A STUDY ON
KALANJAGAPADAI

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INTRODUCTION

Before entering the study let us know the basic concepts like origin of earth, origin of life in it, origin of medicine in mankind. Knowing these basics concepts reveals us some truths which glorify our great siddhars that they are the pioneers to all modern scientist invariable to the department they belong, and also invariable to the country they belong. For many scientific evolutions even for todays nano concepts our siddhar thoughts are the basics tools for the modern scientist which help them in their researches.

The age of earth still is a made of great debate. Some used Bible to calculate that the earth was created in 4004BC. Later on in the middle of the nineteenth century, the great scientist, Charles Darwin believed that the earth must be extremely old because he recognised that natural, selection and evolution required vast amounts of time. it was well explained by our beloved siddhars which is quoted in our text THOTRA KIRAMA ARAICHI.

The history of earth describes the most important events and fundamental stages in the development of the planet. Nearly all the branches of Natural science contribute in understanding the Earth’s history. Biological and geological changes have been constantly occurring on our planet since the time of its formation. Organisms continuously evolve, taking on new forms or going extinct in response to an ever changing planet. This is quoted by our siddhars as “உலகத்தின் குறுகில் முழுவதும் முக்கிய காரணிகள்”. Life on earth starts as small and microscopic and then into complex multicellular life’s and experienced a rapid diversification into the most major phyla and then into chimpanzees to modern humans it was quoted as
As soon as the humans originated in the earth many dramatic changes occurred in the aspects of knowledge of the living things. Sympathy, caring and love all these contribute more to show the difference between the mankind and their primitives. These feelings particularly sympathy on others pay the way for the origin of medicines. Thus sympathy is the basic step to treatment.

Crystallization of knowledge of early humans about plants and minerals helps to invent medicines. As soon as the man moves against the nature the word “disease” invades the mankind. According to who the definition of health is “health is a state of complete physical, mental and social well being”. So any system of medicine which fulfills this definition of health is said to be the best system of medicine. In this way our siddha systems is found to the best system of medicine. In this way our siddha systems is found to the best system of medicine as it heals the man in all aspects by its many wings like internal medicine, external medicine, varma, yoga. noi illa nerisocial and preventive measures by holistic way).
கிரிதுடன் பூமியும் போது மாற்றங்களைக் காண்பதற்கு அதன்மீது மாற்றங்களைத் தீட்ச வேண்டிய சீர்பார்வைத் தவறு சடங்கு.

ஆனால், கிரிதுடன் போதும் போது போதும் அம்மானையின் ஆலத்ரு இல்லை. பொருக்கவுடன் வெற்றிகாட்டப்படும் கோலான இரண்டு. (கலாசூர் பார்)

மாந்துடைய பானைக்காக

ோத்தும்பதாக வேறுப்பிள்ளையான மதிம்மமான

தீசக்கில்லை முப்பால் நீளமான

நீலாகரி பார் பிள்ளை நீளமான நீலாகரி முப்பாலமான

நீலாகரி பார் பிள்ளை நீளமான பிள்ளை முப்பாலமான

2. வேலி அம்மானை

பிள்ளையான தவறு தவறு மூழ்கு

- மாந்துடைய பானை பாட்டைக்
Psoriasis is an unrelived provocative non contagious skin and joint disease that affects our immune system. The white blood cells (T-cells) become over-stimulated and it commonly causes red crusty dry patches (also called psoriatic plaques or lesions) to emerge on the skin because of the excessive skin production. The skin reacts just the same
with the fungus infection. Researchers believe that inheritance, atmosphere, and the immune system may also play a primary role in psoriasis.

If you have psoriasis it will affects your immune system results an abnormally hasty skin cell cycle and usually itchy and feel sore. The process of having psoriasis begins at the bottom layer of the epidermis, where keratinocytes are completed. Keratinocytes are juvenile skin cells that fabricate keratin, a strong protein that helps the structure of hair, nails and skin.

Generally, skin cells that are produced in the deepest layers of our skin make their way to the outside in just a week or less. They are full-grown, that sloughed off the skin, and replaced with novel skin cells from underneath. Our skin cannot get rid of these cells as much as necessary speed, so they fabricate up and doing, leading to chunky, dry patches, or plaques, silvery, crumbling areas of dead skin.

They usually rise in your elbows, feet, palms, legs, face wrists, lower back and knees but can also affect any area such as our scalp and genitals but overall it can also affects our whole body. In relation with eczema, psoriasis is more prone to be found on the peripheral portion of the joint (psoriatic arthritis). Our fingernails and toenails can also affect with psoriasis (psoriatic nail dystrophy or nail lesions).

Psoriasis is not curable skin disease from time to time improving and worsening especially if you were triggered to scratch them. Some people with psoriasis can rise in the colder winter months while others in the warmer months in increased sunlight exposure. Patients with psoriasis
can explode by changes in climate, stress, infections, a drug-related rash and dry skin and excess in alcohol.

Psoriasis can infected worldwide, whatever your gender and race, either you are baby, teen or an adult but most of the patients can only diagnosed in their early adult years. People with rigorous psoriasis may have collective awkwardness, job strain, expressive anguish and other delicate issues for the reason that the outward show of their skin.

About 25-40% of patients with psoriasis can also develop psoriatic arthritis and still cannot be diagnosed especially if the symptoms are placid. They usually develops between the early 30’s to the late 40’s; on the other hand, as mentioned on the previous paragraph that it can affect of any age of any gender worldwide and 5.7 to 7.5 millions of people in the United States or 2 to 2.6 percent of the total population suffers psoriasis.

There are different types of psoriasis but regardless of what type you have it usually causes you a discomfort life. And because of psoriasis, most patients can be awake even at night because of the itchy feeling. The pain can be difficult to handle and some even think to finish their life because of discomfort.

Being a patient with psoriasis will be suffers a lifelong treatment and therapy and can losing all your financial investment just for the medications. so for this reason the author had selected a efficient compound herbal drug which is also very cost effective to the patients.
AIM AND OBJECTIVES

Aim:

The aim of this dissertation is to bring out the effectiveness of a compound herbal drug against autoimmune diseases like kalanjaga padai (Psoriasis) without the side effects from siddha system of medicine.

OBJECTIVES:

Primary objectives:

To evaluate the clinical efficacy of Neeradi muthu vallathy melugu as internal medicine and kalappai kizhangu velipoochu as external medicine For the diseases kalanjaga padai (Psoriasis)

Secondary objectives:

- To study the efficacy of additional therapies like yoga and azanas In heeling the disease along with the internal and external medicine.
- To discuss the various literary evidence in both siddha and modern text books for the disease kalanjaga padai.
- To confirm the diagnosis in siddha system with the help of modern parameters
- To know the extent of correlation of features given under kalanjaga padai with the features of psoriasis. And thereby enlightening the highness of siddha system.

- To know the chemical and bio-chemical analysis of the selected drug.

- To study the pharmacological analysis of the selected drug.

- To have an idea of an incidence of kalanjaga padai with reference of age, sex, socio-economic status, and family history related to any psychosomatic problems, land where they (Nilam) live and (Paruva Kalam) climatic changes.

- To make an awareness among the patients in order to avoid further recurrence of the disease.
Definition

According to the textbook “Siddha Maruthuvam Sirappu” Kalanjaga padai is a chronic non-infectious, recurrent, inflammatory disorder of the skin characterized by reddish, slightly elevated patches covered with silvery white scales.

In Siddha system, skin disorders are brought under the clinical entity “Kuttam”.

In the text book “Aathma Ratchamirthamennum Vaiththiya Saarasangiragam” the characteristics of Kuttam are mentioned as follows:

White scaly patches will appear in Foot, Hand, Lips, Vertex, Finger and Wrists.

T.V. Sambasivam Pillai has mentioned that in Tamil medicine ‘Kuttam’ means cutaneous affections and so it’s a comprehensive term used for various skin diseases.
In this book, ‘Sorikuttam’ has been compared to Psoriasis (Sorikuttam - A Kind of leprosy with diffuse papillary eruptions without ulceration on the entire surface of the body marked by intense itching and burning sensation followed by exfoliation of the epidermis or brawny scales – eczematous psoriasis, lepra ichthysis)

Classifications

In the Siddha literature “Yugi Muni Vaidhya Chinthamani” the kuttam has been classified into 18 types:

1. `Gz;lhPfk` - Padar Thamarai
2. `tpw;Nghlfk` - Koppula perunoi
Among the eighteen types of skin diseases (kuttam) described by Yugi, clinical features of Virpodaga kuttam, Sadharu kuttam and Thethru kuttam resemble those of Kalanjaga padai.
Classification by Anubava Vaithiya Deva Ragasiyam;

Based on Three thodams 18 types of kuttram has been classified as follows:

**Vatham**
- Kabala Kuttam

**Pitham**
- Avuthumbara Kuttam

**Kabam**
- Mandala Kuttam
  - Visharchiga Kuttam

**Vatha Pitham**
- Rusiya Jimmiga Kuttam

**Pitha Kabam**
- Saruma Kuttam
  - Yega Kuttam
  - Kidiba Kuttam
  - Sithma Kuttam
  - Alasa Kuttam

**Kaba Vatham**
- Vibathiga Kuttam

**Thirithodam**
- Thaththuru Kuttam
  - Pundareega Kuttam
  - Satharu Kuttam
  - Virpodaga Kuttam
  - Bama Kuttam
  - Sarmathala Kuttam
Kakasa Kuttam

In his dictionary T. V. Sambasivam Pillai has mentioned that, according to Tamil Medical Science kuttam is of 18 types:

1. ரீ - Leprosy with serous exudation
2. தைமு - White Leprosy
3. ரண்மு - Psoriasis
4. கன்மு - Black Leprosy
5. பாமு - True Leprosy
6. பாம் - Macular Leprosy
7. பொருமு - Leprosy with Granules
8. அரம் - Leprosy with Fissures
9. அரம் - Leprosy with burning sensation
10. மிருசூலாமு - Lepra mutilans
11. தொம் - Leprosy with confluent ulcers
12. பாகா - Thick skinned Leprosy
13. கொளிமு - Anaesthetic Leprosy
14. மகுமா - Ulcerated Leprosy
15. காம் - Nodular Leprosy
16. அமிமு - A form with sloughing ulcers
17. கொம்மு - Leprosy with microbes
18. அமிமு - Incurable Leprosy

தாழ்கோட்டைகள் கொண்டால் தாழ்கோட்டைகள் - 4 துணை
1. தொண்டைகளும்
2. கொண்டைகளும்
3. கொண்டைகளும்
4. பொருமைகளின்

துணை துணை - 18 துணை
கொண்டைகள் மேலும் கொண்டைகள் - 6
மேலும் மேலும் - 8
பொருமைகள் - 4
Aetiology

In “Yugi Muni Vaidhya Chinthamani” and “Thirumoolar Vaithiyam” we can find out the sources of information on aetiology and clinical features of the above disorders. In “Thirumoolar Vaithiyam”, the aetiology is given as follows;

“அமர்த்திகள் தவள்வை விளக்கமிட்டிருக்கின்றன
ஆற்றிகள் குருவில் குமாரி காய்
லாபுரி வருண்டையும் லாபுரி வேலை
மிகுதி பயிலும் விளக்கிற் காணியாம்”

- சீடரை

• Six types of skin diseases are caused by venereal disease
  “குருவில் குமாரி காய்
• Eight types of skin diseases are caused by insect bites
  “லாபுரி வருண்டையும் லாபுரி வேலை
• Four types are caused by worms infestation.
  “மிகுதி பயிலும் விளக்கிற் காணியாம்”

Guru Naadi Nool describes Aetiology as follows

‘குருவில் குமாரி காய் பயில்களை
கொள்ள அகாதமியக் குறிப்பிட்டு
பல்கோ குருவில் குமாரியக் குறிப்பிட்டு
பல்கோ குருவில் குமாரியக் குறிப்பிட்டு
காய் குருவில் குமாரியக் குறிப்பிட்டு
பல்கோ குருவில் குமாரியக் குறிப்பிட்டு
காய் குருவில் குமாரியக் குறிப்பிட்டு

The text book “Siddha Maruthuvam Sirappu” describes the aetiological factors of “Kalanjaga padai” as follows:

- Unknown Aetiology
- Genetic Cause

“Agathiyar mentioned that Kanmam (genetic predisposition) is the main cause for kuttam in his Kanma Kandam as follows:

- Plucking the unflowered buds
- Cruelty to animals
- Destroying statues of god
- Teasing of elderly people
- Destroying forests and gardens.
The text “Agathiyr paripoornam - 400” describes the Psycho-social causes (Kanma Varalaru)

“பாதுகாப்பற்றான நிலைப்புக்குரிய விளைவு
பரந்தால் மறு தோன்றும் நீண்டுருவை
2 காலத்தொடராய உயிரினத்தில் கிரி நிகழ்வு
2. என்றாலும் அதிபரந்து விளக்கத்தில் நூற்றாண்டு
கல்லாலானம் விரும்பிக்கவேண்டும் கந்தியை
குற்றாலானம் பூமியிலிருந்து கந்த்தலை
என்றாலும் அவ்வுரையுடன் அவ்வுரை இரட்டை
அவசமான நிலை அழுது நிலைவிசிதை”

- வலம்பள்ளி 214

நிலை குக்காண்மையுடன் விரும்ப நிலையும் பாதுகாப்பு
நூற்றாண்டுக்கு வெளியும் குருக்குக் காற்றில்
பொறைய குடும்பகோணத்திலும் குற்றாக வந்து
பொறையகரம் பொறையத்தில் விரும்ப புகழ்பெற்று காண்டல்
சுருங்கல் விடக்கும் குருக்கு பொறைய நூற்றாண்டு
சுருங்கல்போட்டு விரும்பிக்கவேண்டும் கந்தியை
பொறைய விரும்பியத்துக்கு முற்பெயர்வு
பொறையகரம் பொறையத்திலும் கந்தியை

- வலம்பள்ளி 215
In Agathiar Paripooranam 400 it has been mentioned that diseases which are caused due to sins committed in the previous birth will be cured only if kanmam is expiated.

Excessive heat and cold, laziness, excessive sleep in day time, unbridled sexual indulgence, robbery etc. These habits are supposed to be the factors which lower the immune mechanism of the body (Iyarkkai vanmai) and makes the body liable to disease.

Excessive intake of food items which are hard to digest, imbalanced food, vomiting, frequent intake of food mixed with stone and hair.

