினையடுப்பு பேருணம்

‘பலவு பலவு கீழினையடுப்பு பருத்தியுடன்
செழுநூற்றுக் கீழினையடுப்பு பேருணம்
அல்லது கயராயும் வெண்மையான
அன்று உணவு பெற்றியால்
செழுநூற்றுக் கீழினையடுப்பு பேருணம்
செழுநூற்றுக் கீழினையடுப்பு பேருணம்
செழுநூற்றுக் கீழினையடுப்பு பேருணம்
செழுநூற்றுக் கீழினையடுப்பு பேருணம்’

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Preventive methods:

- Avoid allergic and dust atmosphere.
- Avoid karappan pandangal.
- To find out which agent makes allergy and avoid them.
MODERN ASPECTS

Skin
Covering the surface of the body and sheltering it from injurious influences in the environment is the skin or integument. It protects the deeper tissues from injury, drying and invasion by foreign organisms. It contains the peripheral endings of many of the sensory nerves.

Development

- The epidermis and its appendages are developed from the ectoderm, about the fifth week of fetal development.
- The cornium or true skin is of mesodermal origin.
- The subcutaneous fat appears about the fourth month, and the papillae of the true skin about the sixth month.
- A considerable desquamation of epidermis mixed with sebaceous secretion, constitutes the vernix caseosa by which the skin is smeared during the last three months of fetal life.
- The nails are formed at the third month and begin to project from the epidermis about the sixth month.
- Above the fifth month, the fetal hairs appear first on the head and then on the other parts. They drop after and give place to the permanent hairs.
- The cellular structures of the sudoriferous and sebaceos glands are formed from the ectoderm whereas the connective tissue and blood vessels are derived from the mesoderm.
- All the sweat glands are being to develop as early as the fourth month.
- The skin of an average adult covers an area of just under 2m². The skin thickness ranges from 0.5mm as in the eyelids to 4mm on the heels. Over most of the body it is 1-2mm thick.
STRUCTURE OF THE SKIN

Epidermis - Outermost layer
Basement Membrane - Middle layer
Dermis - The deeper connective tissue layer

EPIDERMIS

The epidermis is formed of non-vascular stratified epithelium. It is the outermost layer and predominantly composed of keratinocytes.

- **Keratinocytes**
  Keratins - horn like
  Cytes - cells

  Keratinocytes comprises 65% of epidermal cells. It synthesizes a range of structural proteins including keratins and loricrin. There are over 20 different types of keratin, classified into two broad groups namely basic (type I) and acidic (type II). Genetic diseases are also caused due to mutations of keratins.

Three other cell types make up most of the remaining 5% of epithelial cells.

- **Langerhan cells**
  Langerhans cells are dendritic, bone marrow derived cells that circulate between epidermis and the local lymph nodes.

- **Melanocytes**
  Melans - black
  Cytes - cells

  They synthesise the pigment melanin from tyrosine. Melanin protects the skin from Ultra Violet radiation.
Merkel cells

They are thought to play a role in signal transduction of fine touch. Merkel cell carcinoma has been reported recently.

Layers of epidermis
The epidermis consists of the following layers.

- **Stratum germinativum**
  The whole of the epidermis germinates from this stratum hence the name stratum germinativum. This is the deepest portion of the epidermis and composed of columnar cells placed perpendicular to the skin surface.

- **Stratum Spinosum (Prickle cell layer)**
  It is superficial to the basal cell layer and is composed of several layers of polyhedral cells connected to each other by intercellular bridges.

- **Stratum granulosum (Granulos – little grains)**
  It is composed of flat fusiform cells which are one to three layers thick. These cells contain irregular granules of keratoxyalin and lysosomal enzymes and cystine rich proteins. Near the granular cells layer lamellar granules also known as odland bodies are found. Odland bodies are discharged into the intercellular space below the cornified cell layer and form an effective water proof barrier.

- **Stratum lucidum (Lucid-clear)**
  It is present only in the skin of the finger tips, palms and soles. Pale and wary-looking layer. This layer contains refractile droplets of eleidin.

- **Stratum corneum(Corne-hard (or) hoof like)**
  This is the most superficial layer, the outer surface which is exposed to the atmosphere. It consists of many layers of non-nucleated, flattened, cornified cells. This layer is thickest on palms and soles; but thinnest on the outer aspect of the lips, on the glans penis and the eyes.
**Basement Membrane**

The basement membrane acts as an anchor for the epidermis but allows movement of cells and nutrients between the dermis and epidermis.

**Structural Components**

Epidermal cell membrane is attached to the basement membrane via hemidesmosomes. Lamina lucida is composed predominantly of laminin. Anchoring filaments extended through the lamina lucida to attach it to the lamina densa. Bullous pemphigoid antigen cicalricial pemphigoid antigen, laminin, nidogen, heparan sulfate proteoglycan type IV & type VII collagens, etc are found in the basement membrane.

**Dermis**

The dermis is vascular and supports the epidermis structurally and nutritionally. It varies in thickness from 1mm over on the inner forearm to 4mm on the back. The acellular part of the dermis consist predominantly of fibres, mostly collagens I and III but also elastin and reticulin synthesised by the major cell type fibroblasts.Apart from fibroblasts, there is a large number of other cell types within the dermis including mast cells, mononuclear phagocytes, T lymphocytes, dendritic cells, nerves and vessels.

**Blood supply**

The blood supply of the skin comes from a large number of arteries forming anastamosis in the deepest part of the corneum. From here single vessels run upwards and form a second network in the upper corneum. Finally terminal arterioles ascend into the papillae ending in capillary loops, which drain into connecting venules. The blood is returned to the large veins in the sub cutaneous tissue.
Lymphatic drainage

The skin contains a rich network of lymphatics, which drain into a few larger vessels in the hypodermis.

Nerve supply

The nerve supply of the skin consists of motor and sensory part, the motor part derived from the sympathetic ganglion and sensory part derived from the dorsal root ganglion. The sympathetic fibres innervate the blood vessels erectorus pilorum muscle and apocrine ducts, where the fibres are adrenergic and cause contraction.

Epidermal Appendages

1. Sweat glands
   a. Eccrine glands
   b. Apocrine glands
2. Sebaceous glands
3. Hair
4. The nails.

1. Sweat glands

a. Eccrine glands (Eccrine – secreting outwards)

   They are the ordinary, small – sized (0.3 – 0.4mm) sweat glands which are distributed all over the skin except on the beds of nails, margins of lips and the glans penis. Over 3 million sweat units are present at birth. The sweat produced by these glands is about 600ml per day. The main function of these glands is regulation of temperature.

b. Apocrine glands

   They occur in the axillae, areola and nipples of breasts, umbilicus around the anus and the genitalia.

   Their glandular portion is very large and may measure 3 mm to 5 mm in diameter. Their secretion is odoriferous with a secondary sexual significance. The number of sweat glands varies. They are least numerous in the neck & back. The
palm has about 370 glands / square centimeter. The back of the hand about 200, for forehead 175, abdomen and forearm 155 and leg 60 – 80. The average quantity of sweat secreted in 24 hours varies from 700 – 900ml.

2. **Sebaceous glands (Sebace-greasy)**

   Sebaceous glands usually arise from hair follicles with their ducts discharging sebum into the upper part of the follicle. Sebum excretion is under hormonal control. Androgens and progestogen increase sebum excretion whereas oestrogens have an inhibitory effect.

3. **Hair**

   It is found on almost every part of the body surface except on the palms and soles; the inner surface of the labia, prepuce and glans penis. Hair growth and development is under endocrine control.

4. **Nails**

   These are semi-transparent, plate-like horny structures, covering the dorsal surfaces of the distal phalanges of the fingers and toes. Nails are tightly packed, hard keratinized epidermal cells.
## PHYSIOLOGY

### Functions of the skin

<table>
<thead>
<tr>
<th>Function</th>
<th>Structure / cell involved</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Protection</strong> against chemicals, particles, ultraviolet radiation antigens, haptens, microbes</td>
<td>Horny layer, melanocytes, langerhans cells, lymphocytes, mononuclear phagocytes, mast cells horny layer, langerhans cells, mononuclear phagocytes, mast cells.</td>
</tr>
<tr>
<td><strong>Preservation of a balanced internal environment:</strong> Prevent loss of water, electrolytes and macromolecules</td>
<td>Horny layer</td>
</tr>
<tr>
<td><strong>Shock absorber</strong> Strong, yet elastic and complaint covering</td>
<td>Dermis and subcutaneous fat</td>
</tr>
<tr>
<td><strong>Sensation</strong></td>
<td>Specialist nerve endings</td>
</tr>
<tr>
<td><strong>Calorie reserve</strong></td>
<td>Subcutaneous fat</td>
</tr>
<tr>
<td><strong>Vitamin D synthesis</strong></td>
<td>Keratinocytes</td>
</tr>
<tr>
<td><strong>Temperature regulation</strong></td>
<td>Blood vessels, eccrine sweat glands</td>
</tr>
<tr>
<td><strong>Lubrication and waterproofing</strong></td>
<td>Stratum corneum</td>
</tr>
<tr>
<td><strong>Protection and prising</strong></td>
<td>Nails</td>
</tr>
<tr>
<td><strong>Hormonal</strong> Testosterone synthesis from inactive precursors and testosterone conversion to other androgenic steroids</td>
<td>Hair follicles, Sebaceous glands</td>
</tr>
<tr>
<td><strong>Body odour</strong> (more important in animals)</td>
<td>Apocrine sweat glands</td>
</tr>
<tr>
<td><strong>Psychosocial</strong></td>
<td>Hair, nails, appearance and tactile quantity of skin.</td>
</tr>
</tbody>
</table>
SCABIES

The signs and symptoms of Varal karappan can be correlated with the clinical features of scabies. The Modern aspect is discussed here.

Definition

It is a form of itching dermatosis characterized by epidermal burrows, pruritic inflammatory papules and nodules caused by female sarcoptes scabiei or its products.

PARASITOLOGY:

Sarcoptes scabiei Var hominis has an oviod body, flattened dorsoventrally. The adult female measures approximately 0.4mm long by 0.3mm broad, and the smaller male 0.2mm long ,0.15mm broad. The body is creamy white and it is marked by transverse corrugations and on its dorsal surface by bristles and spines (denticles). There are four pairs of short legs the anterior two pairs end in elongated peduncles tipped with small suckers. In the female the near two pairs of legs end in long bristles (setae) where as in the male bristles are present on the third pair and elongated peduncles on the fourth.

Copulation occurs in a small burrow excavated by the female. After copulation, the fertilized female enlarges the burrow and lays eggs. The burrow is not confined to the stratum corneum, but is inclined downwards in to the epidermis. Gradual penetration appears to occur as a result of the production of a lytic secretion by the mite, which then propels itself forward as the host tissue is dissolved. The burrow is lengthened by approximately 2-3mm daily. Eggs and mite faeces are deposited behind the female in the burrow. Six – legged larvae emerge from the eggs after 3 days and escape from the burrow by cutting can through its roof. The larvae then dig short burrows (Moulding Pockets) in which they transform into lymphs. After further mouls adult males and females develop.

The mites show a preference for certain sites in which to burrow, and appear to avoid areas with a high density of pilosebaceous follicles. The average number of adult female mites on an individual suffering from the common form of scabies is about 12. Only in crusted (Norwegian) Scabies are large numbers of mites are present.

INCIDENCE AND EPIDEMIOLOGY
Scabies affects all races and social classes of the world –wide. It is most common in children and young adults, but may occur at any age. The over all sex incidences are probably equal. Where as all racial groups are susceptible. There are some differences in incidence. These are probably related to customs and social factors rather than inherent susceptibility.

Overcrowding which is common in the under developed countries and is almost invariably associated with poverty and poor hygiene, encourages the spread of scabies. Scabies is usually transmitted by close physical contact, such as prolonged hand – holding or the sharing of a bed. Indirect spread is by clothing or even by sexual contact. Fertilized female mites are responsible for transmission, although there is no firm evidence, and it seems unlikely in view of their relatively small numbers and inclination to remain within their burrows.

**IMMUNOLOGY**

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

Evidence suggests that both immediate and delayed helper sensitivity involved some patients show high levels of IgE. Involvement of delayed – type hypersensitivity in the production of inflammatory papules and nodules is suggested by the histological changes and predominance of T-Lymphocytes in the cutaneous infiltrate.

Other immunological findings include high serum IgG and IgM, and low IgA with levels returning to normal after treatment. IgM and C3 deposits have been demonstrated at the dermoepidermal function in the region of borrows and circulating immune complexes have been found in the serum after treatment of scabies.
PATHOGENESIS

Scanning electron microscope reveals the Keratinocytes around the burrow to be compacted, indicating that the mite physically forces its way in between the Keratinocytes, rather than chewing a passage. The burrow is essentially a tunnel within the stratum corneum, formed as the mite burrows down to the live stratum granulosum for nourishment.

HISTO PATHOLOGY

Histologic examination of a specimen containing a burrow reveals that the borrow in almost its entire length is located within the horny layer. Only the extreme blind end of the burrow, where the female mite is situated, extends 400 µm in length.

Spongiosis is present in the stratum malphighii near the mite to such extent the formation of a vesicle is often the result. Even if no mite is found in the sections the presence of eggs containing larvae, egg shelt, or fecal deposits within the horny layer is indicative of scabies. The dermal infiltrate in section’s containing mites shows varying numbers of eosinophils. Papular lesions not containing mites show a non-specific picture in which eosinophils generally are absent.

In persistent nodular scabies is a dense, chronic inflammatory infiltrate in which eosinophils may be present. The blood vessels may have thickened walls and there may even be vasculitis with fibrinoid deposits and inflammatory cells within the vessel walls. Atypical mononuclear cells may be found, and in some instances, the nodules show a histologic picture resembling lymphoma. Mites are hardly ever found in the nodules.