Prolonged mental depression, intention to spoil others, greed, abusing God and noble people, neglecting orphans and beggars, cursing the elders and so on. These were the causes mentioned by Yugi.
In Dhanvandhri Vaithiyarogam he Mentions

‘அரிதங்கி அமரிக் விற்காத்து பிக்கச்சுந்தை

சுத்தமிகி இரத்து விற்கரை விற்கட்டம் பிக்கச்சுந்தை

தன்மைப்படியான தன்மையான சொச்சாறு

தன்மைப்படியான ரீதியாக தன்மையான சொச்சாறு

பிக்கச்சுந்தை புத்தீஸ்வர இரவு மீது சொட்டுப் பிக்கச்சுந்தை

விமூகத்துப் புதிய நேரங்களின் பரம்பு

சுத்தமிகி அமரிகான் தன்மையான சொச்சாறு

டேவேராது சான்று சொச்சாறு தன்மையான பாதிக்கான’

- கைக்குலி கொங்குதுதரதம்

• Intake of allergic foods
• Intake of contaminated food
• Thinking of females
• Destiny (Kanma vinai)
• Scolding the elders
In Manmurukiyam, he Mentions,

"இவ்வாறு பலவை வயலால் குறிப்பிட்டு படைத்து

வருடத்தால் வழக்குத் தவறு செய்து

பிறவத்தில் இருக்கும் குறிப்பிட்டு

மேளிப்பு வழக்கு குறை வழமையும்"

-மாடி எமுக்கியம்

- Change of place, food, work, climate and diurnal
Toxins by animal bites

In Agasthiyar vaithyam he mentions,

"குறையலாம் வயலால் வழக்கடையும் திழியும் குறிப்பிட்டு

துணையில் வருடத்தால் தவறு செய்து

வம்ப வழக்கு வழக்கடையும் துணையில் தவறு செய்து

குறையலாம் வயலால் வழக்கு குறையலாம்"

- அக்கியம் எமுக்கியம்

- Skin diseases
- Tuberculosis
- Diabetes
- Fever
- Diarrhea

These diseases occurs due to destiny
Triggering Factors of Kalanjaga Padai are:

a) Tonsilitis (Lasuna thabitham)
b) Respiratory disorders (Puppusa pinigal)
c) Allergic disorders (Ovvamai)
d) Stress and strain
e) Anxiety, Depression
f) Seasonal variations.
g) Certain drugs (eg.) Thambira chendhooram, Chloroquin, Polio Vaccine

Clinical Features

In the text book “Siddha Maruthuvam Sirappu” written by Dr. R. Thiagarajan the clinical features of “Kalanjaga padai” have been given as follows:

- Erythematous slightly elevated patches of different sizes and shapes (commonly coin shaped) covered with white silvery scales appear all over the body. It may also occur in scalp and face
- Pinpoint bleeding appears on scratching the lesions
- In children the lesions may be like water drops

In chronic cases;

- Thickening of skin with fissures appears in both palms and soles
- Excessive scaling and generalized erythema develops all over the body
- Mild oozing will be present if flexures (axilla groin) are involved in females
In one fourth of the patients, nails are affected (pitting, transverse ridges will be seen)

In 7% of the patients, joints are affected (Psoriatic arthropathy)

PSORIATIC ARTHROPATHY (Kalanjaga Vatham;):

Kalanjaga padai is often associated with painful joints known as “Kalanjaga vatham”. It may affect any joint. The most often affected joints are inter-phalangeal joints. The terminal interphalangeal joints are usually involved as opposed to the proximal interphalangeal joints in “Uthira vatha suronitham” which is identical with rheumatoid arthritis. In these cases the affected fingers show nail changes. This condition is termed as “Psoriatic Arthropathica”

The joints of fingers, ankles, knee and sacroiliac region are selectively affected. Those joints are swollen and painful with psoriatic lesions. Radiological changes are characteristic and consist of osteoporosis followed by increased density, diminished joint space, erosion of joint surfaces followed by eventual destruction of the ends of bones. Ultimately, the joints become deformed.

Yugi muni describes the clinical features of Kalanjaga vatham as follows;

“அம்மாமான் குல் குழலின் தருணகலத்தில்
லோம் குழல் பொழுக்கின் த்தக்கு விளக்கு
பாலம் குழல் தீட்ட விளக்கில் விளக்கில்
மெல்லியும் பெருத்திக் குல் குழல்
சிங்கமன் சுருளிக் குழல் விளக்கு
தேப்ரம்பு தலேம்பு விளக்கில்
அம்மாம் பதருத்திக் என்னாவது
குழல் குழலகார மற்ற குழல்” - மேம்பால் 259
The joints of fingers, feet, ankles, knee and sacroiliac are selectively affected and these joints are painful.

The deforming erosive arthritis targets fingers and toes. Marked cartilage destruction and bony articulation results in loss of joint space and marked instability.

The whole body becomes pale (anaemic). Well-defined erythematous papules which are sharply demarcated appear on the skin. There is also loss of taste and giddiness.

Among the eighteen types of skin diseases (kuttam) described by Yugi, clinical features of Virpodaga kuttam, Sadharu kuttam and Thethru kuttam resemble those of Kalanjaga padai.

The clinical features of Virpodaga kuttam are as follows:
Characterized by elevated skin lesions with erythema and itching. Burning sensation will be present on and off. Usually these entities are associated with anxiety and despair.
Characterized by skin lesions covered with silvery white scales, erythema, itching, burning sensation and thickening of ears, cheeks and nose

**Mukkuttram Verupadugal:**

a. **Vatham:**

In case of kalajaga padai

1. Abanan  - habitual Constipation
2. Viyanan  - erythematous changes in the affected areas of skin
3. Samanam - due to other vayus, it is affected
4. Kirukaran - loss of appetite
5. Devathan - insomnia like condition

are commonly affected

b. Pitham:

In case of kalanjaga padai

1. Anal pitham - indigestion of food
2. Ranjagam - paleness of the conjunctiva and tongue
3. Sathagam - difficulty to do the routine works properly and sluggishness
4. Pirasagam - dryness and roughness of skin

are commonly affected

c. Kadam:

In case of kalanjaga padai,

1. Kilethagam - loss of appetite
2. Tharpagam - burning sensation of eyes may be present
3. Santhigam - joint pain present in very few cases

are commonly affected

Udal Kattugal

Our body consists of seven udal kattugal. It gives strength and structure to our body. In the case of Kalanjaga padai out of seven udal kattukkal saaram, senneer, oon and enbu are commonly affected.

Saaram : Dryness, roughness, tiredness

Senneer : Erythematous patches present
Oon : Impairment of sense organ.
Kozhupu : Synovial Fluid Secretion affected
Enbu : joint pain present in few cases

**UDAL VANMAI (Body Immunity)**

The Udal Vanmai is classified into 3 types. They are,

- Iyarkai Vanmai
- Seyarkai Vanmai
- Kaala Vanmai

**IYARKAI VAN MAI**

Natural immunity of the body itself by birth.

**SEYARKAI VANMAI**

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

**KAALA VANMAI**

Development of immunity according to age and the environment.

When Udalvanmai is affected there may be a possibility of Kalanjaha Padai.
PINIYARI MURAIMAI

(Diagnostic methods adopted in Siddha system of Medicine)

Piniyari muraimai is a method of diagnosing a disease. It is based upon three main principles. They are,

- Poriyalarithal (Inspection)
- Pulanalarithal (Palpation)
- Vinathal (Interrogation)

Physicians 'pori' and 'pulan' are used as tools for examine the 'pori pulan' of the patient. The above principles correspond to the methodology of

1. Inspection,

2. Interrogation

3. Palpation in modern medicine, in arriving a clinical diagnosis of the disease.

1. PORIYALARITHAL

Pori is considered as the five senses of perception namely,

- Nose
- Tongue
- Eye
- Skin
- Ear

‘Poriyalarithal’ is examining the pori of the patient by the physician for diagnosing.
• Skin is commonly affected in kalanjagapadai.
• Ear lobes are rarely affected in kalanjagapadai.
• So skin and ear is used to diagnose the disease

2. PULANALARITHAL

'Pulan' is five object of senses. They are

- Smell
- Taste
- Vision
- Sensation to touch
- Hearing

Pulanalarithal' means examining the 'pulan' of the patient by the physician for diagnosing purpose.

- Dryness, roughness are elicited by touching the skin

3. VINATHAL

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

- Vinathal is use ful to know about the exacerbations based on seasonal variations

ALAVAIGAL (logics)

Alavaigal are used in clinical diagnose of a disease
Alavai divided into ten types. They are,

- Observation - காண்பிய
- Inference - குறிப்பிட்டு
- Authority, Literature - கைலர
- Preception - இறிக்கலம
- Presumption - அகத்துறை
- Comparison - தேசைய
- Inference by elimination - பாரிசைன
- Probability - பாயம
- Tradition - வருமை
- Natural Inference - நேர்மை

The above mentioned "ten alavaigal" are included in three alavaigal.

They are,

- **Kaandal (Inspection by Siddha method)]**

  Through 'kaandal' the physician can directly see the patient, hear all the complaints and at length concludes a diagnosis.
Karuthal (Through Siddha Investigation)

Through envagai thervu and neerkuri as well as neikuri, we can diagnose a disease by karuthal.

Urai (Text's evidence - Siddhar's)

Comparative study of the signs and symptoms of the patient with the reference of books and come to diagnosis.

Ubamanam

It is very useful to differentiate kalanjapadai from other skin diseases.

Iyalbu

It explains about the features of kalanjapadai.

Ennvagai thervugal (eight diagnostic tools)

Siddhars have developed a unique method of diagnosing the disease by "Enn vagai thervugal" 

"கலான்ஜப்படை குறிப்பிட்டால் அடையாது கிளகு தெளிவேளை மேலே அடைந்துகொண்டு முடிக்கவுள்ளவை" 

- குலாலம் கண்கள் குலாலம் உயர் மகள் (முக்காலம்)

"கலான்ஜப்படை குறிப்பிட்டால் அடையாது முடியாது செல்லும்" 

- குலாலம்
1. Naadi (Pulse)

In kalanjaga padai the following types of naadi could be felt. They were,

a) Vathapitham
b) Vathakabam
c) Pithakabam

II. Sparism

In case of Kalanjaga padai slightly raised well defined dry erythematous macules or plaques, covered with white silvery scales can be noticed in affected areas.

III. Naa

In case of Kalanjaga padai no abnormality was seen in Naa.

IV. Niram

In case of Kalanjaga padai white patches with silvery scales could be noticed at affected areas.

V. Mozhi

In case of kalanjaga padai, no abnormalities were observed.

VI. Vizhi

In case of Kalanjaga padai, no abnormality was seen in vizhi.

VII. Malam

In case of Kalanjaga padai constipation was reported in some cases.

VIII. Moothiram

Collection of urine for the determination of Neerkkuri and Neikkuri, is an important diagnostic method
Prior to the day of urine examination the patient is instructed to take a balanced diet. The patient should have good sleep. After waking up in the morning, the first urine voided is collected in a clear wide mouthed glass container and is subjected to analysis of “Neerkuri and neikkuri” within one and a half hour

1. Niram - Colour
2. Edai - Specific gravity
3. Manam - Smell
4. Nurai - Frothy nature
5. Enjal - Quantity of urine voided

Apart from these the frequency of urination, abnormal constituents such as sugar, protein, presence of blood, pus, renal crystals must also be found out.
In Kalanjaga padai patients straw coloured urine was noticed.

**NEIKKURI:**

The speciality of neikuri is stated in the text book ‘Siddha Maruthva Noi Naadal Noi Mudal Nadal Thirattu’ as follows:

“The collected specimen as said above is to be analysed by following method. The specimen is kept open in a glass dish or china clay container. It is to be examined under direct sunlight, without any shaking of the vessel.

Then add one drop of gingelly oil through the side of vessel without disturbing the urinary specimen and the neikkuri was noted in direct sunlight, and conclude the diagnosis as follows:
In my Kalanjaha padai dissertation,

- 60% cases have Vatha Neer
- 10% cases have pitha Neer
- 30% cases have Kaba Neer.

Medicine like Pranayamam, Yoga.

LINE OF TREATMENT (பிரானயமம் - யோகானா)  

In accordance with the Siddha system of medicine, certain basic principles are developed before starting the specific drug therapy. These procedures are initially followed to balance, the deranged kutrams ie. Vatham, pitham and kabam. They are purgation, vomiting and application of drugs on the eyes to balance the deranged vatham, pitham and kabam respectively. This can be understood by the following verbs,

“அற்றமைக்கோ கட்டு தானும்

அய்வுகோ பித்து தானும்

ஏற்றமைக்கோ கட்டு தானும்”

In addition to this following medications are practiced in the Siddha system.

- Aga marunthugal (Internal medicines)
- Pura marunthugal (External medicines)
- Restriction regarding food habits and routine day to day life style.
- Sirappu Maruthuvam - a special feature of Siddha medicine like Pranayamam, Yoga.
Internal Medicine:

Neeradimuthu Vallathy Mezhugu 500 - 700mg twice daily

External Medicine:

Kalappaikizhangu Velipoochu

Paththiyam (Dietary Regimen):

SPECIAL NON - DRUG THERAPEUTICS

Several special medicaments of non-drug therapeutics like Yoga, Pranayamam, Asanas, Kalpa medicines are employed in Siddha system. These are employed during diseased state and also for the prevention of diseases during healthy days.

In Kalanjaha padai, patients are also advised to follow Pranayamam, Yoga and Asanas for the early cure, in order to avoid the remissions and exacerbation of this disease.

PRANAYAMAM

It is a form of Kayakalpa method. By practicing this one can prevent any disease. This is explained in the following verse,

`καθαρισθήσει το Τρίτο Α' δύο χρόνων η ημέρας, ο υπόλοιπος χρόνος
και τόπος η ημέρας η ημέρας. “Γιατί” λέει ο υπόλοιπος χρόνος
ημέρας και τόπος η ημέρας το Τρίτο Α' δύο χρόνων η ημέρας.
"Τον μελετώντα λειτουργία χρονίων χρόνων ημερών."

καθαρισθήσει το Τρίτο Α' δύο χρόνων η ημέρας, ο υπόλοιπος χρόνος
και τόπος η ημέρας η ημέρας. “Γιατί” λέει ο υπόλοιπος χρόνος
ημέρας και τόπος η ημέρας το Τρίτο Α' δύο χρόνων η ημέρας."
YOGA:

Yoga is maintained by the body in a particular posture for a particular period of time. This is totally different from the ordinary exercise. Yoga vitilises both physical body and the mental set-up unlike exercise which tones only the muscles. The common benefits are,

- It tones the internal organs
- It prevents obesity and disease
- It maintains normal circulation to all the organs of the body.
- It is very safeguard for all the vital organs.
- It avoids laziness, enhances pure mind and cleverness and memory power. There will be no problems like psychomotive disturbances if practised daily.

**ASANAS**

Regarding skin disease the following Asanas can be advised

1. 1. 1. 1.
2. 2.
3. 3. 3.

1. **ASANAS**

   कर्मानिव तथा विशेष निर्देश अवस्थितियों को अनुसार के नियमों से तत्कालीन स्थितियों में उपयोग्य करना चाहिए। आंतरिक रूप से, अहंकार से दिन-दिन प्रभाव नहीं रहता है। विशेष तत्कालीन स्थितियों में नियमों का अनुसार करना विशेष निर्देश अवस्थितियों के कारणों से, आंतरिक स्वास्थ्य और विशेष निर्देश अवस्थितियों के कारणों से।

**प्रमाण:****

- निर्देशित तथा अनुसार अनुस्मरण
- अवस्थितियों में स्वस्थ्य और विशेष निर्देश
- निर्देशित तथा अनुसार अनुस्मरण
- निर्देशित तथा अनुसार अनुस्मरण
- खेलों के लिए शुभकामनायें

2. **सन्तुलनसाधन**

मनोविश्वासी बिखेर के सतहों या विशेष अवस्थितियों तथा कस्तों पर प्रभाव नहीं होता। उपयोगिता पर विशेषता है। शारीरिक इकान्ताओं तथा आंतरिक अवस्थितियों पर कस्तों से शारीरिक इकान्ताओं के लिए शुभकामनायें।
3. புரோச் செய்யும் அளவு

மாணவர் படிகத்தில் கணக்கள் செய்யும் வருடாக, தனித்து எண்ணி பொருளாளரானவர் கணக்கூறு வருடாகப் படிகத்தில் விளக்கம்.