CLINICAL FEATURES

ITCHING

Itching is usually the most obvious manifestation of scabies. It is generally worst at night and when the patient is warm. The onset occurs 3-4 weeks after the infection is acquired, and coincides with a widespread eruption of inflammatory papules. Re-infection of a previously cured individual however provokes immediate symptoms, which suggests that the generalized eruption is a true sensitization phenomenon.
BURROWS

The pathognomonic lesions of scabies are burrows, which appear as slightly raised, brownish, tortuous lesions. The point of entry of the mite, the most superficial part of the burrow, has a slightly scaly appearance, and at the distal end there may be tiny vesicle, adjacent to which is the female mite. There may be few or many burrows and in patients with high standards of hygiene they may be difficult to find. They may occur on the wrists, the borders of hands, the sides of fingers, and the finger web spaces, the feet, particularly the instep and, in the male the genitalia. They are often present on the palms and soles of young children and may occur on the palms in women, though uncommonly in men. Burrows on the trunk are uncommonly in adults, but may be found in the elderly and are not unusual in infants. They may be seen on the head and neck in babies but not normally in adults. The scalp was however, involved in an adult who was applying a topical steroid for seborrhoic dermatitis.

The reason for this pattern of distribution is not understood, but the mites appear to prefer non-hairy skin and area of low sebum production.

PRURITIC PAPULES

The pruritic papules which accompany the development of hypersensitivity occur predominantly around the axillae, in the peri-areolar regions, on the abdomen, particularly the periumbilical region, and on the buttocks and thighs. Indurated, inflammatory nodules sometimes occur, particularly on the axillae, groins, scrotum and penis. They are intensely itchy, and often persist for weeks or months after the scabies has been effectively treated.

INFLAMMATORY PAPULES OR NODULES

Inflammatory papules or nodules, sometimes surrounded by burrows, on the male genitalia are characteristic of scabies.
SCABIES IN INFANTS

The clinical features of scabies in infants differ in certain respects from those in older children and adults. In addition to the more extensive distribution of burrows mentioned above vesicular and vesiculo pustular lesions on the hands and the feet are not uncommon and bullous lesions have been described. Extensive eczematisation is frequently present, and there may be multiple crusted nodules on the trunk and limbs.

DIAGNOSIS

The typical history of pruritis with nocturnal exacerbations, and the distribution of the eruption of inflammatory papules should suggest the diagnosis.

The female mite can be brought out from the burrow and can be seen with the help of hand lens.

Absolute confirmation can only be made by the discovery of burrows and microscopical examination. A burrow is gently scraped off the skin with a blunt scalpel, and the material placed in a drop of 10% potassium hydroxide or mineral oil on a microscope slide. The presence of mites, eggs or fragments of egg shells confirms the diagnosis.

CRITERIA FOR DIAGNOSIS OF SCABIES

Major diagnostic Criteria (Presence of one criteria)
- Identifiable typical burrow particularly associated with an itching and rashes
- Skin scrapping shows eggs or mites

Minor Criteria (Two needed for a diagnosis)
- Typical rash that itches more at night
- Sudden onset of an un explainable itching and rash with characteristic distribution
- Contact with a Scabetic patient
CRUSTED SCABIES (NORWEGIAN SCABIES)

Crusted scabies is an infestation with sarcoptes scabiei var. hominis in which the mite population is enormous, and may number millions. The grossly thickened horny layer is honey combed with cavities which contain large numbers of mites, and these are shed into the environment of the patient. An undiagnosed case of crusted scabies may cause large outbreaks of common scabies.

CLINICAL FEATURES

Large warty crusts form on the hands and feet and the palms and soles may be irregularly thickened and fissured. Masses of horny debris accumulate benetath thickened and discoloured nails. Erythema and scaling occur on the face, neck, scalp and trunk and may generalize. The extent of erythroderma and the warty plaques varies greatly, and either may predominate. It has been suggested that staphylococcus aureus colonizing burrows might play a part in initiating the erythroderma. Itching is often absent or slight, but may occasionally be severe. Generalized lymphadenopathy is present in some cases, and blood eosinophilia is common.

Crusted scabies may masquerade as hyperkeratotic eczema, psoriasis, Darier’s disease and contact dermatitis.

COMPLICATION

1. Eczematization.
2. Impetiginization.
3. Acute glomerulonephritis.

1. Eczematization

It is one of the rare complications of scabies. Scabetic areas may get sensitized. This sensitization results in eczematization and well defined circular or oval patch of eczema consisting of erythema, oozing and crusting is formed. If there are severed patches the intervening skin is completely clear.
2. **Impetiginization**

It is a rare complication of scabies. This is usually due to diminished local resistance. It starts as a superficial bullae containing seropurulent matter the contents coagulate to form a tick stuck on honey coloured crust. Crust is the most important feature of impetiginization. The lesions are usually multiple, the intervening skin is completely normal. Usually there is no pain or itch.

3. **Acute glomerulonephritis**

Acute glomerulonephritis follows infection by streptococci on the scabetic areas. The onset is usually rapid, with puffiness around the eyes and edema over the feet. Urine colour is characteristically smoky brown, because of formation of acid hematin. The degree of oliguria usually correlates with the severity of the disease. Hypertension is usually present. Atypical presentation may also be present which include, convulsions due to hypertensive encephalopathy. The urine may grossly normal and edema absent, left ventricular failure and pulmonary edema due to very high blood pressure and hypovolemia, acute renal failure.
RESULTS AND OBSERVATIONS

Results were observed with respect to the following criteria

1. Age reference
2. Sex reference
3. Socio-Economic status reference
4. Contact history reference
5. Paruva kaalam
6. Diet reference
7. Mode of Onset reference
8. Clinical features of Varal Karappan during admission reference
9. Mukutram reference
10. Ezhu Udal Kattugal reference
11. Ennvagai Thervugal reference
12. Neerkuri, Neikuri reference
13. Results after treatment reference

The observations recorded with the above said criteria are given in the tabular form.
1. Age Reference

<table>
<thead>
<tr>
<th>S.No</th>
<th>Age (In years)</th>
<th>No. of Cases (Out of 50)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>3-5 Years</td>
<td>21</td>
<td>42%</td>
</tr>
<tr>
<td>2.</td>
<td>6-8 Years</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>3.</td>
<td>9-12 Years</td>
<td>19</td>
<td>38%</td>
</tr>
</tbody>
</table>

*The prevalence of the disease was found to be higher in the age group of 3-5 years [42%]*

2. Sex Reference

<table>
<thead>
<tr>
<th>S.No</th>
<th>Sex</th>
<th>No.of Cases (out of 50)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Male Children</td>
<td>21</td>
<td>42%</td>
</tr>
<tr>
<td>2.</td>
<td>Female Children</td>
<td>29</td>
<td>58%</td>
</tr>
</tbody>
</table>

*Among the selected patients 50 patients, the prevalence of the disease was found to be higher in female [58%].*
3. Socio – Economic Status

<table>
<thead>
<tr>
<th>S.No</th>
<th>Socio - Economic status</th>
<th>No.of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Poor</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>2.</td>
<td>Middle class</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>3.</td>
<td>Rich</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

The incidence of the disease was found to be higher in poor class 50%.