➤ நுழைவு கல்வெட்டுகள் படிகத்தில் விளக்கம்
➤ புதிய கல்வெட்டில் எண்ணி விளக்கம்
➤ முன்னைய எண்ணி விளக்கம்
➤ கல்வெட்டில் முன்னைய எண்ணி விளக்கம்
➤ கல்வையாளர் படிகத்தில் விளக்கம்
அருங்காட்சியாளர்
Vayu Mudra

Varuna Mudra
MODERN ASPECTS

ANATOMY OF THE SKIN

The skin is an ever-changing organ that contains many specialized cells and structures. The skin functions as a protective barrier that interfaces with a sometimes-hostile environment.

It is also very much involved in maintaining the proper temperature for the body to function well. It gathers sensory information from the environment, and plays an active role in the immune system protecting us from disease.

Understanding how the skin can function in these many ways starts with understanding the structure of the 3 layers of skin - the epidermis, dermis, and subcutaneous tissue

EPIDERMIS

The epidermis is the outer layer of skin. The thickness of the epidermis varies in different types of skin. It is the thinnest on the eyelids at 0.05 mm and the thickest on the palms and soles at 1.5 mm.

The epidermis contains 5 layers. From bottom to top the layers are named:

- Stratum Basale
- Stratum Spinosum
- Stratum Granulosum
- Stratum Lucidum
- Stratum Corneum
Stratum Basale

The stratum basale is the bottom layer of keratinocytes in the epidermis and is responsible for constantly renewing epidermal cells. This layer contains just one row of undifferentiated columnar stem cells that divide very frequently. Half of the cells differentiate and move to the next layer to begin the maturation process. The other half stay in the basal layer and divide over and over again to replenish the basal layer.

Stratum Spinosum

Cells that move into the spinosum layer (also called prickle cell layer) change from being columnar to polygonal. In this layer the cells start to synthesize keratin.

Stratum Granulosum

The cells in the stratum granulosum, or granular layer, have lost their nuclei and are characterized by dark clumps of cytoplasmic material. There is a lot of activity in this layer as keratin proteins and waterproofing lipids are being produced and organized.

Stratum Lucidum

The stratum lucidum layer is only present in thick skin where it helps reduce friction and shear forces between the stratum corneum and stratum granulosum.

Stratum Corneum

The cells in the stratum corneum layer are known as corneocytes. The cells have flattened out and are composed mainly of keratin protein which provides strength to the layer but also allows the absorption of water.
Specialized Epidermal Cells

There are three types of specialized cells in the epidermis:

- The melanocyte produces pigment (melanin)
- The Langerhans' cell is the frontline defense of the immune system in the skin
- The Merkel's cell's function is not clearly known

Epidermal Appendages

The following glands and structures are found in the epidermis:

Eccrine Glands

These are the sweat glands. They are found in abundance throughout the skin surface, except margins of the lip, labia minora, glans penis and inner aspect of the prepuce. These are also found in highest concentration in the palm, soles and the axillae. They secrete sweat that is a hypotonic solution, which permits evaporative cooling of the body.

Apocrine Glands

These are the scent glands. They are found primarily in the axillae and ano-genital region. Modified apocrine glands are found in the ear canal, eyelids and in the breasts.

Sebaceous Glands

These are found on all parts of the body except the palms and soles. They produce oil that lubricates and protects the skin and hair. This oil is called the sebum.
Hair

Hair is found on almost every part of the body surface except on the palms, soles and the dorsal surface of the terminal phalanges. Hair differs in length, thickness and colour. It grows about 1-2 cm per month. The growth of Hair is controlled by endocrine.

Nails

These are semi transparent plate like horny structures, covering the dorsal surfaces of the distal phalanges of the fingers and toes. The proximal edge of the nail is known as the nail root; the visible portion of the nail is called the nail plate. It is semi transparent and looks red due to the abundant vascular supply in the nail bed. The more opaque and rather whitish semi lunar portion of the nail plate near its root is known as the lunula. The surface of the skin on which the nail rests is known as the nail bed.

DERMIS

The dermis varies in thickness depending on the location of the skin. It is 0.3 mm on the eyelid and 3.0 mm on the back. The dermis is composed of three types of tissues

- Collagen
- Elastic tissue
- Reticular fibers

Layers of the Dermis

The two layers of the dermis are the papillary and reticular layers.

- The upper papillary layer contains a thin arrangement of collagen fibers
The lower reticular layer is thicker and made of thick collagen fibers that are arranged parallel to the surface of the skin.

**Specialized Dermal Cells**

The dermis contains many specialized cells and structures:

- The hair follicles are situated here with the Arrector pili muscles that attaches to each follicle.
- Sebaceous (oil) glands and apocrine (scent) glands are associated with the follicle.
- This layer also contains eccrine (sweat) glands, but they are not associated with hair follicles.
- Blood vessels and nerves course through this layer. The nerves transmit sensations of pain, itch, and temperature.
- There are also specialized nerve cells called Meissner's and Vater-Pacini corpuscles that transmit the sensations of touch and pressure.

**Subcutaneous Tissue**

The subcutaneous tissue is a layer of fat and connective tissue that houses larger blood vessels and nerves. This layer is important in regulation of skin temperature and the body.

**PHYSIOLOGY**

1. **Protective Function**

   It prevents the penetration of harmful substances and bacterial invasions and protects against sunlight by synthesis of melanin pigment.
2. Immunological Function

Langerhans cells play a crucial role in the contact sensitization, immuno surveillance against viral infections and neoplasms.

3. Sensory Functions

The skin is richly supplied with nerves and various types of specialized sensory end-organs which provide information regarding environmental changes. By this, the body can adjust its activities accordingly.

4. Secretion and Excretion

The skin possesses various types of glands and the most important of them are Sweat and Sebaceous glands. These glands secrete Sweat and Sebum respectively. The substances excreted in Sweat are Sodium Chloride, Sodium Phosphate, Sodium Bicarbonate, Keratin and a small amount of Urea. The skin can also excrete certain drugs administered to the individual such as Mercury, Arsenic, Iodine etc.

Sebum is composed of Fatty acids, Cholesterol, Alcohol etc. The Sebum acts as a lubricant for the drying effects of atmosphere.

5. Synthesis of Vitamin D

Vitamin D is synthesized in the skin as a result of exposure to ultra violet ‘B’ (UVB) radiation.

6. Body heat regulation

The skin plays a very important role in regulation of heat loss. It loses heat to the external environment in three ways by Conduction, Radiation and Evaporation. The heat loss through the skin is regulated by various physiological mechanisms.
7. **Endocrine function**

Hair follicles and Sebaceous glands are the targets for androgenic steroids secreted by the gonads.

8. **Storage function of skin**

Blood is stored in the rich sub papillary plexus of the dermis (approximately 1 litre). The skin is also a good store house of ergosterol which is irradiated by the Ultra Violet light of the sun and converted into Vitamin D.

9. **Absorption**

The skin can absorb substances dissolved in fatty solvents. This is the principle behind the local application and massaging of various ointments and creams dissolved in animal fats.

10. **Gaseous exchange through skin**

A small amount of gaseous exchange occurs through the skin. In man, the amount of CO2 exchanged through the skin is negligible when compared to the amount exhaled from the lungs.
PSORIASIS

General Description:

Psoriasis is an immune mediated genetically determined common dermatological disorder which affects skin, nails, joints and has various systemic associations. There is evidence that the disease is associated with a high impact on the health-related quality of life and considerable cost. Large literature has been published focusing on its varied aspects. There is a no dearth of information available; however, many questions remain that are still unanswered.

Although the disease can develop at any time, 10-15% of all cases are diagnosed in children under 10, and the average age at the onset of symptoms is 28. Psoriasis is most common in fair-skinned people and extremely rare in dark-skinned individuals.

Normal skin cells mature and replace dead skin every 28-30 days. Psoriasis causes skin cells to mature in less than a week. Because the body can't shed old skin as rapidly as new cells are rising to the surface, raised patches of dead skin develop on the arms, back, chest, elbows, legs, nails, folds between the buttocks, and scalp.

Psoriasis is considered mild if it affects less than 5% of the surface of the body; moderate, if 5-30% of the skin is involved, and severe, if the disease affects more than 30% of the body surface.

Definition:

Psoriasis is non contagious, chronic, autoimmune disease commonly characterized by thickened, inflamed patches of skin covered by silver-gray scales, sometimes accompanied by painful joint swelling and stiffness.
Etymology:

The term *psoro* comes from the Greek word for itch; *psoriasis* corresponds to the term *itchy*. The term *psoriasis* was used as early as 1684 as the Latin term for Mange. [Mange is simply another word for scabies, a very itchy mite infestation]

Prevalence

There is a growing number of population-based studies providing worldwide prevalence estimates of psoriasis. Prevalence of psoriasis varies in different parts of the world. According to published reports, prevalence in different populations varies from 0% to 11.8%. For most of the data given, the range extends from around 0.5% to close to 2.5%. In the USA, the prevalence of psoriasis was estimated to be around 4.6% while in Canada it was 4.7%. Data from Europe show little variation in countries with a range from 1.4% (Norway), 1.55% (Croatia) and 1.6% (UK). In East Africa, the figure was 0.7% and in the Henan district of China only 0.7% were found affected.

Most of the data on prevalence has been derived from hospital-based studies while there are only few well-defined large population based studies done to find the exact prevalence of this dermatoses in the community.

Prevalence studies from India are mostly hospital-based. presents the comparative data from various epidemiological studies on psoriasis from India. Okhandiar *et al.* collected a comprehensive data from various medical colleges located in Dibrugarh, Calcutta, Patna, Darbhanga, Lucknow, New Delhi and Amritsar. They found that the incidence of psoriasis among total skin patients ranged between 0.44 and 2.2%, with
overall incidence of 1.02%. They noted that the incidence in Amritsar (2.2%) was higher as compared to other centers in Eastern India and speculated that it may be related to different environmental conditions (extremes of temperature), dietary habits, and genetic differences. The ratio of male to female (2.46:1) was very high which could not be clearly accounted for. Highest incidence was noted in the age group of 20-39 years and the mean age of onset in males and females was comparable.

In another study from North India, Bedi reported the prevalence of psoriasis to be 0.8% among the skin patients but the sample size of the study was very small. Male to female sex ratio was 2.5:1. In this study, it was observed that females had lower mean age of onset compared to males. In a latter study by Bedi, which included larger number (530) of subjects, prevalence of psoriasis among dermatology outpatients was found to be 2.8% while male to female ratio continued to be the same.

In a study from tertiary health care center from North India, psoriasis patients accounted for 2.3% of the total dermatology outpatients. Of the total psoriasis patients, 67% were men and 33% were women, male to female ratio being 2.03:1. Ages of patients ranged from infancy to eighth decade, mean age being 33.6 years. Children accounted for 4.4% of total psoriasis patients. Women had slightly lower mean age of onset (27.6 years) compared to the men (30.9 years).

So, it can be inferred that in India the prevalence of psoriasis varies from 0.44 to 2.8%, it is twice more common in males compared to females, and most of the patients are in their third or fourth decade at the time of presentation. These studies are limited by the absence of
commonly accepted and validated diagnostic criteria. Furthermore, there is basically no reliable information on time trends of the disease.

Table 1: Epidemiological studies on psoriasis from India

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total no of patients</td>
<td>3573</td>
<td>162</td>
<td>782</td>
<td>530</td>
<td>1220</td>
</tr>
<tr>
<td>Prevalence (% of total dermatology outpatients)</td>
<td>1.02</td>
<td>0.8</td>
<td>1.4</td>
<td>2.8</td>
<td>2.3</td>
</tr>
<tr>
<td>Male:female</td>
<td>2:46:1</td>
<td>2:5:1</td>
<td>2:3:1</td>
<td>2:4:1</td>
<td>2:03:1</td>
</tr>
<tr>
<td>Mean age in males and females</td>
<td>Comparable</td>
<td>Lower in females</td>
<td>Lower in females</td>
<td>-</td>
<td>Slightly lower in females</td>
</tr>
<tr>
<td>Peak onset of disease</td>
<td>third and fourth decade</td>
<td>third and fourth decade</td>
<td>-</td>
<td>third and fourth decade</td>
<td>-</td>
</tr>
</tbody>
</table>

Genetic and familial incidence:

Psoriasis vulgaris is known to be associated with certain HLA antigens and complement factors but most of the studies published are in Western populations with only little information about Indians. Chablani et al. in a study of 67 psoriasis subjects from Western India found association with the A1, B17 and Cw6, but not with B13 antigens. Pitchappan et al. reported association of HLA Bw57 and DR7 with psoriasis vulgaris in South India. Rani et al. showed that Cw *0602 was the main allele that had high frequency in psoriasis patients in North India.
Genetic predisposition has a significant role in the etiopathogenesis of psoriasis and familial clustering of the cases has been observed. Farber et al. reported familial occurrence in 36% of their patients. Familial incidence is greater in childhood psoriasis compared to adult onset psoriasis.

Indian studies report lower familial incidence of the disease. Bedi reported positive family history of psoriasis in 14% of their patients. While Kaur et al. reported family history in only 2% of their patients. First degree relatives were affected in 84% of the cases while second degree relatives in 12% cases. There are only few studies which have made record of family history of psoriasis in their patients, so definite statistical data on familial incidence is not available.

**Quality of life**
- 60 percent of people with psoriasis reported their disease to be a large problem in their everyday life
- Nearly 40 percent with psoriatic arthritis reported their disease to be a large problem in everyday life
- Patients with moderate to severe psoriasis experienced a greater negative impact on their quality of life
- Psoriasis has a greater impact on quality of life in women and younger patients

**CAUSES**
- The cause of psoriasis is not fully understood. There are two main hypotheses about the process that occurs in the development of the disease. The first considers psoriasis as primarily a disorder of excessive growth and reproduction of skin cells. The problem is
simply seen as a fault of the epidermis and its keratinocytes. The second hypothesis sees the disease as being an immune-mediated disorder in which the excessive reproduction of skin cells is secondary to factors produced by the immune system.

**Psoriasis - an Autoimmune Disorder**

- As part of its defense against foreign invaders, our body's bone marrow and thymus gland collaborate to pump out specialized white blood cell warriors called "T cells." Under normal circumstances, T cells are programmed to identify and coordinate an attack on enemy combatants.

- In psoriasis, T cells mistakenly identify skin cells as "other" and attack them. This attack injures the skin cells, setting off a cascade of responses in immune system and in skin, resulting in skin damage (that is, swelling, reddening and scaling).

- In an effort to heal, skin cells begin reproducing rapidly. Activities that should take a month take place in only days, and abnormally large numbers of new skin cells push their way to the surface of skin. This occurs so quickly that older skin cells and white blood cells aren't shed quickly enough. These discarded cells pile up on the surface of the skin, creating thick, red plaques with silvery scales on their surface: the hallmark of the classic form of plaque psoriasis.