4. Contact History Reference:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Contact History</th>
<th>No.of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Positive</td>
<td>31</td>
<td>62</td>
</tr>
<tr>
<td>2.</td>
<td>Negative</td>
<td>19</td>
<td>38</td>
</tr>
</tbody>
</table>

During the study 62% of cases were affected by viral karappan due to contact with schoolmates/ neighborhoods/ family members.
5. Diet Reference

<table>
<thead>
<tr>
<th>S.No</th>
<th>Food habits</th>
<th>No.of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Vegetarian</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>2.</td>
<td>Mixed</td>
<td>48</td>
<td>96</td>
</tr>
</tbody>
</table>

Out of 50 cases, 96% of cases were non vegetarian. 4% of cases vegetarian.
6. Paruva kaalam

<table>
<thead>
<tr>
<th>S.No</th>
<th>Paruvakaalam</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Karkaalam (Avani – puratasi)</td>
<td>29</td>
<td>58%</td>
</tr>
<tr>
<td>2.</td>
<td>Koothirkaalam (Iyppasi – karthikai)</td>
<td>18</td>
<td>36%</td>
</tr>
<tr>
<td>3.</td>
<td>Munpani (Markazhi – Thai)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>Pin pani (Masi – Panguni)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5.</td>
<td>Elavenil (Chitirai, Vaigasi)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6.</td>
<td>Mudhuvenil (Aani, Aadi)</td>
<td>3</td>
<td>6%</td>
</tr>
</tbody>
</table>

Out of 50 patients 58% were affected in kaarkaalam, 36% affected in koothir kaalam, and 6% of cases were affected in mudhuvenil kaalam.
7. Mode of Onset

<table>
<thead>
<tr>
<th>S.No</th>
<th>Mode of Onset</th>
<th>No.of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Acute</td>
<td>23</td>
<td>46%</td>
</tr>
<tr>
<td>2.</td>
<td>Chronic</td>
<td>27</td>
<td>54%</td>
</tr>
</tbody>
</table>

Out of 50 patients, 54% of cases affected chronic, 46% of cases affected in acute.
8. Clinical Features during Admission

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Clinical Features</th>
<th>No. of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Itching</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Oozing</td>
<td>35</td>
<td>70</td>
</tr>
<tr>
<td>3</td>
<td>Papules</td>
<td>34</td>
<td>68</td>
</tr>
<tr>
<td>4</td>
<td>Vesicles</td>
<td>19</td>
<td>38</td>
</tr>
<tr>
<td>5</td>
<td>Pustules</td>
<td>22</td>
<td>44</td>
</tr>
<tr>
<td>6</td>
<td>Ulcers</td>
<td>29</td>
<td>58</td>
</tr>
<tr>
<td>7</td>
<td>Hyper pigmentation</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>8</td>
<td>Sleep disturbance</td>
<td>31</td>
<td>62</td>
</tr>
</tbody>
</table>

Out of 50 cases, Itching was almost present in all the 50 cases. Among them [70%] 35 patients had oozing, 34 patients[68%] had papules,31 patients[ 62%] had sleep disturbance,22 cases [44%] had pustules,29 cases [58%] had ulcers, 38% had vesicles, 24% had hyper pigmentation.
9. Mukutram Reference

A. Derangement in the types of vatham

<table>
<thead>
<tr>
<th>S.No</th>
<th>Classification of vatham</th>
<th>No. of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Piranan</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>Abanan</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>3.</td>
<td>Viyanan</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>4.</td>
<td>Uthanam</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5.</td>
<td>Samanan</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>6.</td>
<td>Nagan</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7.</td>
<td>Koorman</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8.</td>
<td>Kirukaran</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9.</td>
<td>Devathathan</td>
<td>31</td>
<td>62</td>
</tr>
<tr>
<td>10.</td>
<td>Thananjeyan</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Out of 50 patients, viyanan and samanan were affected in almost all the cases. Abanan affected in 8 cases [16%], kirukaran affected in 12 cases [24%] and devathathan affected in 31 cases [62%].
B. Derangement in types of pitham

<table>
<thead>
<tr>
<th>S.No</th>
<th>Types of pitham</th>
<th>No.of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Analapitham</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>2.</td>
<td>Ranjagam</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>3.</td>
<td>Saathagam</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>Prasagam</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>5.</td>
<td>Alosagam</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Out of 50 cases, ranjagam was affected in almost all the cases, prasagam and anal pitham were affected in 12 cases [24%].

C. Derangement in types of Kabam

<table>
<thead>
<tr>
<th>S.No</th>
<th>Types of kabam</th>
<th>No.of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Avalambagam</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>Kilethagam</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>3.</td>
<td>Pothagam</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>Tharpagam</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5.</td>
<td>Santhigam</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Out of 50 cases, kiletham affected in 12 cases [24].
10. Ezhu Udal kattugal Reference

<table>
<thead>
<tr>
<th>S.No</th>
<th>Udal kattugal</th>
<th>No.of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Saaram</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>2.</td>
<td>Senneer</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>3.</td>
<td>Oon</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>Kozhuppu</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5.</td>
<td>Enbu</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6.</td>
<td>Moolai</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7.</td>
<td>Sukkilam / Suronitham</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Out of 50 cases, saaram and senneer affected in almost all cases.
### 11. Envagai Thervugal Reference

<table>
<thead>
<tr>
<th>S.No</th>
<th>Enn Vagai Thervugal</th>
<th>No.of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Naa</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Niram</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>Mozhi</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Vizhi</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Sparisam</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>Malam (Constipation)</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>7</td>
<td>Moothiram</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>Naadi</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Vali Azhal</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>b) Vali Iyam</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>c) Azhal Vali</td>
<td>27</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>d) Azhal Iyam</td>
<td>10</td>
<td>20</td>
</tr>
</tbody>
</table>

Out of 50 cases, niram and sparism were affected in almost all cases. 8 cases [16%] were affected in malam. Majority of 27 cases [54%] had azhalvali naadi, 9 cases [18%] had valiazhal naadi, 10 cases [20%] had azhaliyam naadi, 4 cases [8%] had vali iyam naadi.
### 12. Neerkuri, Neikuri Reference

<table>
<thead>
<tr>
<th>S.No</th>
<th>Character of urine</th>
<th>Neikuri Reference</th>
<th>No.of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Spreads like snake</td>
<td>Vatha Neer</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>2.</td>
<td>Spreads like ring</td>
<td>Pitha Neer</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>3.</td>
<td>Spreads like pearl</td>
<td>Kaba Neer</td>
<td>33</td>
<td>66</td>
</tr>
<tr>
<td>4.</td>
<td>Spreads like snake and ring</td>
<td>Thontha Neer</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Out of 50 cases, 33 cases [66%] spreads like a pearl, 9 cases [18%] spreads like a snake and in 8 patients [16%] spreads like a ring.
13. Results Reference

<table>
<thead>
<tr>
<th>S.No</th>
<th>Results</th>
<th>No.of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Good relief</td>
<td>35</td>
<td>70</td>
</tr>
<tr>
<td>2.</td>
<td>Moderate relief</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>3.</td>
<td>Mild relief</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

Among the 50 patients, 35 patients [70%] got good relief, 12 patients [24%] got moderate relief, and 3 patients [6%] got mild relief.