Factors that increase the risk of developing psoriasis include:

- family history
- stress
- exposure to cold temperatures
• injury, illness, or infection
• steroids and other medications
• race

Trauma and certain bacteria may trigger psoriatic arthritis in patients with psoriasis.

**Clinical Symptoms:**

- A sharply delimited, hyperemic patch, covered with a silvery-white layer of scales of variable thickness, is found as typical primary eruption
- With careful scratching, small silvery-white lamellar scales come off, more or less as from a solidified candle strip (candle grease sign)
- Phenomenon of the last skin layer: if scratching continued, a thin, glistening epithelial layer is revealed
- **Auspitz sign:** removal of this epithelial layer reveals punctuate bleeding because of a lesion of the capillaries running out into the tips of the papillae.
- **Koebner’s phenomenon:** if the skin of a psoriatic patient is irritated (e.g. scratching) in the phase of an acute episode of eruption, a new psoriatic focus is formed on the floor of this epithelial lesion

**Types of psoriasis:**

Dermatologists distinguish different forms of psoriasis according to what part of the body is affected, how severe symptoms are, how long they last, and the pattern formed by the scales.
PLAQUE PSORIASIS.

Plaque psoriasis (psoriasis vulgaris), the most common form of the disease, is characterized by small, red bumps that enlarge, become inflamed, and form scales. The top scales flake off easily and often, but those beneath the surface of the skin clump together. Removing these scales exposes tender skin, which bleeds and causes the plaques (inflamed patches) to grow.

Plaque psoriasis can develop on any part of the body, but most often occurs on the elbows, knees, scalp, and trunk.

SCALP PSORIASIS:

At least 50 of every 100 people who have any form of psoriasis have scalp psoriasis. This form of the disease is characterized by scale-capped plaques on the surface of the skull.

NAIL PSORIASIS:

The first sign of nail psoriasis is usually pitting of the fingernails or toenails. Size, shape, and depth of the marks vary, and affected nails may thicken, yellow, or crumble. The skin around an affected nail is sometimes inflamed, and the nail may peel away from the nail bed.

GUTTATE PSORIASIS:

Named for the Latin word *gutta*, which means "a drop," guttate psoriasis is characterized by small, red, drop-like dots that enlarge rapidly and may be somewhat scaly. Often found on the arms, legs, and trunk and sometimes in the scalp, guttate psoriasis can clear up without treatment or disappear and resurface in the form of plaque psoriasis.
PUSTULAR PSORIASIS.

Pustular psoriasis usually occurs in adults. It is characterized by blister-like lesions filled with non-infectious pus and surrounded by reddened skin. Pustular psoriasis, which can be limited to one part of the body (localized) or can be widespread, may be the first symptom of psoriasis or develop in a patient with chronic plaque psoriasis.

Generalized pustular psoriasis is also known as Von Zumbusch pustular psoriasis. Widespread, acutely painful patches of inflamed skin develop suddenly. Pustules appear within a few hours, then dry and peel within two days.

Generalized pustular psoriasis can make life-threatening demands on the heart and kidneys.

Palomar-plantar pustulosis (PPP) generally appears between the ages of 20 and 60. PPP causes large pustules to form at the base of the thumb or on the sides of the heel. In time, the pustules turn brown and peel. The disease usually becomes much less active for a while after peeling.

Acrodermatitis continua of Hallopeau is a form of PPP characterized by painful, often disabling, lesions on the fingertips or the tips of the toes. The nails may become deformed, and the disease can damage bone in the affected area.

INVERSE PSORIASIS.

Inverse psoriasis occurs in the armpits and groin, under the breasts, and in other areas where skin flexes or folds. This disease is characterized by smooth, inflamed lesions and can be debilitating.
ERYTHRODERMIC PSORIASIS.

Characterized by severe scaling, itching, and pain that affects most of the body, erythrodermic psoriasis disrupts the body's chemical balance and can cause severe illness. This particularly inflammatory form of psoriasis can be the first sign of the disease, but often develops in patients with a history of plaque psoriasis.

PSORIATIC ARTHRITIS.

About 10% of patients with psoriasis develop a complication called psoriatic arthritis. This type of arthritis can be slow to develop and mild, or it can develop rapidly. Symptoms of psoriatic arthritis include:

- Joint discomfort, swelling, stiffness, or throbbing
- Swelling in the toes and ankles
- Pain in the digits, lower back, wrists, knees, and ankles
- Eye inflammation or pink eye (conjunctivitis).
BEFORE AND AFTER TREATMENT

1) Name: ARUMUGANAINAR
   O.P.No: 75490

   BT
   AT

1) Name: Manoharan
   O.P.No: 68376

   BT
   AT
BEFORE AND AFTER TREATMENT

1) Name: GANESAN
   I.P No: 66068

2) Name: KARUPPUSAMY
   I.P No: 26842

BT

AT
PATHOGENESIS

The biochemical basis for the pathogenesis of psoriasis, which is as equally varied as the genetic basis, can be attributed to both overexpression and underexpression of certain proteins in psoriatic lesions. The anomalies in protein expression can be divided into three areas:

A. Abnormal keratinocyte differentiation
B. Hyperproliferation of the keratinocyte
C. Infiltration of inflammatory elements

A. Keratinocyte Differentiation

At least six markers of abnormal keratinocyte differentiation have been found, and all have implications in the pathogenesis of the disease. These include aberrations of

- Keratinocyte Transglutaminase type I (TGase K)
- Skin-derived Antileukoproteinase (SKALP)
- Migration inhibitory factor-related protein-8 (MRP-8)
- Involucrin
- Filaggrin
- Keratin expression

**TGase K** - The overexpression of this enzyme causes the excessive cornification seen in psoriatic lesions.

**SKALP** – It is found only in psoriatic skin. This polypeptide is a major elastase inhibitor, which is specific for the degredation of elastin, a protein found in tissues requiring elasticity.
MRP-8 - Its biochemical function is not completely understood. It has been found in psoriasis and other inflammatory diseases but not in normal skin.

Involucrin - A precursor protein that helps to stabilize the CE, is also upregulated in psoriasis vulgaris.

Keratin - Its expression is also disrupted in psoriasis. K6 and K16, markers of abnormal hyperproliferative conditions, are up-regulated in psoriatic epidermis, whereas K1 and K10, markers of terminal differentiation, are down-regulated.

Filaggrin - It is normally found in the granular layer of the skin and is absent in psoriatic lesions.

B. Hyperproliferation

It is the second category of anomalies that contributes to the symptoms of psoriasis vulgaris. Several possible biochemical causes for the overproduction of the keratinocytes have been found in psoriatic skin:

- Epidermal Growth Factor (EGF)
- Bone Morphogenetic Protein-6 (BMP-6)
- Transforming Growth Factor-alpha (TGF-α)
- Ornithine Decarboxylase
- Activating Protein (AP1)
- Mitogen-Activated Protein Kinase (MAPK)

EGF binding capacity is doubled in the upper layers of the epidermis of psoriatic skin. This increase in binding over-stimulates the growth of the keratinocytes, causing hyperproliferation.

BMP-6, another growth factor, is present in newborns, but normally disappears by adulthood, except in psoriatic patients, which
makes it a prime candidate for a growth factor sponsoring the formation of psoriatic lesions in humans.

**TGF-α** expression is up-regulated in psoriatic skin.

**Ornithine Decarboxylase**, an essential enzyme in polyamine biosynthesis, is higher in lesional and nonlesional psoriatic skin.

**AP1**, a complex of the oncoproteins, stimulates the expression of many genes that are important in cell proliferation and inflammation.

The last indicator, **MAPK**, helps to regulate cellular proliferation. Numerous growth factors and cytokines modulate MAPK's activity, which is higher in psoriatic fibroblasts.

**C. Inflammatory Elements**

The inflammatory aspect of psoriasis is physically evident by the redness of psoriatic plaques. The biochemical basis for this inflammation stems from several immune modulators including various cytokines released from keratinocytes and other proteins involved in the inflammatory response.

Among the interleukins (ILs), IL-1, IL-6, IL-7 and IL-8 are upregulated in psoriatic skin. In addition, IL-15, which reduces keratinocyte cell apoptosis, is elevated in psoriatic lesions. Pituitary Adenylate Cyclase Activating Polypeptide (PACAP) is an inflammatory mediator that is upregulated in psoriatic lesions.

All of these inflammatory factors exert specific effects on T cells, endothelial cells, macrophages and neutrophils, which in turn spawn the immunogenic inflammatory response seen in psoriasis.

In the last few decades, however, this view has changed and it is now well accepted that psoriasis is in fact an immunologically mediated
disease where activation of T lymphocytes is central to the inflammation in the dermal microenvironment and the epidermal hyper proliferation is secondary to the inflammatory events that follow a Th1 type of immune response.

**T Cells**

In psoriasis, the activity of T cells is the driving force for induction and maintenance of the skin lesions.

**T Cell Activation**

Activation of T cells requires three steps

- **Binding**
- **Antigen specific activation, known as signal 1**
- **Non-antigen specific cell-cell interaction, known as signal 2**

**Binding**

The T cell attaches to the Antigen Presenting Cell [APC] through surface adhesion molecules. In skin the Langerhans cell is the most efficient Antigen Presenting Cell.

**Antigen specific activation**

Once the T cell-APC binding has occurred through their respective surface adhesion molecules, the antigen is presented to the T cell by the APC. This antigen stimulated activation leads to conversion of the naïve T cell into an antigen specific cell that may further develop into a long lived memory cell that circulates in the body and can recognize the same antigen at a later date, even after several years.

**Non antigen specific cell-cell interaction**

This is also known as co-stimulation. If co-stimulation by other cell surface molecules does not occur following antigen presentation, the T
cell will not respond to the antigen and will undergo apoptosis or be rendered unresponsive to that antigen in the future (anergy).

**Effector functions of activated T cells**

Once the T cell is activated the next step is induction of inflammatory responses and tissue changes leading to the clinical picture of psoriasis.

TNF-α is strongly implicated in the pathogenesis of psoriasis and psoriatic arthritis. TNF-α functions in a positive feedback loop by recruiting more inflammatory cells and upgrading receptors on those cells. TNF-α levels are markedly increased in skin lesions, synovium and serum of patients with psoriasis and these correlate with the severity of the disease. Decreased levels are associated with clinical resolution.

**DIAGNOSIS OF PSORIASIS**

There are no laboratory tests which will positively identify psoriasis. The blood count, Urine analysis, ESR and other hematologic chemical and serologic studies are within normal limits in most cases of psoriasis.

The diagnosis of psoriasis is based upon:

1. The family history of psoriasis
2. The typical distribution of the lesions on the scalp, elbows, knees, the front of the legs, back and nails
3. Well-defined non-indurated dry erythematous areas with silvery layer-upon-layer scaling
4. The candle – grease sign (when a psoriatic lesion is scratched with the point of a dissecting forceps, a candle-grease-like scale can be repeatedly produced even from the non-scaling lesions. This is CG sign)

5. Auspitz sign (Complete removal of a scale produces pin-point bleeding)

6. Koebner’s phenomenon (Psoriatic lesions may develop along the scratch lines in the active phase)

7. Little or no itching

8. History of previous attacks and seasonal variations of the disease
MATERIALS AND METHODS

This pilot study to evaluate the efficacy of **NEERADIMUTHU VALLATHY MELUGU** and **KALAPAIKILANGU VELIPOOCU** (external) in treating kalanjaga padai (psoriasis) was carried out at Post Graduate Department of Sirappu maruthuvam, Government Siddha Medical College and Hospital, Palayamkottai. Under the observation and guidance of the head of the department. In this study totally 40 cases were taken out of which 10 cases were taken from In patient ward and remaining 30 cases from out-patient ward.

**Selection of cases:**

The patients were selected on the basis of the following inclusive criteria.

- Age 15-60 yrs
- Both male and female
- Willing to give specimen of blood for the investigation whenever required.
- Willing for admission and study in IPD for 48 days or willing to attend OPD
- Patients with silvery white patches, coin shaped lesions, scaling with or without itching.
Diagnosis of the cases:

Diagnosis was made by conducting all the necessary investigation in siddha as well as in Modern medicine methodology.

In siddha system the following aspect were taken into consideration.

1. Poriyal arithal
2. Pulanaal arithal
3. Vinaathal
4. Ennvagai Thervugal
5. Thinaigal
6. Paruva kalangal.

The following investigations were done in Modern medicine aspect.

Lab Investigation

**Blood:** Total WBC count

- Differential count of WBC
- Erythrocyte sedimentation Rate
- Hemoglobin percentage
- Blood Sugar
- Blood urea
- Serum cholesterol (LDL&HDL)
**Urine:**  Albumin

Sugar

Deposit.

**Motion:**  Ova

Cyst

**Skin examination:**

Site-

Colour-

Size-

Shape-

Border

Itching

Erythema

Macule

Papule

Auspitz Sign

Koebner’s phenomenon

Candle Grease sign-

**Skin scraping test for fungus.**
SELECTION OF DRUG:

Selection of drug was made from the elaborate study of various siddha literatures and finally the drugs were selected from ANUBOGA VAITHIYA NAVANEETHAM PART- VIII, GUNAPADAM MOOLIGAI VAGUPPU.

The Trial drugs

i) NEERADIMUTHU VALLATHY MELUGU as internal medicine

and

ii) KALAPAIKILANGU VELIPOOCHU as external medicine.

LINE OF TREATMENT:

The day before the trial started, vellai- ennai 15ml was given in early morning for purgation to correct the deranged vatham to all patients.

From the second day onwards the trial drugs are administrated.

i) NEERADIMUTHU VALLATHY MELUGU as Internal medicine

ii) KALAPAIKILANGU VELIPOOCHU as external medicine

- This powder was given only for external use on the lesions.

All the patients were advised to strict dietary regimen (or) pathiyam to avoid interaction with drug.