**Mean ± standard deviation at 1 hour**

The difference between before treatment and after treatment of ESR at 1 hour is statistically significant

<table>
<thead>
<tr>
<th></th>
<th>Mean ± Std</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>22.68±17.88</td>
<td>3.40</td>
<td></td>
</tr>
<tr>
<td>After</td>
<td>14.44±4.69</td>
<td>P=0.0013</td>
<td></td>
</tr>
</tbody>
</table>
DISCUSSION

As per the Protocol 50 patients with unique signs and symptoms related to Varal karappan (i.e.) itching all over the body, vesicles, pustules, oozing sleeping disturbance were treated under the department of Kuzhanthai maruthuvam, National Institute of Siddha, Chennai-47.

All the patients were subjected to preliminary routine investigation, which include hematological, urine and motion examination on the date of admission and at the time of discharge.

Laboratory investigations of blood (Tc, Dc, ESR, Hb), urine (Albumin, Sugar, deposit), and motion (ova, cyst) have been done for all the 50 cases.

The trial medicines Karappan chooranam (internal) and Milagu Ennai (external) were administered for 48 days. All patients were told to take the trial drug Karappan chooranam honey as an adjuvant, twice a day.

All patents were strictly instructed to follow diet restriction and hygienic lifestyle. Observation was made during the first day of treatment, every 8th day of treatment and end of treatment. The results were documented and interpreted for the prognosis of the disease.

Based on various criterias, the datas were collected and tabulated.

AGE REFERENCE:
During the entire study, the prevalence of varal karappan was a very common one affecting the age group from 3-5 years (i.e. 21 patients out of 50)

SEX REFERENCE:
In the study among the 50 cases, 21 were male and 29 were female. According to the textbooks, there is no apparent sex predilection in varal karappan.
SOCIO-ECONOMIC STATUS:
Out of 50 patients, 5 were rich, 20 were middle class and 25 were poor. Where poor hygienic conditions and malnutrition are prevail and exposure to polluted atmosphere, lowered immune responses made them more prone to the disease.

CONTACT HISTORY REFERENCE:
During the study, 62% of cases were affected by varal karpapppan due to contact with schoolmates/ neighborhoods/ family members.

PARUVA KAALAM REFERENCE:
Out of 50 patients, each 29 patients, were affected by varal karappan in Kaar kaalam, 18 patients in Koothir kaalam and 3 in Mudhuvenil kaalam.

DIET PREFERNCE:
According to the yugi vaithya chinthamani, the non-vegetarian diet is one of the exacerbating factors for recurrence of karappan. In the trial 96% of patients were non-vegetarian.

MODE OF ONSET:
During the study, 62% of the cases were observed of chronic onset, 38% were acute cases. Incomplete treatment, failure to follow medical instructions regarding diet restriction and hygiene were observed to be the reasons for this disease to become chronic, generally all the skin diseases, usually have a recurrent nature.

MUKUTRAM REFERENCE:
Among the 50 cases, constipation in 8 cases (i.e. derangement of Abanan) and all the 50 cases had derangement of viyanan and samanan were noted. In 31 cases had sleeping disturbance (i.e, derangement of Devathathan) due to itching at night.

Among the five types of pitham anar pitham affected in 12 cases ranjagam affected in 50 cases and prasagam were affected in12 cases. Among the five types of kabam kilethagam were affected in 12 cases
EZHU UDAL KATTUGAL REFERENCE:
Among the seven-udal kattugal, saram & senneer were affected in all cases.

ENVAGAI THERVUGAL REFERENCE:
As per the skin lesions of the varal karappan niram and sparisam were affected in all the 50 cases. Malam was affected in 8 cases (i.e. constipation)

NAADI:
Majority of 54% of patients were Azhalvali naadi, 20% were Azhal iyya naadi, 8% were Vali iyya naadi and 18% were Vali azhal naadi.

NEIKURI REFERENCE:
Major of 66% of cases had Kaba neer, 16% of cases had Vadha neer and 18% of cases had Azhal neer.

The major clinical symptoms were reported to be itching, pustules, ulcers, oozing, hyper pigmentation, sleeping disturbance. They were almost none after the treatment.

There were significant decreases in ESR after the treatment. The difference between before treatment and after treatment of ESR at 1 hour is statistically significant

It is the pleasure to say that there was no report of adverse effects during the entire course of treatment in any cases.
SUMMARY

The dissertation work on Varal karappan is chosen by the author. Various literatures have been collected regarding Varal Karappan from Siddha texts as well as modern textbooks.

Twenty patients from the inpatient department and thirty patients from the outpatient department from both sexes were selected after thorough evaluation of history, clinical findings and laboratory results. Enn vagai thervugal were used for the diagnostic purpose.

Majority of patients were female (58%) and particularly belongs to the age of 3-5 years and 50% from poor socio economical background.

Biochemical analysis revealed the drug Karappan chooranam has sulphur, tannic acid, reducing sugar and steroids.

Pharmacologically

Karappan chooranam (internal drug) has

- Significant anti-inflammatory action
- Significant anti-histamine action and
- Mild analgesic action.
- Moderate anti-pyretic action
- The drug showed anti-microbial activity

Milagu ennai (external drug) has

- Moderate anti-histamine action and
- Moderate anti-inflammatory action.

In an average of 48 days treatment, majority of patients show good recovery from signs and symptoms and their laboratory investigation results were encouraging after the treatment, as illustrated in the tabular columns. None of them developed any adverse affects. The progress exhibited was quite encouraging.
CONCLUSION

The treatment with Karappan chooranam (Internal) and Milagu ennai (external) showed remarkable improvement in varal karappan patients.

Along with medication, the patients were advised to follow avoidance of food, which triggers the varal karppan, and to adapt hygienic routines.

The cost of trial medicines is less economical and can affordable by patients below poverty line.

The raw material of the drug is available in almost all season and preparation of the drug is very simple.

No adverse effects were reported during the entire course of treatment.

Hereby the author concludes that the treatment with Karappan chooranam and Milagu ennai for varal karappan is very effective in the point of efficacy and safety.
PREPARATION AND PROPERTIES OF TRIAL MEDICINE

Terminalia chebula

Terminalia chebula is a medicinal plant that is commonly used in Ayurvedic medicine. It is known for its various medicinal properties, including anti-inflammatory, anti-oxidant, and anti-bacterial effects.

The preparation of Terminalia chebula involves the use of specific ingredients and methods. The standard preparation involves the following:

- **Ingredients:**
  - 250 ml. of water
  - 1 ml. of glycerin
  - 1 ml. of honey
  - 492 ml. of lemon juice
  - 463 ml. of sugar

- **Preparation Method:**
  - Boil the water until it reduces to half its volume.
  - Add the glycerin and honey, stirring well.
  - Pour the lemon juice and sugar into the mixture, stirring until dissolved.

The resulting mixture is then used for medicinal purposes, such as in the treatment of various health conditions.

**Terminalia chebula**

Terminalia chebula is a valuable medicinal plant that has been used in Ayurvedic medicine for centuries. Its properties and benefits are well-documented in various traditional texts and studies.

- **Ayurvedic Uses:**
  - Antimicrobial
  - Antioxidant
  - Anti-inflammatory

- **Modern Applications:**
  - As a dietary supplement
  - In cosmetics

Terminalia chebula is a versatile plant that offers a wide range of health benefits. Its use in traditional and modern medicine highlights its importance in the field of natural healthcare.
**Terminalia chebula**

**Fruit**  
Astringent  
Laxative  

Used externally as a local application to chronic ulcers and wounds. Fruits contain 30% of an astrin. Astringency is due to the characteristic principle of chebulinic acid, also contain tannic acid, gallic acid, resin and some purgative principle of the nature of astronquinons. The fruit is highly nutritous and could be used as an important source of Vitamin C, Protein and mineral nutrients. It contains more Vitamin C and Protein than common apple.

The fruit have the property to improve the Secretary status of Brunner’s glands involved in protection against duodenal ulcers. Tannin showed antioxidant and protective effect on liver injury.

**Nigella sativa**
The seeds of *Nigella sativa* Linn, (Ranunculaceae), commonly known as black seed or black cumin, are used in folk (herbal) medicine all over the world for the treatment and prevention of a number of diseases and conditions that include asthma, diarrhoea and dyslipidaemia.

The main reports of the pharmacological and toxicological properties of *N. Sativa* and constituents.

The Seeds contain both fixed and essential oils, proteins, alkaloids and saponin. Much of the biological activity of the seeds has been shown to be due to thymoquinone, the major component of the essential oil, but which is also present in the fixed oil.

The Pharmacological actions of the crude extracts of the seeds (and some of its active constituents, e.g. Volatile oil and thymoquinone) that have been reported
include protection against nephrotoxicity and hepatotoxicity induced by their disease or chemicals.

The seeds / oil have

1. Anti Inflammatory
2. Analgesic
3. Antipyretic
4. Antimicrobial and
5. Antineoplastic activity

The oil decreases blood pressure and increases respiration.

Induce changes in the haemogram that include an increase in both the packed cell volume (PCV) and haemoglobin (Hb), and a decrease in plasma concentrations of cholesterol, triglycerides and glucose.

It would appear that the beneficial effects of the use of the seeds and thmoquinone might be related to their cytoprotective and antioxidant actions, and to their effect on some mediaors of inflammation.
Cow’s Urine
Can cure any form of skin diseases

Action
Germicidal
Anti infective
Antibiotic
Anti cancer
Anti microbial
Anti fungal

The invention relates to an absolutely novel use of cow urine as activity enhance and availability facilitator molecules including anti - infective and anti cancer drugs. The use of cow’s urine is known for a long time in India.

July 3, 2008, A US patent has been granted to Indian Scientist on the use of Cow urine distillate as bio-enhances by Murali Manohar Joshi.

**Honey - நறிவு**

சிதைவு பெருக்குதலைக் கையில் சுதந்திரம் ஆடியும் மூலமாகவே, அமைதிக்கும் மாற்றப்பட்டுள்ளது.

உறை

1. கால்வளகில்
2. பிறந்த நூலகீ
3. கால்வளமாகில்
4. குழந்தை
5. பெருந்தூண்டு

**சுண்டக்கால்**

சுண்டக்கால் 5 சுண்டக்கால் சுண்டக் காலம்:

1. மேல் கோவல்
2. மேல் பேருந்து
3. மேல் பெருந்தூண்
4. பற்றிய கோவல்
5. மேல் கோவல்
Medicinal Uses of Honey

1. The Antiseptic and antibacterial properties of honey have been chemically explained.

2. As an anti microbial agent honey may have the potential for treating a variety of ailments. i.e., particular type of honey may be useful in treating MRSA infections.

3. Anti-bacterial properties of honey used to alleviate the effects of a sore throat, by mixing with lemon juice and consumed. The mixture coats the throat alleviating discomfort and the anti bacterial, antiseptic; properties are good for the throat as well.

4. The pH of honey is 3.2 - 4.5. This relatively acidic pH level prevents the growth of many bacteria.

5. Honey has also been used as a treatment for sore throat and cough for centuries.

6. For sore throats honey not only soothes throats but can also kill certain bacteria that cause the infection.
Nutritional Value of Honey

Honey
Nutritional value per loog (3.5 oz)
Energy 300 kcal 1270 kj
Carbohydrates 82.4 g
Sugars 82.12 g
Dietary Fiber 0.2 g
Fat 0 g
Protein 0.3 g
Water 17.10 g
Vitamin B2 .038 mg 3 %
Vitamin B3 .121 kg 1 %
Vitamin B5 .068 mg 1 %
Vitamin B6 .024 mg 2 %
Folate 2 mg 1 %
Vitamin C 0.5 mg 1 %
Calcium 6 mg 1 %
Iron .42 mg 3 %
Mg. 2 mg 1 %
Ph 4 mg 1 %
K 52 mg 1 %
Na 4 mg 0 %
Zinc 22 mg 2 %
பிள்சு கலாச்சாரம்

பிள்சு

பிள்சுக்குந்தி

சமை

பிள்சுப்பான

பிள்சுமுக

பிள்சுக்குறுத்து

உட்புற உண்மைக்குறுத்து

குறிப்பிட்டு வலை

முன்னெச்சாரம்

பிள்சு பிள்சுக்குந்தி. பிள்சு அழிப்பதற்கு வண்ணத்தில் 2
உண்மைக்குறுத்து அழக் பான் பிள்சுப்பான், குறுத்து பிள்சுமுக் பெற்றான்.

முன்னெச்சாரம்

பிள்சுக்குந்தியின் பிள்சு பிள்சு குறுத்து அழிப்பதற்கு வண்ணத்திற்கு வண்ணம்

பிள்சுமுக

பிள்சு பிள்சு பிள்சு

- பல்லாநூர் பாணக. 242

பிள்சு

Piper nigrum

பிள்சு பிள்சுக்குந்தி

கனிகை, கனிக, காயந்தி, கோதக்காணை, கோதக்காணை, கோதக்காணை, கோதக்காணை, பல்லாநூர்

பாலைப்பெயர் : கனிகை, கனிக

கனிகை - கருப்பு, கருப்பு

கனிகை - பல்லாநூர்

பிள்சு - கருப்பு

வகைச்

கனிகை

கனிகைகள்

செயல்பாடுகள்

செயல்பாடுகள்

செயல்பாடுகள்

செயல்பாடுகள்
Piper Nigrum
Part used: dried ripe fruit

**Constituents:**

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>A volatile alkaloid piperine</td>
<td>5 - 9 %</td>
</tr>
<tr>
<td>Piperidin</td>
<td>5 %</td>
</tr>
<tr>
<td>Balramic Volatile essential Oil</td>
<td>1 - 2 %</td>
</tr>
<tr>
<td>Fat</td>
<td>7 %</td>
</tr>
<tr>
<td>Protiens</td>
<td>7 %</td>
</tr>
<tr>
<td>Chavicin</td>
<td>1 %</td>
</tr>
</tbody>
</table>

Chavicin is a soluble pungent concrete resin. It contains very little piperine and no volatile oil action. Black pepper is acrid, pungent, hot, carminative also used as antiperiodic. Externally it is rubefacient and stimulant to the skin and resolvent. Piperine is a mild antiperiodic, antipyretic.
Acrous calamus

Constituents:

A Volatile essential oil, acrorin, a bitter principle acoretin, calamine, starch, mucilage a little of tannin.