Some complementary therapies like Pranayamam and simple yogasana were advised.
Clinical assessment:

- The drugs were subjected to bio-chemical and pharmacological analysis.
- Required information will be collected from each patient by using the forms mentioned in protocol.
- For I.P patients, the clinical assessments will be made daily and recorded in the appropriate forms.
- For O.P patients in each visit the clinical assessment will be recorded regularly.
- An individual case sheet was maintained for each and every patient.
- The laboratory investigation will be done before and after treatment and recorded in the appropriate form.
- All the patients were screened for side effects and adverse effects.
- The outcome is assessed by the reduction of severity of symptoms and the results are observed.
- All the patients were advised for the further follow –up.
OBSERVATION AND RESULTS

The observation and results were studied and tabulated under the following headings:

1. Family History
2. Sex distribution
3. Age distribution
4. Kaalam distribution
5. Occupational status
6. Diet habit
7. Paruva Kaalam
8. Thinai reference
9. Socio-economic status
10. Triggering factors
11. Clinical features
12. Other general clinical features
13. Distribution of three doshas
14. Udar kattugal reference
15. En vagai thervugal
16. Neerkkuri, Neikkuri reference
17. Assessment of results after Treatment
1. FAMILY HISTORY

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Criteria</th>
<th>No of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Family History (+ve)</td>
<td>12</td>
<td>30%</td>
</tr>
<tr>
<td>2.</td>
<td>Family History (-ve)</td>
<td>28</td>
<td>70%</td>
</tr>
</tbody>
</table>

**Observation**

It is observed that 30% of the patients showed positive family history.
2. SEX DISTRIBUTION

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Sex</th>
<th>No of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Male</td>
<td>23</td>
<td>57.25%</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>17</td>
<td>42.75%</td>
</tr>
</tbody>
</table>

**Observation**

Among the 40 patients selected for this study, 57.25% were males and 42.75% were females.
3. AGE DISTRIBUTION

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Age</th>
<th>No of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Below 20 and 21-30</td>
<td>8</td>
<td>20%</td>
</tr>
<tr>
<td>2</td>
<td>31-40</td>
<td>10</td>
<td>25%</td>
</tr>
<tr>
<td>3</td>
<td>41-50</td>
<td>11</td>
<td>27.50%</td>
</tr>
<tr>
<td>4</td>
<td>51-60 &amp; above</td>
<td>11</td>
<td>27.50%</td>
</tr>
</tbody>
</table>

**Observation**

The patients selected were from all age groups as given above and the maximum number of patients was in the age between 41-50 and also in 51-60 & above.
4. KAALAM DISTRIBUTION

In Siddha literature human life has been divided into three periods as follows:

1. Vatham
2. Pitham
3. Kabam

The duration of each period is said to be 33 years.

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Kaalam</th>
<th>No of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Vatha Kaalam (1-33 Years)</td>
<td>11</td>
<td>27.5%</td>
</tr>
<tr>
<td>2</td>
<td>Pitha Kaalam (34-66 years)</td>
<td>27</td>
<td>67.5%</td>
</tr>
<tr>
<td>3</td>
<td>Kaba Kaalam (67-100 years)</td>
<td>2</td>
<td>5%</td>
</tr>
</tbody>
</table>

Observation

Out of 40 patients, 27 patients reported were in Pitha kaalam, 11 were in Vatha kaalam and the remaining 2 in kaba kalam.
5. OCCUPATIONAL STATUS

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Nature of Work</th>
<th>No. of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Home Maker</td>
<td>7</td>
<td>17.50%</td>
</tr>
<tr>
<td>2</td>
<td>Farmer</td>
<td>5</td>
<td>12.50%</td>
</tr>
<tr>
<td>3</td>
<td>Cooli</td>
<td>6</td>
<td>15.00%</td>
</tr>
<tr>
<td>4</td>
<td>Business</td>
<td>2</td>
<td>5.00%</td>
</tr>
<tr>
<td>5</td>
<td>Engineer</td>
<td>2</td>
<td>5.00%</td>
</tr>
<tr>
<td>6</td>
<td>Student</td>
<td>5</td>
<td>12.50%</td>
</tr>
<tr>
<td>7</td>
<td>Teacher</td>
<td>2</td>
<td>5.00%</td>
</tr>
<tr>
<td>8</td>
<td>Other manual workers</td>
<td>11</td>
<td>27.5%</td>
</tr>
</tbody>
</table>

Observation

The patients selected for the study belongs to various occupational status and no particular association was found.
6. DIETARY HABITS

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Dietary Habits</th>
<th>No of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Vegetarian</td>
<td>4</td>
<td>10%</td>
</tr>
<tr>
<td>2</td>
<td>Mixed diet</td>
<td>36</td>
<td>90%</td>
</tr>
</tbody>
</table>

Observation

All the cases except four were mixed diet.
7. PARUVA KAALAM

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Paruva Kaalam</th>
<th>No. of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kaar kaalam (Aavani &amp; Purattasi)</td>
<td>24</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>(Aug 16 – Oct 15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Koothir Kaalam (Aippasi &amp; Kaarthigai)</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>(Oct 16 – Dec 15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Munpani Kaalam (Margazhi &amp; Thai)</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>(Dec 16 – Feb 15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Pinpani Kaalam (Maasi &amp; Panguni)</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>(Feb 16 – Apr 15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Elavenil Kaalam (Chithirai &amp; Vaikasi)</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>(Apr 16 – June 15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Muthuvenil Kaalam (Aani &amp; Aadi)</td>
<td>14</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td>(June 16 – Aug 15)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Observation:**

Among the 40 patients admitted for this study, 24 patients reported in kaar Kaalam, 2 patients in koothir kaalam and 14 in mudhuvenil kaalam.
### 8. THINAI REFERENCE

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Thinai</th>
<th>No. of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kurinji (Hill Area)</td>
<td>1</td>
<td>2.50%</td>
</tr>
<tr>
<td>2</td>
<td>Mullai (Forest Area)</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>3</td>
<td>Marutham (Fertile Land)</td>
<td>32</td>
<td>80.00%</td>
</tr>
<tr>
<td>4</td>
<td>Neithal (Coastal Area)</td>
<td>7</td>
<td>17.50%</td>
</tr>
<tr>
<td>5</td>
<td>Paalai (Desert Land)</td>
<td>0</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

**Observation**

80% of the patients were from Marutham (Fertile Land) and 17.5% were from Neithal (costal area) and the remaining 2.5% from Kurinji nilam(hill area).
9. SOCIO-ECONOMIC STATUS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Economic Status</th>
<th>No of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Poor</td>
<td>20</td>
<td>50%</td>
</tr>
<tr>
<td>2</td>
<td>Middle Class</td>
<td>10</td>
<td>25%</td>
</tr>
<tr>
<td>3</td>
<td>Rich</td>
<td>10</td>
<td>25%</td>
</tr>
</tbody>
</table>

Observation

50% of the patients were poor and 25% of patients were from middle class and the remaining 25% belongs to rich groups.
10. TRIGGERING FACTORS:

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Triggering factors</th>
<th>No of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Infection</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2</td>
<td>Reaction to certain medicine</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3</td>
<td>Skin injury</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>4</td>
<td>Psycho-somatic</td>
<td>5</td>
<td>12.5%</td>
</tr>
<tr>
<td>5</td>
<td>Alcohol</td>
<td>4</td>
<td>10%</td>
</tr>
<tr>
<td>6</td>
<td>Smoking</td>
<td>7</td>
<td>17.5%</td>
</tr>
<tr>
<td>7</td>
<td>Unknown</td>
<td>20</td>
<td>50%</td>
</tr>
</tbody>
</table>

Observation:

Among 40 patients, 50% of them had unknown triggering factor, while 17.5% had smoking as the factor, 12.5% were due to psycho-somatic cause.
11. CLINICAL FEATURES

<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>Red patches with ivory Scaling</td>
<td>40</td>
<td>100%</td>
</tr>
<tr>
<td>2</td>
<td>Itching</td>
<td>20</td>
<td>50.00%</td>
</tr>
<tr>
<td>3</td>
<td>Scalp lesions</td>
<td>8</td>
<td>20.00%</td>
</tr>
<tr>
<td>4</td>
<td>Auspitz sign</td>
<td>40</td>
<td>100%</td>
</tr>
<tr>
<td>5</td>
<td>Candle Grease sign</td>
<td>15</td>
<td>37.50%</td>
</tr>
<tr>
<td>6</td>
<td>Koebner’s Phenomenon</td>
<td>40</td>
<td>100%</td>
</tr>
<tr>
<td>7</td>
<td>Nail changes</td>
<td>5</td>
<td>12.50%</td>
</tr>
<tr>
<td>8</td>
<td>Palm and sole lesions</td>
<td>5</td>
<td>12.50%</td>
</tr>
<tr>
<td>9</td>
<td>Joint involvement</td>
<td>6</td>
<td>15.00%</td>
</tr>
</tbody>
</table>

Observation:

All the patients have scaling, Auspitz sign, Koebner’s Phenomenon as their predominant symptom.
### 12. OTHER GENERAL CLINICAL FEATURES:

<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>Constipation</td>
<td>4</td>
<td>10%</td>
</tr>
<tr>
<td>2.</td>
<td>Cough</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>3.</td>
<td>Insomnia</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>4.</td>
<td>Loss of appetite</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>5.</td>
<td>Anemia</td>
<td>12</td>
<td>30%</td>
</tr>
</tbody>
</table>

Among 40 patients, 4 had constipation, 2 had cough, 2 had sleep disturbances, 2 had loss of appetite, and 12 were anemic.
13. DISTRIBUTION OF MUKKUTRAM

The derangement of Vatham, Pitham and Kabam in Kalandjaga padai is as follows

**VATHAM**

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Classification of Vatham</th>
<th>No of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pranan</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>2</td>
<td>Abanan</td>
<td>4</td>
<td>10.00%</td>
</tr>
<tr>
<td>3</td>
<td>Udhanan</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>4</td>
<td>Samanan</td>
<td>40</td>
<td>100.00%</td>
</tr>
<tr>
<td>5</td>
<td>Viyanan</td>
<td>40</td>
<td>100.00%</td>
</tr>
<tr>
<td>6</td>
<td>Nagan</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>7</td>
<td>Koorman</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>8</td>
<td>Kirukaran</td>
<td>2</td>
<td>5.00%</td>
</tr>
<tr>
<td>9</td>
<td>Devathathan</td>
<td>2</td>
<td>5.00%</td>
</tr>
<tr>
<td>10</td>
<td>Dananjayan</td>
<td>0</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

**Observation:**

Samanan and Viyanan were found to be affected in all the 40 patients. Abanan, Kirukaran and Devathathan were affected in 4, 2 and 2 patients respectively.
# PITHAM

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Classification of Pitham</th>
<th>No. of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Anarpitham</td>
<td>2</td>
<td>5.00%</td>
</tr>
<tr>
<td>2</td>
<td>Ranjakam</td>
<td>12</td>
<td>30.00%</td>
</tr>
<tr>
<td>3</td>
<td>Sathakam</td>
<td>6</td>
<td>15%</td>
</tr>
<tr>
<td>4</td>
<td>Alosakam</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>5</td>
<td>Prasakam</td>
<td>40</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

**Observation:**

Prasakam was affected in all the cases. Sathakam was found affected in 15% of the patients, Ranjakam was affected in 30% of the patients and Anarpitham in 5% of the patients.
KABAM

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Classification of Kabam</th>
<th>No of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Avalambagam</td>
<td>6</td>
<td>15%</td>
</tr>
<tr>
<td>2</td>
<td>Kilethagam</td>
<td>2</td>
<td>5.00%</td>
</tr>
<tr>
<td>3</td>
<td>Pothagam</td>
<td>2</td>
<td>5.00%</td>
</tr>
<tr>
<td>4</td>
<td>Tharpagam</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>5</td>
<td>Santhigam</td>
<td>6</td>
<td>15%</td>
</tr>
</tbody>
</table>

**Observation:**

Avalambagam and Santhigam were found to be affected in 15% of the patients and then in 5% of the patients Kilethagam and pothagam were found to be affected.
### 14. UDAL KATTUGAL

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Udar Kattugal</th>
<th>No of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Saaram</td>
<td>40</td>
<td>100%</td>
</tr>
<tr>
<td>2</td>
<td>Senneer</td>
<td>38</td>
<td>95%</td>
</tr>
<tr>
<td>3</td>
<td>Oon</td>
<td>40</td>
<td>100%</td>
</tr>
<tr>
<td>4</td>
<td>Kozhuppu</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>5</td>
<td>Enbu</td>
<td>6</td>
<td>15%</td>
</tr>
<tr>
<td>6</td>
<td>Moolai</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>7</td>
<td>Sukkilam/Suronitham</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Observation:**

Among 40 patients, Saaram and Oon were affected in all the cases and Senneer in 38 patients. Enbu was seen affected in 6 patients and Kozhuppu in 2 patients.
In En vagai thervugal, Niram and Sparisam were found affected in all the 40 cases. Vizhi was affected in 30% of the patients. The Naadi nadai seen in Kalanjaga padai patients were Vathapitham 45%, Vathakabam 37.50% and Pithakabam 17.50%.
### 16. NEERKKURI, NEIKKURI REFERENCE

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Type of Test</th>
<th>No. of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Neerkkuri:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>“Vaikkol Niram” (straw yellow)</td>
<td>40</td>
<td>100%</td>
</tr>
<tr>
<td>2</td>
<td>NEIKKURI:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) (Vatham) “Aravena Neelal”</td>
<td>18</td>
<td>45.00%</td>
</tr>
<tr>
<td></td>
<td>b) (Pitham) “Aazhi pol Paraval”</td>
<td>8</td>
<td>20.00%</td>
</tr>
<tr>
<td></td>
<td>c) (Kabam) “Muththothu Niral”</td>
<td>14</td>
<td>35.00%</td>
</tr>
</tbody>
</table>

**Observation:**

Neerkuri showed vaikkol niram in all the patients. Neikkuri showed vatha kuri among 45% patients, Pitha kuri in 20% patients and kaba kuri in 35% patients.
17. ASSESSMENT OF RESULTS:

CLASSIFICATION OF PSORIASIS BASED ON THE SEVERITY OF SYMPTOMS:

1. **Severe** - Marked plaque elevation, Scaling and / or erythema / affecting more than 10% of the body surface

2. **Moderate** – Moderate plaque elevation, Scaling and / or erythema / affecting 3-10 % of the body surface

3. **Mild** – Slight plaque elevation, scaling and or erythema / affecting less than 3% of the body surface

4. **Clear** - No signs of psoriasis

- F. Alzeni et al., (2011)
F). OVERALL RESULTS AFTER TREATMENT

Based on the outcome, all the 40 patients have been classified into 4 grades. The gradation is as follows,

- Grade I (Good Improvement) - No signs of psoriasis (post inflammatory hyper-pigmentation may be present)
- Grade II (Moderate Improvement) - Slight plaque elevation, reduction in size of all lesions, mild scaling, itching and/or erythema
- Grade III (Mild Improvement) - no new lesions, moderate plaque elevation, scaling, itching and/or erythema
- Grade IV (No Improvement) - very marked plaque elevation, scaling, itching and/or erythema with or without new lesions
Observation:

In this study 67.5% of the patients had good improvement, 25% of the patients had moderate improvement, 7.5% of them had mild prognosis.

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Effect of therapy</th>
<th>No. of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Good Improvement</td>
<td>27</td>
<td>67.5</td>
</tr>
<tr>
<td>2</td>
<td>Moderate Improvement</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>3</td>
<td>Mild Improvement</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td>4</td>
<td>No Improvement</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
## OP AND IP CASES CLINICAL IMPROVEMENT

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>OP &amp; IP NO</th>
<th>NAME</th>
<th>AGE</th>
<th>SEX</th>
<th>DOA</th>
<th>DOD</th>
<th>TREATED DAYS</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50111</td>
<td>MANIVASAGAM</td>
<td>20</td>
<td>M</td>
<td>4.7.12</td>
<td>24.8.12</td>
<td>42</td>
<td>GOOD</td>
</tr>
<tr>
<td>2</td>
<td>53993</td>
<td>MUTHULAKSHMI</td>
<td>22</td>
<td>F</td>
<td>17.7.12</td>
<td>7.9.12</td>
<td>56</td>
<td>GOOD</td>
</tr>
<tr>
<td>3</td>
<td>55922</td>
<td>MARIAMMAL</td>
<td>38</td>
<td>F</td>
<td>24.7.12</td>
<td>17.9.12</td>
<td>56</td>
<td>MODERATE</td>
</tr>
<tr>
<td>4</td>
<td>58197</td>
<td>ARUMUGANAINAR</td>
<td>35</td>
<td>M</td>
<td>31.7.12</td>
<td>3.10.12</td>
<td>56</td>
<td>GOOD</td>
</tr>
<tr>
<td>5</td>
<td>63057</td>
<td>ASIA BEGAM</td>
<td>43</td>
<td>F</td>
<td>16.8.12</td>
<td>10.10.12</td>
<td>35</td>
<td>MODERATE</td>
</tr>
<tr>
<td>6</td>
<td>58193</td>
<td>KANDAN</td>
<td>50</td>
<td>M</td>
<td>31.7.12</td>
<td>7.9.12</td>
<td>35</td>
<td>GOOD</td>
</tr>
<tr>
<td>7</td>
<td>51871</td>
<td>VENGATACHALA</td>
<td>79</td>
<td>M</td>
<td>10.7.12</td>
<td>25.9.12</td>
<td>56</td>
<td>GOOD</td>
</tr>
<tr>
<td>8</td>
<td>63020</td>
<td>SARADHA</td>
<td>45</td>
<td>F</td>
<td>16.8.12</td>
<td>12.11.12</td>
<td>42</td>
<td>GOOD</td>
</tr>
<tr>
<td>9</td>
<td>69642</td>
<td>KANDHASAMY</td>
<td>52</td>
<td>M</td>
<td>7.9.12</td>
<td>5.10.12</td>
<td>35</td>
<td>GOOD</td>
</tr>
<tr>
<td>10</td>
<td>73033</td>
<td>RAJAM</td>
<td>78</td>
<td>F</td>
<td>7.9.12</td>
<td>2.11.12</td>
<td>35</td>
<td>MODERATE</td>
</tr>
<tr>
<td>11</td>
<td>65185</td>
<td>PRABAKAR</td>
<td>19</td>
<td>M</td>
<td>24.8.12</td>
<td>25.9.12</td>
<td>35</td>
<td>GOOD</td>
</tr>
<tr>
<td>12</td>
<td>60009</td>
<td>KUTTYDURAI</td>
<td>40</td>
<td>M</td>
<td>6.8.12</td>
<td>20.9.12</td>
<td>42</td>
<td>GOOD</td>
</tr>
<tr>
<td>13</td>
<td>65400</td>
<td>MARIAMMAL</td>
<td>55</td>
<td>F</td>
<td>25.8.12</td>
<td>18.9.12</td>
<td>28</td>
<td>MODERATE</td>
</tr>
<tr>
<td>14</td>
<td>56915</td>
<td>PERIASAMY</td>
<td>60</td>
<td>M</td>
<td>27.7.12</td>
<td>21.9.12</td>
<td>56</td>
<td>GOOD</td>
</tr>
<tr>
<td>15</td>
<td>58983</td>
<td>MOHAMED MAIDEEN</td>
<td>53</td>
<td>M</td>
<td>3.8.12</td>
<td>10.9.12</td>
<td>42</td>
<td>GOOD</td>
</tr>
<tr>
<td>16</td>
<td>57078</td>
<td>SUNDAR</td>
<td>43</td>
<td>M</td>
<td>27.7.12</td>
<td>7.9.12</td>
<td>49</td>
<td>MODERATE</td>
</tr>
<tr>
<td>17</td>
<td>60008</td>
<td>RATHINAM</td>
<td>40</td>
<td>F</td>
<td>6.8.12</td>
<td>14.9.12</td>
<td>35</td>
<td>GOOD</td>
</tr>
<tr>
<td>18</td>
<td>64587</td>
<td>E.SHIVA</td>
<td>20</td>
<td>M</td>
<td>20.8.12</td>
<td>9.10.12</td>
<td>42</td>
<td>GOOD</td>
</tr>
<tr>
<td>19</td>
<td>64040</td>
<td>SANTHIYA</td>
<td>10</td>
<td>FC</td>
<td>21.8.12</td>
<td>9.10.12</td>
<td>56</td>
<td>GOOD</td>
</tr>
<tr>
<td>20</td>
<td>51986</td>
<td>KRISHNASAMY</td>
<td>46</td>
<td>M</td>
<td>10.7.12</td>
<td>7.9.12</td>
<td>56</td>
<td>GOOD</td>
</tr>
</tbody>
</table>
## OP AND IP CASES CLINICAL IMPROVEMENT

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>OP &amp; IP NO</th>
<th>NAME</th>
<th>AGE</th>
<th>SEX</th>
<th>DOA</th>
<th>DOD</th>
<th>TREATED DAYS</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>68376</td>
<td>MAHORAN</td>
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### Columns Explanation
- **TC**: Total Count
- **DC**: Differential Count
- **ESR**: Erythrocyte Sedimentation Rate
- **Bl.Sugar**: Blood Sugar
- **Bl.Urea**: Blood Urea
- **Se. Cr**: Serum Creatinine
- **N**: Neutrophils
- **L**: Lymphocytes
- **E**: Eosinophils
- **M**: Monocytes
- **BT**: Before Treatment
- **AT**: After Treatment
- **F**: Factor
- **PP**: Protein Precipitation

### Notes
- Values are measured in standard units, typically used in clinical laboratories.
- The table provides a comprehensive overview of blood investigations before and after treatment for both OP and IP patients.
- Each row represents a different patient with specific indicators for their health status.
- The columns provide a clear comparison, allowing healthcare professionals to track changes and identify trends.
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### URINE AND MOTIONS EXAMINATION BEFORE AND AFTER TREATMENT – OP & IP PATIENTS

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DISCUSSION

Psoriasis is a common, chronic and non-infectious skin disease characterized by well defined slightly raised dry erythematous macules with silvery scales and typical extensor distribution. Physically it is a most uncomfortable disease. Psoriasis patients are humiliated, disgraced and tend to hide their skin from the critical public. The psychological impact of feeling of self consciousness, frustration and shame often leads to severe mental depression. Remissions and relapse of this disease is quite common and there is no specific treatment available in other systems of medicines. With this background the disease psoriasis which is correlated with kalanjaga padai in siddha literature was chosen for the dissertation work.

As an attempt in fulfilling the aim, the internal and external medicines for treating the disease kalanjaga padai were selected. The trial drugs selected were

i. Neeradi muthu vallathy melugu as the internal medicine
ii) Kalaipai kilangu velipuchu as the external medicine

In order to attain the primary objective of the study the result of the efficacy of trial drugs with observed and tabulated.

The secondary objectives of the study were reached by studying the disease kalanjaga padai under various headings like gender distribution, age distribution, kaalam, thinai etc. The results were observed and documented. All the observations are discussed here under.
Family History

In this study 30% of the patients had strong family history. Many recent studies also shows the coincidence to this fact.

F-Valenzuela et al., (Dec-2011) study results exactly coincides with the results inferred in this study.

Sex distribution

More or less Equal numbers of male and female patients were voluntarily selected for this study. So the inference obtained had no statistically significant data upon sex distribution.

Age distribution:

The maximum number of patients was in the age between 41-50 and also in 51-60 & above.

Kaalam:

The higher incidence was found to be in pitha kaalam (34-66 years).

Occupational status

From the observed result it was clear that there was no association between the occupational status and the psoriasis incidence.

Luigi Naldi, M.D et al., (2007) also documented the same result in his study.

Dietary habits:

36 patients were reported to have mixed diet. So this data had no statistically significant data.
**Paruva kaalam:**

From the tabulated data, it was shown that 24 patients reported in kaarkaalam, 2 patients in koothir kaalam and 14 in mudhuvenil kalam.

Actually the study period started from June and ended in January. So the obtained result may not have a scientific value to influence the disease and a long period study is required to evaluate the seasonal variations.

**Thinai Reference:**

The inferred result shows that incidence was highest in Marutha nilam.

As this study is a single centered study, the inferred results may not have a significant evaluation of influence of thinai on psoriasis.

**Socio-economic status:**

Here 50% were reported to be poor and 25% from middle class and 25% were rich. The relation between psoriasis incidence and socio-economic status was likely to be complicated. The inferred result was not statistically significant.

**Triggering factors:**

From the observed results it was proved that the smoking (17.5%) and the psycho-somatic disorder (12.5%) plays a key role as an important Triggering factors.

The result inferred coincides with the previous studies like Danielle Levine. BA et al., (1999) and Michelle Badash MS. et al., (2008).
**Clinical features:**

All the patients had patches with ivory scaling, Auspitz sign and Koebner’s phenomenon as their predominant clinical features.

And some patients had itching and candle grease sign as their second predominant features. Further nail was found affected in 5 patients and 6 cases had joint involvement.

**Distribution of three dhosas:**

a) **Vatham:**

Samanan and viyanan were found to be affected in all 40 patients.

b) **Pitham:**

Prasakam was affected in all the cases.

c) **Kabam:**

Santhigam (psoriatic arthritis) was found to be affected in 15% of the patients.

**En vagai thervugal**

Niram and sparisam were found affected in all the 40 cases.

In naadi nadai, vatha pitha nadai (45%) predominates among the other naadi nadai in the psoriatic patients.

**Udal Kattugal**

Among the seven udal kattugal saaram and Oon were affected in all the cases and enbu (Psoriatic arthritis) were affected in 15% of the cases.
Laboratory investigations were done for all the cases before and after treatment. There were no significant variations in the laboratory investigation except in certain aspects like ESR and HB.

The phytochemical analysis of Neeradi muthu vallathy melugu had shown the presence of calcium, sulphate, Iron (ferrous), Starch, unsaturated compounds, reducing sugar and amino acid.

Pharmacological studies of Neeradi muthu vallathy melugu shows significant analgesic and anti-inflammatory properties. And the external medicine kalapai kilangu velipuchu also shows significant acute anti-inflammatory properties.

**Treatment:**

In siddha system of medicine the line of treatment primarily aimed to retain the deranged doshas and then providing relief from symptom. So before treatment each patient was advised for purgation by giving vellai enennai-15 ml with hot water during morning for first day treatment.

From the second day onwards Internal Medicine- Neeradi muthu vallathy melugu 5 gm in 3 divided doses and External Medicine- kalapai kilangu velipuchu were administrated during treatment, the patients were advised to follow pathiyam (avoid tamarind, tubers etc) and patients were advised to avoid foods which induces itching.

Along the course of the treatment some of the complementary methods which were already planned like pranayama, asana and mudras were instructed to the patients.
The outcome is mainly assessed by reduction in symptoms like itching and scaling.

No adverse effects of both internal and external medicine were noted along the course of the treatment clinically.
SUMMARY

The disease Psoriasis was comparatively studied with the disease Kalanjaga padai. In considering the following three important facts that, Psoriasis has been linked to an increased risk of stroke and atrial fibrillation (ole Ahuhoff et al., 2011), its important complication in many patients is psoriatic arthritis (Gelfand IM et al., 2005) and Long term toxicities are observed with all currently available system treatments (European Medicine agency Journal), it is a need to evaluate the safe and effective drug for the treatment of psoriasis. For this a clinical trial with internal medicine Neeradi muthu vallathy melugu and external medicine kalapai kilangu velipoocchu in meeting the disease psoriasis was conducted.

For this 40 cases were selected. The pre clinical studies of the trial drug were found to be encouraging.

Out of 40 cases 30 were treated in OPD and remaining 10 in IPD of Govt. Siddha Medical College & Hospital Palayamkottai. Some of the complementary therapies were followed along the course of the treatment. Complete proforma was maintained for each and every patient. Daily progress was observed to note the clinical efficacy of the drug. The results obtained were found to be auspicious.
Pre clinical pharmacological analysis of the trial drug had

- Significant anti histamine action.

- Significant acute anti inflammatory actions.

- Moderate chronic anti-inflammatory actions.

- Significant analgesic action

No adverse reactions like nausea, vomiting, diarrhoea, abdominal discomfort, drowsiness were reported during the study period. Hence the trial drug was found to be safe and effective.
CONCLUSION

In this clinical study “Neeradi muthu vallathy melugu” and “kalapai kilangu velipuchu” were taken as Internal & External drug respectively for treating the disease Kalanjaga padai.

In the pre clinical study Pharmacological evaluation of the trial drugs shows

- Significant anti histamine effects
- Significant acute anti inflammatory effects
- Moderate chronic anti inflammatory effects
- Significant analgesic action

The Overall results of efficacy of the trial drugs along with complementary therapies by reducing the clinical signs and symptoms like Itching, Scaling and erythema in this Clinical study were found to be Good in 67.5% cases, Moderate in 25% cases and Mild in 7.5%.

The costs of the trial medicines are relatively economical. The raw drugs are easily available and the preparation is also convenient. No adverse effects and side effects were found clinically for the trial drugs.

So the study proved conclusively that the clinical effects of the trial drugs were found to be good in treating the disease Psoriasis.
ANNEXURE I

STANDARD OPERATING PROCEDURE FOR PREPARATION OF
"NEERADIMUTHU VALLATHY MELUGU (Internal)" AND
"KALAPAIKILANGU VELIPOOCHU (External)

INTERNAL MEDICINE:

NEERADIMUTHU VALLATHY MELUGU

INGREDIENTS:

Serangottai (seeds of semicarpous anardica) - 3500gms
Neeradimuthu (seeds of hydnocarpous laurifolia) - 350gms
Parangipattai (barks of smilax chinensis) - 350gms
Pirapankilangu (rhizome of calamus rotang) - 70 gms
Karunjeeragam (seeds of Nigella sativa) - 70 gms
Seeragam (seeds of cuminum cyminum) - 70 gms
Pieces of fried vasambu (acorus calamus) - 70 gms
Sivanarvembu (indigofera asplathoides) - 70 gms
Sanganverpattai (root barks of azima tetracantha) - 70 gms
Kollankovai kilangu (rhizome of corollocarpus epigaeus) - 70 gms
Amukkara kilangu (rhizome of withania somenifera) - 70 gms
Vellarugu (enicostema axillare) - 70 gms
Errukanver pattai (root barks of calotrophis gigantea) - 70 gms
Athipattai (barks of ficus racemosa) - 70 gms
Kumilam verpattai (root bark of gmelina arbora) - 70 gms
Sathisaranai kilangu (rhizome of trianthema decandra) - 70 gms
Milagaranai kilangu (rhizomes of toddalia asaitica) - 70 gms
Senthotti pattai (barks of Pavonia odorata) - 70 gms
Veppankottai paruppu (seeds of azhadirecta indica) - 70 gms
Vetpalai arisi (seeds of wrightia tinctoria) - 70 gms
Thurusu (purified copper sulphate) - 17 ½ gms
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<tr>
<td>Purified kanthagam (sulphur)</td>
<td>-17 ½ gms</td>
</tr>
<tr>
<td>Purified rasam (mercury)</td>
<td>-17 ½ gms</td>
</tr>
<tr>
<td>Ellu (seeds of sesamum plants)</td>
<td>-280 gms</td>
</tr>
<tr>
<td>Panjaggery</td>
<td>-1400 gms</td>
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**PREPARATION:**

a) 3500 gms of semecarpus anacardium is taken. It is boiled or steamed 7 times in cow dung liquid (cow dung mixed in water) and 1 times each in tamarind leave juice, cow milk, and tender coconut fluid. From this above processed semecarpus anacardium, oil is extracted by pit oil method.

b) 350 gms of neeradi muthu is taken and it is steamed in cow dung fluid and dried. The above process is repeated 5 times and the seeds are dried well and the kernels are separated from the seeds and cleaned.

c) 350 gms of parangipattai is taken and powdered well. 1.3 lits of milk is taken in a vessel and its mouth is covered by a piece of cloth and is tied tightly. The parangipattai powder is then spreaded on the cloth and is covered by another vessel it is steamed well. After steaming it is dried under shadow and powdered well.

d) 70 gms of pirappan kilangu, karunjeeragam, seeragam, vasambu, vatakarappan pattai, sivanarvembu, sanganverpattai, kollankovai, amukkara kilangu, vellarugu, erukkan ver, athipattai, kumilaverpattai, sathisaranai kilangu, milagarani kilangu, sengathiri pattai, senthoti pattai, veppan kottai paruppu, vetpalaiarisi are taken and dried under the shadow and powdered by either grinding or stroking and all the powders are mixed well.

e) 17 ½ gms of thurrusu, paal thutham, kanthegam, rasam are taken. First rasam and kanthegam are grinded well upto which the mixture gets black color then other materials are added and grinded, then the powder is collected.
f) 280 gms of ellu and 1400 gms of pan jaggery are taken and dissolved well in the water and boiled, when the boiling process begins it is filtered and the fluid is collected. Then the fluid is again collected upto a certain level until it gets it consistency.

all the above powders and the pit oil obtained from the process a. are mixed well and rubbed well in the kalvam and slowly the fluid obtained from the process f. is added and grinded for upto 1 and 3/4 hrs. then it is collected in a air tight container.