Action:

Emetic, Stomachic in dysentery, peptic Colic remittent fevers, nerve tonic, dysentery of children. Dry rhizomes contain 1.5 - 3.5 % of volatile oil.
அற்குறிப்பு

Emblica officinalis

வரை வர்த்தகல்
     அரேப்பாதி
     கத்தகதிக
     சைர்குளம்
     வெள்ளரமா
     ஆவணம்
     அத்தகம்

வாழ்வில் தோற்றம்
     விலை
     கதை
     கொத்தம்
     துணை
     கொண்டாடத்

கலாச் - வெளிப்பு, நூற்றுப்பு, வளிப்பு

கலாச் - கழிப்பு

பருங்கள் - வளிப்பு

சப்பாய் - சாம்பாளி

காலத்தில்

“அற்குறிப்பு வரை வர்த்தக வருடம் வருடங்கள்
அற்குறிப்பு விளையாட்டு வருடங்கள் - வரை
காலம் வருடம் வருடங்கள் வருடங்கள் வருடங்கள்
இரண்டும் சாம் நிலையில் செயல்படுவது காலம் வருக”

- கோது தரைசாம்பாளியல்
Emblica Officinalis

Ripe Fruit
   Acrid
   Cooling
   Diuretic
   Laxative

Raw fruit
   Aperient

Dried Fruit
   Useful in haemorrhagic diseases, diarrhoea and dysentery in combination with iron used for anaemia, jaundice and dyspepsia.

   Exudation from incisions on the fruit used as external application for the inflammation of the eye. Fruits are rich in tannin.

   Used in worms, acidity, inflammation of lungs, eyes, ulcerations GI disorders and discharges, painful micturation, internal haemorrhage.

Allium cepa

அளிக்குறு

Allium cepa
Allium Cepa

Part used: Bulb and seed

Constituents

Bulbs contain an acrid volatile oil which contains sulphur, essential oil and organic sulphides.

Fresh red onions contain 85.6 moisture,

Dried material contains
- Ether extract  - 2.17 pc
- Albuminoids   - 11.62 pc
- Carbohydrate - 78.53 pc
- Woody Fibre   - 4.02 pc
- Ash           - 3.66 pc

Actions
- Stimulant
- Diuretic
- Expectorant
External
Stimulant
Rubefacient
Raw onion especially antiperiodic value.

Allium sativum

Uses

- Stomachic
- Carminative
- Antiperiodic
- Venereal

Preparation:

- Allium sativum
- Garlic

Notes:

- Garlic is a common culinary ingredient.
- It has been used in traditional medicine for centuries.
- Garlic has been shown to have antioxidant and anti-inflammatory properties.
- Garlic is often used to improve heart health.
- It can be eaten raw, cooked, or used as a condiment.
Allium Sativum

Part used : Bulb & Oil
Constituents : An acrid volatile oil is its active principle
Juice - Used as rubefacient in skin disease
Bulb - Carminative, Aphrodisiac, expectorant, stimulant.

Bulbs yield 0.06 - 0.1 % essential oil containing allyl prophyl disulphide, diallyl disulphide and two more sulphur compounds. It has Antiseptic & Hypotensive principles.

Aristolochia bracteolata

Aristolochia bracteolata
Aristolochia Bracteata

Constituents:
A nauseous volatile substance, an alkaloids and salts especially potassium chloride.

Action:
Every part of the plant is extremely otter purgative.
Juice of leaves applied to foul and neglected ulcers Bruised leaf mixed with castor oil applied to eczema or children legs.
Decoction of root well for expelling round worms.

Thespesia populnea

Aristolochia Bracteata

Constituents:
A nauseous volatile substance, an alkaloids and salts especially potassium chloride.

Action:
Every part of the plant is extremely otter purgative.
Juice of leaves applied to foul and neglected ulcers Bruised leaf mixed with castor oil applied to eczema or children legs.
Decoction of root well for expelling round worms.
**Thespisia populnea**

Fruit, leaves and root applied externally to scabies, psoriasis and other skin diseases.

**Constituents:**

Flower, Petals contain populnin 0.33 %

Populnetin - 0.07 %

Herbacetin - 0.09 %

It abounds in a viscid yellow juice which is used as an external application to bruises, insect bites especially in psoriasis, scabies especially itch. Externally it is used for washing skin diseases. Oil prepared from coconut oil is also used for applying to skin diseases. Flowers are employed in the cure of itch.

---

**Sesamum indicum**

**வெஞ்சு பொழுது**

**மூலம்படியுடன் செய்யப்படும்**

- கிராம. பு. கனவு, குழுத்த

**கௌடர்**

- கிராம்

**தட்டுகள்**

- ஆவம்

**பேரெண்டு**

- ஆவம்

---

**அம்மன்**

ஆராக்கியம்

ஒ. அம்மன்

பூண்டிச்சம்

2. அந்தர்கு காங்கிர

---

**பார்வத்கால குறிப்பிட்டு**

"என்னுடையதுடன்பெண்கி புகழ்பெண்கி போற்றுவை பெண்கி போற்றுவை

சக்தியே காண்பிய கறையவர் - பெண்கி போற்றுவை

கல்லுறும்பி பெண்கி போற்றுவை கறையவர்

புராண உருவம் உயர் பெண்கி"
**Sesamum Indicum**

Three varieties of Sesamum seeds are found black, white, red (or) brown. The black variety is the most common and yields the best quality of oil and is also the best suited for medicinal purposes.

**Constituents:**

Seeds contain fixed oil 50 - 60 pc

**Analysis:**

- 2.0 - 5.2 pc moisture
- 44.6 - 56.9 pc oil
- Seeds also contain,
  - Proteide- 22 pc
  - Carbohydrates -18 pc
  - Mucilage -4 pc
  - Woods fibre- 4 pc
  - Ash -4.8 pc

Oil contains 70 pc of liquid fats consisting of the glycerides of oleic acid and linoleic and 12 - 14 pc of solid fats stearin, palmitin and myristin. A crystalline substance sesamine and a phenol compound sesamol.