DOSE:

500-700 mg

EXTERNAL MEDICINE:

KALAPAIKILANGU VELIPOOCHU

Ingredients :

Kalappai kizhangu (rhizome of glorisa superb) - 5 gms
Karbogi (seeds of Psoralia corylifolia) -5 gms
Karunjeeragam (seeds of Nigella sativa) -5 gms
Kattujeeragam (seeds of vernonia anthelmentica) -5 gms

Method of preparation:

Above raw drugs are grinded and mixed well and made into paste form. This paste is applied externally.
PROPERTIES OF TRIAL DRUGS:

INTERNAL MEDICINE:

NEERADI MUTHU VALLATHY MELUGU

1) செம்பர்போன் என் (Semecarpus anacardium- Anacardiaceae)

Parts Used: Fruits and seeds

Therapeutical Action: Alterative, Caustic

2) ஹைட்நோகார்பஸ் இனோபியோஸ் (Hydnocarpus inobrians/ Laurifolia)

Botanical Name: Hydnocarpus inobrians/ Laurifolia

Family: Bixaceae

Vernacular names:
- Sanskrit: Garudaphala
- Hindi: Chaulmoogra
- Telugu: Adi-badam

Classification:
- Class: Dicotyledons
- Subclass: Polypetalae
- Series: Thalami florae
- Order: Paraitales
- Family: Bixaceae
- Genera: Hydnocarpus
- Species: Laurifolia
Organoleptic Characters

Useful Parts: Oil of seeds

Therapeutic actions

Alterative
Stimulant
Detergent
Parasiticide

Hydnocarpus seeds have long been used in south India as a remedy for leprosy, chronic skin affections and ophthalmic as a dressing for wounds and ulcers.

3). Similax chinensis (Similax chinensis – Liliaceae)

Parts used: bark

Therapeutic actions: Alterative, Antisyphilitic, Aphrodisiac, Depurative.
4) **calamus rotang**:

Parts used: Rhizome

Therapeutic actions: Expectorant, antivatha

5) **Nigella sativa - Ranunculaceae**

Parts used: Seeds

Therapeutic actions: carminative, Diuretic, emmenague, galactogogue, anthelmintic, Stomachic, Parasiticide, Emolient.

6) **Cuminum cyminum - Umbelliferae**

Parts used: seeds

Therapeutic actions: Carminative, Stimulant, Stomachic, Astringent.

7) **Acorus Calamus - Araceae**

Part used : Rhizome
8) இந்தியின் சும்பு (Indigofera aspalathoides-fabaceae)

Parts used: சுத்தம், தொல்லியல், மலர்

Therapeutic actions: stimulant, demulcent.

9) சுலா ஆசிரியா (Azima tetracantha – Salvadoraceae)

Part used: Root

Therapeutic actions: diuretic, Stimulent, astringent, tonic, Antiperiodic.

10) ரிஜோம் கோர்லோர்பஸ் (rhizome of corollocarpus epigaeus): 

Parts used: Rhizome 

Therapeutic actions : Alterative, tonic

11) விடானியா கொன்ஸ்மிரா - (Withania somnifera- Solanaceae)

Part used : Dried root.
13) **Enicostemma axillare** (Gentianaceae)

Parts used: whole plant

Therapeutic Actions: stomachic, tonic, Alterative, laxative, frebrifuge.

14) **Calotropis gigantean**

**Part Used:**  பொடி.

**Therapeutic Action:**

- **Alterative**
- **Expectorant**

*வல்லுனர் பொடி பிள்ளை கொண்டு வீண்டுகி, அந்த வளர்கின்ற மாவட்டின் விளக்கும் புவியான், பல பிள்ளை கொண்டு வீண்டுகி மேல்குச்சென்று வரங்க.***

- வெள்ளியாறு வைத்திருப்பதை.
15) முருங்கை (barks of ficus racemosa):

   Therapeutic actions: Astringent

16) நெல்லை வட்டப்பழம் (root bark of gmelina arbora):

   Therapeutic actions: stimulant, febrifuge.

17) திருநெய்யாரியால் (rhizome of trianthema decandra):

   Therapeutic actions: Expectorant, Laxative, Diruetic

18) கல்லைரும்பளை (rhizomes of toddalia asaitica):

   Therapeutic actions: stimulant, tonic, carminative, Diaphoretic, Antiperiodic

19) ஆசிரியா இந்தியா (Azadirachta indica - Meliaceae)

   Useful parts: Seeds

   Therapeutic action: Stimulant, Anthelmintic, Discutient

20) விர்த்தா செட்டி (seeds of wrightia tinctoria):

   Therapeutic actions: tonic
21) JUR (copper sulphate):

Therapeutic actions: tonic, astringent, emetic, antiseptic, caustic

22) Fzh (zinc sulphate):

Therapeutic actions: tonic, astringent, emetic, anti spasmodic.

23) Gz;zhw;Wq; fhkpaj;jpd; Gz;zhw;Wq; fz;Nzhia

tpz;Nzw;W Kj;Njhl TPwlf;FQ;- rz;Zfpd;w

fhe;ep jUe;JhpR fhz;
24) மரு (Mercury):

Therapeutic actions: Alterative, tonic, Laxative, Antibilous, Deobstruent, sialagogue and diuretic.

25) செசமும் (sesamum indicum-Pedaliaceae)

Parts used: செசமும், காப்பு, கீழ்

Therapeutic actions: Demulcent, Laxative, Nutritive, Emolient

26) பொராச்சு பல்லாண்டு (Borassus flabelliformis)-

Parts used: panjaggery

Therapeutic Actions:

Astrigent, Aphrodisiac, Diuretic, Demulcent, Nutrient, Refrigerant Stimulant, Antiphlogistic
EXTERNAL MEDICINE:

KALAPAIKILANGU VELIPOOCHU

1) கலப்பைகிலங்கு வெலிபூசு:

**Botanical name**: Gloriosa Superba

**Family**: Liliaceae

**Classification**:

- **Class**: Monocotyledons
- **Series**: Coronariae
- **Family**: Liliaceae
- **Genera**: Gloriosa
- **Species**: Superba

**Organoleptic Characters**

- **Useful parts**: Tubers

**Therapeutic actions**

- Alterative
- Antiperiodic (பானத்துடுப்பாதல்)
- Purgative

"தோற்றம்

' தோற்றம் வெளியில் இருந்து குறுகிய

னிறந்து மையாக மையூற்று எறியுகலா

முருக்கு மையாக மையூற்று மையூற்று எறியுகலா

முருக்கும் மையாக மையூற்று எறியுகலா”

- சுருள் பொன்னன்
Chemical Constituents

Alkaloids

Cochicine,

Gloriosine

Externally it is used as a local applicant for psoriatic skin diseases.

The tuber extract shows antibiotic activity against staphylococcus aureus.

2) பசொறைலிலோலி (Psoralea corylifolia - Fabaceae.):

Part used: The dried fruit

Therapeutic actions: Laxative, Stimulant.

3) தியானா (Nigella sativa - Ranunculaceae):

Parts used: Seeds

Therapeutic actions: carminative, Diuretic, emmenague, galactogogue, anthelmintic, Stomachic, Parasiticide, Emolient.

4) வெர்நோனியா கோச்சுக்கர் (seeds of vernonia anthelmentica):

Parts used: Seeds

Therapeutic actions: anthelmintic, stomachic, tonic, Diuretic, Antiperiodic, Alterative
நீர்த்தான்கல் விளையாட்டு
இனிப்புரை கலந்துரை படுத்து
நிறைவு அங்கு லோகம்

[Images of different substances]
கட்லைப்பெருந்து புஷ்கர் - தென்னிந்தியப் பொருள்கள்
ANNEXURE - II

BIO-CHEMICAL ANALYSIS OF NEERADIMUTHU VALLATHI MELUGU

Preparation of the Extract

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

<table>
<thead>
<tr>
<th>S. NO</th>
<th>EXPERIMENT</th>
<th>OBSERVATION</th>
<th>INFERRENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>TEST FOR CALCIUM</td>
<td>A White precipitate is formed.</td>
<td>Indicates the presence of calcium.</td>
</tr>
<tr>
<td></td>
<td>2ml of the above prepared extract</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>was taken in a clean test tube.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>To this added 2 ml of 4% Ammonium</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>oxalate solution was added.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>TEST FOR SULPHATE:</td>
<td>white precipitate is formed.</td>
<td>Indicates the presence of sulphate</td>
</tr>
<tr>
<td></td>
<td>2ml of the extract was added</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>to 5% barium chloride solution.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>TEST FOR CHLORIDE</td>
<td>No white precipitate is formed.</td>
<td>Absence of chloride.</td>
</tr>
<tr>
<td></td>
<td>The extract was treated with silver</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>nitrate solution.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>TEST FOR CARBONATE</td>
<td>No brisk effervescence is formed.</td>
<td>Absence Of Carbonate.</td>
</tr>
<tr>
<td></td>
<td>The extract was treated with</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>concentrated HCL.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>TEST FOR STARCH</strong></td>
<td>Blue colour is formed.</td>
<td>Indicates the presence of starch.</td>
</tr>
<tr>
<td>---</td>
<td>-------------------</td>
<td>------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>5.</td>
<td>The extract was added with weak iodine solution.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td><strong>TEST FOR IRON FERRIC</strong></td>
<td>No blue colour is formed.</td>
<td>Absence of ferric iron.</td>
</tr>
<tr>
<td></td>
<td>The extract was treated with concentrated Glacial acetic acid and potassium ferro cyanide.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td><strong>TEST FOR IRON FERROUS:</strong></td>
<td>Blood red colour is formed.</td>
<td>Indicates the presence of Ferrous Iron.</td>
</tr>
<tr>
<td></td>
<td>The extract was treated with concentrated Nitric acid and ammonium thio cyanate.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td><strong>TEST FOR PHOSPHATE</strong></td>
<td>No yellow precipitate is formed.</td>
<td>Absence of phosphate.</td>
</tr>
<tr>
<td></td>
<td>The extract was treated with ammonium Molybdate and concentrated Nitric acid.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td><strong>TEST FOR ALBUMIN</strong></td>
<td>No yellow precipitate is formed.</td>
<td>Absence of Albumin.</td>
</tr>
<tr>
<td></td>
<td>The extract was treated with Esbach’s reagent.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td><strong>TEST FOR TANNIC ACID</strong></td>
<td>No blue black precipitate is formed.</td>
<td>Absence of Tannic acid.</td>
</tr>
<tr>
<td></td>
<td>The extract was treated with ferric chloride.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td><strong>TEST FOR UNSATURATION</strong></td>
<td>It gets decolorized.</td>
<td>Indicates the presence of unsaturated compound.</td>
</tr>
<tr>
<td></td>
<td>Potassium permanganate solution was added to the extract.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12. **TEST FOR THE REDUCING SUGAR**

5ml of Benedict’s qualitative solution was 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.

<table>
<thead>
<tr>
<th>Colour change occurs</th>
<th>Indicates the presence of Reducing Sugar.</th>
</tr>
</thead>
</table>

13. **TEST FOR AMINO ACID:**

One or two drops of the extract was placed on a filter paper and dried it well. After drying, 1% Ninhydrin was sprayed over the same and dried it well.

<table>
<thead>
<tr>
<th>No Violet colour is formed</th>
<th>Absence of Amino acid.</th>
</tr>
</thead>
</table>

14. **TEST FOR ZINC**

The extract is treated with potassium ferrocyanide

<table>
<thead>
<tr>
<th>No white precipitate is formed</th>
<th>Absence of zinc</th>
</tr>
</thead>
</table>

**INFERENCEn**

- Indicates the presence of Calcium.
- Indicates the presence of Sulphate.
- Indicates the presence of Starch.
- Indicates the presence of ferrous iron.
- Indicates the presence of unsaturated compounds.
- Indicates the presence of reducing sugar.
ANNEXURE - III

PHARMACOLOGICAL ANALYSIS

INTERNAL MEDICINE

ACUTE ANTI-INFLAMMATORY STUDY ON NEERADIMUTHU VALLATHY MELUGU

Aim:

To study the acute anti-inflammatory effect of *NEERADIMUTHU VALLATHY MELUGU* by Hind-paw method in albino rats.

Procedure:

Nine healthy albino rats weighing 100-150 gm were taken and divided into three groups, each consisting of three rats.

First group was kept as control by giving distilled water orally 2ml/100gm body weight. The second group was given ibuprofen at a dose of 20mg /100gm body weight. The third group received the test drug at a dose of 100mg /100g body weight.

Before administration of drugs, the hind-paw volumes of all rats were measured. This was done by dipping the hind-paw upto the tibio-tarsal junction into a mercury plethysmograph. While dipping the hind-paw, by pulling the syringe piston, the level of mercury in the centre small tube was made to coincide with red marking and reading was noted from the plethysmograph.

Soon after measurement, the drugs were administered orally. One hour later, a sub-cutaneous injection of 0.1ml of 1% (W/V) carrageenan in water
was made into plantar surface of both hind-paws of each rat. Three hours after carrageenan injection, the hind paw volume was measured once again. The difference between the initial and final volume was calculated and compared. This method is more suitable for studying the anti-inflammatory activity in acute inflammation. The values are tabulated.