**Actions:**

- Lactative
- Nourishing Lactogogue
- Emolient
- Diuretic
- Demulcent
- Emmenagogue
## TABLE 1: BIOCHEMICAL ANALYSIS

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Calcium</td>
<td>Absent</td>
</tr>
<tr>
<td>2</td>
<td>Sulphur</td>
<td>Present</td>
</tr>
<tr>
<td>3</td>
<td>Chloride</td>
<td>Absent</td>
</tr>
<tr>
<td>4</td>
<td>Carbonate</td>
<td>Absent</td>
</tr>
<tr>
<td>5</td>
<td>Starch</td>
<td>Absent</td>
</tr>
<tr>
<td>6</td>
<td>Iron ferrous</td>
<td>Absent</td>
</tr>
<tr>
<td>7</td>
<td>Phosphate</td>
<td>Absent</td>
</tr>
<tr>
<td>8</td>
<td>Albumin</td>
<td>Absent</td>
</tr>
<tr>
<td>9</td>
<td>Tannic acid</td>
<td>Present</td>
</tr>
<tr>
<td>10</td>
<td>Unsaturation</td>
<td>Present</td>
</tr>
<tr>
<td>11</td>
<td>Reducing sugar</td>
<td>Present</td>
</tr>
<tr>
<td>12</td>
<td>Amino acids</td>
<td>Absent</td>
</tr>
<tr>
<td>13</td>
<td>Alkaloids</td>
<td>Absent</td>
</tr>
<tr>
<td>14</td>
<td>Steroids</td>
<td>Present</td>
</tr>
<tr>
<td>15</td>
<td>Triterpenoids</td>
<td>Absent</td>
</tr>
</tbody>
</table>
ANTIINFLAMMATORY ACTIVITY

TABLE 2: EFFECT OF THE KARAPPAN CHOORANAM ON CARAGEENAN- INDUCED HIND PAW EDEMA IN RATS

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose (mg/kg)</th>
<th>Paw volume (ml)</th>
<th>Inhibition (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1hr</td>
<td>3hr</td>
</tr>
<tr>
<td>Control Saline</td>
<td></td>
<td>2.22 ± 0.2</td>
<td>4.87 ± 0.04</td>
</tr>
<tr>
<td>Karappan Chooranam 100</td>
<td>200</td>
<td>2.05 ± 0.2</td>
<td>3.31 ± 0.2</td>
</tr>
<tr>
<td>Karappan Chooranam 100</td>
<td>200</td>
<td>2.02 ± 0.2</td>
<td>2.68 ± 0.2*</td>
</tr>
<tr>
<td>Indomethacin 10</td>
<td></td>
<td>2.18 ± 0.1</td>
<td>1.99 ± 0.1**</td>
</tr>
</tbody>
</table>

Values are expressed as mean ± SEM of 5 rats. **P<0.01; *P<0.05 Vs Control group.

Inference: The drug (Karappan Chooranam) showed significant anti-inflammatory effect.

ANALGESIC ACTIVITY

TABLE 3. EFFECT OF KARAPPAN CHOORANAM ON ACETIC ACID INDUCED WRITHEs IN MICE

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Dose (mg/100g)</th>
<th>No.of writhings</th>
<th>Inhibition (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Vehicle (1.0ml)</td>
<td></td>
<td>51.7 ± 5.1</td>
<td>---</td>
</tr>
<tr>
<td>Karappan chooranam 100</td>
<td>100</td>
<td>40.1 ± 3.8</td>
<td>22.4</td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>29.7 ± 2.9*</td>
<td>42.5</td>
</tr>
<tr>
<td>Standard – Paracetamol</td>
<td>20</td>
<td>11.0 ± 1.4</td>
<td>78.7</td>
</tr>
</tbody>
</table>

Values are expressed as mean ± SEM of 5 rats. *P<0.05 Vs Control group.

Inference: The drug (Karappan Chooranam) showed mild analgesic effect.
### TABLE 4: ANTIPYRETIC EFFECT OF KARAPPAN CHOORANAM

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Group</th>
<th>Dose/ 100gm</th>
<th>Temp in °C</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>0 hr</td>
<td>1 ½ hr</td>
<td>3 hrs</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Control – Honey</td>
<td>1 ml</td>
<td>36.5</td>
<td>39.0</td>
<td>44.6</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Standard – Ibuprofen</td>
<td>20 mg</td>
<td>37.5</td>
<td>34.6</td>
<td>38.5</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Karappan chooranam</td>
<td>100 mg</td>
<td>37.0</td>
<td>38.0</td>
<td>40.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>200mg</td>
<td>36.5</td>
<td>37.0</td>
<td>39.0</td>
<td></td>
</tr>
</tbody>
</table>

**Inference:** The drug (Karappan Chooranam) showed moderate antipyretic effect.

### TABLE 5: ANTIMICROBIAL ACTIVITY OF KARAPPAN CHOORANAM (KC)

<table>
<thead>
<tr>
<th>Name of Organisms</th>
<th>Diameter of inhibition zone in mm</th>
<th>Drug (KC) concentration (mg/disc)</th>
<th>Standard Chloromphenicol (10µg/ml/disc)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control 0.5</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Bacillus subtilis</td>
<td>-</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>-</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>Escherichia coli</td>
<td>-</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa</td>
<td>-</td>
<td>15</td>
<td>19</td>
</tr>
</tbody>
</table>

**Inference:** The drug (Karappan Chooranam) showed antimicrobial activity.
TABLE 6: ANTIHISTAMINE ACTIVITY OF KARAPPAN CHOORANAM

<table>
<thead>
<tr>
<th>Group</th>
<th>Dose (mg/kg)</th>
<th>Preconvulsion</th>
<th>% Inhibition</th>
<th>Plasma histamine (pmoles/ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>Vehicle (1ml)</td>
<td>156.4 ± 1.1</td>
<td>-</td>
<td>6.8 ± 0.5</td>
</tr>
<tr>
<td>Karappan chooranam</td>
<td>100</td>
<td>222.4 ± 2.1</td>
<td>70.3</td>
<td>4.1 ± 0.3</td>
</tr>
<tr>
<td>Cetrizine-standard</td>
<td>50</td>
<td>258.8 ± 2.2</td>
<td>60.4</td>
<td>2.8 ± 0.2</td>
</tr>
</tbody>
</table>

Inference: The drug (Karappan Chooranam) showed moderate anti-histamine effect.

ACUTE ANTI-INFLAMMATORY STUDY ON ‘MILAGU ENNAI’
(EXTERNAL USE)
(By hind-paw method in Albino rats.)

Effect of Milagu Ennai

<table>
<thead>
<tr>
<th>Sl. no.</th>
<th>Group</th>
<th>Dose/100gm/Bw</th>
<th>Mean difference</th>
<th>% of inflammation</th>
<th>% of inhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Control water</td>
<td>1ml</td>
<td>0.85</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>Standard ibu brufen</td>
<td>20mg/1ml</td>
<td>0.05</td>
<td>6.25</td>
<td>93.75</td>
</tr>
<tr>
<td>3.</td>
<td>Milagu Ennai</td>
<td>External</td>
<td>0.35</td>
<td>38.80</td>
<td>61.20</td>
</tr>
</tbody>
</table>

Inference
The test-drug has Moderate anti-inflammatory action.
## ANTI-HISTAMINE EFFECT OF MILAGU ENNAI

<table>
<thead>
<tr>
<th>Group</th>
<th>Dose (mg/kg)</th>
<th>Preconvulsion</th>
<th>% Inhibition</th>
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<td>2.8 ± 0.2</td>
</tr>
</tbody>
</table>

**Inference:**

The drug has a moderate anti histamine action.
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