Effect of *NEERADIMUTHU VALLATHY MELUGU*

<table>
<thead>
<tr>
<th>Group</th>
<th>Dose / 100gm of body weight</th>
<th>Initial reading average</th>
<th>Final reading average</th>
<th>Mean difference</th>
<th>% of inflammation</th>
<th>% of inhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control (water)</td>
<td>2 ml</td>
<td>0.55</td>
<td>0.4</td>
<td>0.85</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>Standard (ibuprofen)</td>
<td>20mg</td>
<td>0.55</td>
<td>0.75</td>
<td>0.20</td>
<td>22.2</td>
<td>77.8</td>
</tr>
<tr>
<td>Test drug (Neeradimuthu vallathy melugu)</td>
<td>100mg</td>
<td>0.7</td>
<td>0.95</td>
<td>0.25</td>
<td>29.4</td>
<td>70.6</td>
</tr>
</tbody>
</table>

Result:

From the above experiment it is concluded that the test drug has good Significant Anti-inflammatory action in acute inflammatory condition.
CHRONIC ANTI-INFLAMMATORY STUDY BY COTTON-PELLETS GRANULOMA METHOD

Drug

NEERADIMUTHU VALLATHY MELUGU

Aim

To study the chronic anti-inflammatory activity of the drug in albino rats by cotton pellets implantation (granuloma) method.

Procedure:

Cotton pellets each weighing 10mg was prepared and sterilized in an autoclave for about one hour under 15 lbs atmosphere pressure. Nine Albino rats weighing between 100-200gm were selected and were divided into 3 groups. Each rat was anaesthetized with ether and cotton pellets were implanted subcutaneously in the groin, two in each side.

First group was kept as control group giving distilled water of 1ml/100gm of body weight. To the second group the standard drug Ibuprofen in a dose of 20mg/100gm body weight was given. The third group of animals was given test drug Neeradimuthu vallathy melugu in a dose of 100mg/100gm of body weight

On the eighth day the rats were sacrificed and the pellets were removed and weighed. Then they were put in an incubator at 60ºC-80ºC and then weighed.
The concordant weight was noted for all groups and compared.

The effect of Neeradimuthu vallathy melugu in chronic anti-inflammatory study.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Group</th>
<th>Dose/100 gm body weight</th>
<th>Pellet Weight</th>
<th>Pallet Weight of the Granuloma of drugs</th>
<th>Percentage of Inflammation</th>
<th>Percentage of Inhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Control (water)</td>
<td>2 ml</td>
<td>10mg</td>
<td>250mg</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Standard (Ibuprofen)</td>
<td>20mg</td>
<td>10mg</td>
<td>55mg</td>
<td>22</td>
<td>78</td>
</tr>
<tr>
<td>3</td>
<td>Test drug (Neeradimuthu vallathy melugu)</td>
<td>100mg</td>
<td>10mg</td>
<td>120mg</td>
<td>48</td>
<td>52</td>
</tr>
</tbody>
</table>

**INTERFERENCE**

- The drug shows moderate chronic – anti inflammatory action.
ANTI- HISTAMINE EFFECT OF NEERADIMUTHU VALLATHY MELUGU ON ISOLATED ILEUM OF GUINEA PIG

Preparation of the Drug:

0.1ml *NEERADIMUTHU VALLATHY MELUGU* was dissolved in 100ml of water and decoction was made out of it. This was used for the studies.

Method:

A guinea pig weighing about 450gms was starved for 48hrs and only water was allowed. It was killed by stunning with a sharp blow on the head and cutting its throat to bleed it, to death. The abdomen was quickly opened and the viscera inspected and loops of intestine identified using the batch as a landmark. Then the ileum was removed and placed in a shallow dish containing warm ‘Tyrode solution’ mixed with Atropine with the help of 25ml pipette, the lumen was gently rinsed out with saline. It was cut in to segments of required length, generally 4cm, in a full relaxed state and the sutures were made with needle and tied at either ends, and the segment is suspended in an isolated organ bath. It was aerated by oxygen tube and immersed in Tyrode solution at 37° C. Drugs were given to study the inhibitory effect of histamine induced contractions.

INFERENCE

- *Neeradimuthu vallathy melugu* has significant anti histamine action
ANTI HISTAMINE ACTION OF NEERADIMUTHUVALLATHY

MELUGU
Aim:

To study the analgesic effect on albino rats by tail flick method.

Preparation of the test Drug:

1 gram of Neeradi muthu vallathy melugu was suspended in 10ml of Hot Water as suspending agent. This 1 ml contained 100mg of the test drug.

Procedure:

Nine Male Healthy albino rats (weighing 80-100gms) were used for this study. The animals were allowed, free access to food and water until they brought for the experiment. The animals which showed the positive response to the stimulus (within a given time) were selected for the study. After the selection of animals which were responding to stimulus within 2 seconds, they were divided into three groups, each group consisting of three rats.

The hot water was maintained at 55°C. The tip of the tail was immersed into the water bath and the time was noted when the rat flicked the tail. First group was given 1ml of water and kept as control. Second group was administered with paracetamol at a dose of 20mg/100gm of body weight. Third group as given the dose of 100mg/100gm body weight of the animal. After the drug administration, the reaction time of each rat after half an hour and one
hour were noted in each group (when a rat fails to flick the tail, it should not be continued beyond 8 seconds to avoid injury) and the average was calculated.

The results of control group, standard group and drug treated group were tabulated and compared.

**STUDY OF ANALGESIC EFFECT USING THE DRUG**

**NEERADIMUTHU VALLATHY MELUGU**

<table>
<thead>
<tr>
<th>Name of the Groups</th>
<th>Dose/ 100 gram body weight</th>
<th>Initial reading</th>
<th>After drug administration</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>½ hr Average</td>
<td>1 hr Average</td>
</tr>
<tr>
<td>Control (Water)</td>
<td>2 ml</td>
<td>2.0 sec</td>
<td>2.0 sec</td>
<td>2.0 sec</td>
</tr>
<tr>
<td>Standard (Paracetamol)</td>
<td>20 mg</td>
<td>2.0 sec</td>
<td>2.5 sec</td>
<td>4.5 sec</td>
</tr>
<tr>
<td>Test drug (NMVM)</td>
<td>100 mg</td>
<td>2.0 sec</td>
<td>2.5 sec</td>
<td>4.5 sec</td>
</tr>
</tbody>
</table>

NMVM- Neeradimuthu Vallathy melugu

**Inference:**

The trial drug had significant *analgesic action.*
EXTERNAL MEDICINE

ACUTE ANTI-INFLAMMATORY STUDY ON
KALAPPAI KILANGU VELIPUCHU (EXTERNAL)

Aim

To study the acute anti-inflammatory effect of kalappai kilangu velipuchu (External) by Hind-paw method in albino rats.

Procedure:

Nine albino rats were selected weighing between 100 - 150 grams and divided into three groups each containing three rats. To the first group distilled water was given and kept as control. Before the application of the drug, the hind-paw volume of all rats were measured. This was done by dipping the hind paw upto the tibio-dorsal junction in mercury plethysmography. Subcutaneous injection of 0.1% of carrageenan (W/v) in water was made into plantar surface of both the hind-paw of each rat. To the second group the standard drug Ibuprofen in a dose of 20mg/100gm body weight was given. To the test group Kalappai kilangu velipuchu was topically applied frequently over the inflammed surface in a thin layer. To the control group, no drug was applied over the inflammed surface. One and half hours after injection the hind paw volume was measured once again. The difference between the initial and final volumes would show the amount of inflammation. Taking the volume in
the control group as 100% of inflammation, the anti-inflammatory effect of the group is calculated.

<table>
<thead>
<tr>
<th>Group</th>
<th>Dose / 100gm of body weight</th>
<th>Initial reading average</th>
<th>Final reading average</th>
<th>Mean difference</th>
<th>% of inflammation</th>
<th>% of inhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control (water)</td>
<td>2 ml</td>
<td>0.55</td>
<td>1.45</td>
<td>0.85</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>Standard (ibuprofen)</td>
<td>20mg</td>
<td>0.55</td>
<td>0.75</td>
<td>0.20</td>
<td>22.2</td>
<td>77.8</td>
</tr>
<tr>
<td>TD (Kalappai kilangu velipuchu)</td>
<td>-</td>
<td>0.87</td>
<td>1.15</td>
<td>0.28</td>
<td>32.9</td>
<td>67.1</td>
</tr>
</tbody>
</table>

TD- Test Drug

**INFERENCE**

- The drug has SIGNIFICANT acute anti-inflammatory action.
ANNEXURE – IV

ASSESSMENT FORMS

FORM I  -  SCREENING FORM
FORM II -  CONSENT FORM
FORM III -  CASE SHEET PROFORMA
FORM IV -  LABORATORY INVESTIGATIONS
FORM V  -  CLINICAL ASSESSMENT
FORM VI -  PATIENT WITHDRAWAL FORM
FORM VII -  DRUG COMPLIANCE FORM
GOVERNMENT SIDDHA MEDICAL COLLEGE & HOSPITAL
PALAYAMKOTTAI.

POST GRADUATE DEPARTMENT OF SIRAPPU MARUTHUVAM

AN OPEN CLINICAL TRIAL OF ‘NEERADIMUTHU VALLATHY
MELUGU’ AND ‘KALAPPAI KILANGU VELIPUCHU FOR THE
TREATMENT OF ‘KALANJAGA PADAI’ (PSORIASIS)

FORM I –SCREENING FORM

1. OP/ IP No: 2. BED No: 3. Sl. No:

4. NAME: 5. AGE: 6. GENDER:

7. OCCUPATION: 8. SOCIAL STATUS:

9. DATE OF ADMISSION: 10. DATE OF DISCHARGE:

11. POSTAL ADDRESS:

____________________________________________________________________

a) INCLUSION CRITERIA:

1. Age: between 14 years and 60 years

2. Sex: Both Male and Female

3. Patients having the symptoms of Kalanjaga padai

4. Psoriatic arthritis

5. Auspitz sign positive

6. Koebner’s phenomenon positive

7. Candle grease sign positive

8. Willing to participate in the study

9. Willing to give specimens for the investigations whenever required
b) EXCLUSION CRITERIA:

1. Diabetes Mellitus
2. Hypertension and Cardiac diseases
3. Narcotic addicts
4. Pregnancy and Lactation
5. HIV
6. Leprosy
7. Peptic ulcer
8. Patients with any other serious illness

c) WITHDRAWAL CRITERIA:

1. Development of any adverse reaction (ADR).
2. Occurrence of any other systemic illness.
GOVERNMENT SIDDHA MEDICAL COLLEGE & HOSPITAL,
PALAYAMKOTTAI.
POST GRADUATE DEPARTMENT OF SIRAPPU MARUTHUVAM
AN OPEN CLINICAL TRIAL OF ‘NEERADIMUTHU VALLATHY MELUGU’
AND ‘KALAPPAI KILANGU VELIPUCHU’ FOR THE TREATMENT OF
‘KALANJAGA PADAI’ (PSORIASIS)

Form: II CONSENT FORM

CERTIFICATE BY INVESTIGATOR
I certify that I have disclosed all the details about the study in the terms readily understood by the patient.

Signature……………………
Date………
Name……………………

CONSENT BY PATIENT
I have been informed to my satisfaction, by the attending physician, the purpose of the clinical trial, and the nature of drug treatment and follow-up including the laboratory investigations to be performed to monitor and safeguard my body functions.

I am aware of my right to opt out of the trial at any time during the course of the trial without having to give the reasons for doing so.

I, exercising my free power of choice, hereby give my consent to be included as a subject in the clinical trial of ‘neeradimuthu vallathy melugu’ (internal drug)’ and ‘kalappai kilangu velipuchu’ (External drug)’ for the treatment of ‘KALANJAGA PADAI’ (PSORIASIS)

Signature……………………
Name……………………
Date……………………
அரியின் விளை மத்தியச் சாலையின் முதல் மத்தியச் சாலையின் முதல் மத்தியச் சாலையின் முதல்

பாலமேசுவர் ரீது நூற்றாண்டுக் கோவை

“தீப்பார்க்க மணல் தெரு” பதிலின் “கல்லாலாமுகள் விளையுடன்”

குருமையில் பிரிவுப்படி நூற்றாண்டுக் கல்லாலாமும் மட்டும் அம்மை

அறிவியல் கால நுட்பங்கள்

நான் இந்த அம்மையில் தெரிகிய அனைத்து விளையாட்டுமிடையில் பிரிவுகள் மட்டும் நடத்த வேண்டும். இந்த நுட்பங்கள் கால நுட்பங்களும், அனைத்து பார்வையாக மட்டும் நடத்தும் அம்மைகள். பிரிவுப்படி விளையாட்டில் குதிரை அறிவியல் நடத்திய அம்மை

நான் இந்த பார்வையானது அம்மையில் பிரிவு கால நுட்பங்கள் அறிவியல்

பாலமேசுவர் ரீது நூற்றாண்டுக் கோவை

“தீப்பார்க்க மணல் தெரு” பதிலின் “கல்லாலாமுகள் விளையுடன்”

குருமையில் பிரிவுப்படி நூற்றாண்டுக் கல்லாலாமும் அம்மையில் கல்லாலாமை விளையாட்டு அறிவியல்.
GOVERNMENT SIDDHA MEDICAL COLLEGE & HOSPITAL,
PALAYAMKOTTAI.

POST GRADUATE DEPARTMENT OF SIRAPPU MARUTHUVAM
AN OPEN CLINICAL TRIAL OF NEERADIMUTHU VALLATHY
MELUGU AND KALAPPAI KILANGU VELIPUCHU FOR THE
TREATMENT OF ‘KALANJAGA PADAI’ (PSORIASIS)

FORM III - CASE PROFORMA

1. OP / IP No  -----------  2. Sl.No. -----------

3. Name  ---------------  4. Age ________  5. Gender ______

6. Marital status  1) Married □  2) Unmarried □

7. Occupation  -------------------

8. Postal address
   ---------------------------------------------------------------
   ---------------------------------------------------------------
   ---------------------------------------------------------------

9. Complaints & Duration
   ---------------------------------------------------------------
   ---------------------------------------------------------------
   ---------------------------------------------------------------
   ---------------------------------------------------------------
   ---------------------------------------------------------------
10. History of present illness


11. Past history


12. Family history


13. Social Status

1) Low Income ☐ 2) Middle Class ☐ 3) Higher ☐

Income

HABITS

<table>
<thead>
<tr>
<th>Habit</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Smoker</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>15. Alcoholic</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>16. Betalnut Chewer</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>17. Non – Vegetarian</td>
<td>☐</td>
<td>☐</td>
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</table>

GENERAL EXAMINATION

<table>
<thead>
<tr>
<th>Examination</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18. Body Weight (kg)</td>
<td></td>
</tr>
<tr>
<td>19. Body Temperature (°F)</td>
<td></td>
</tr>
</tbody>
</table>

144
20. Blood Pressure (mmHg) 

21. Pulse rate / min 

22. Heart rate / min 

23. Respiratory rate / min 

Yes  No

24. Pallor

25. Jaundice

26. Clubbing

27. Cyanosis

28. Pedal oedema

29. Lymphadenopathy

30. Engorged veins

CLINICAL EXAMINATION OF SKIN

Right        Left

31. Site   . . . . . . . . . . . . . . . . . . . .  . . . . . . . . . . . . . . . . . . . . . . . .  .

... 

... 

31. Colour


33. Shape

1. Irregular 2. Coin shape 3. Dispersed
34. Scaling

35. Itching

36. Erythema
   1. Present  □  2. Absent  □

37. Bleeding
   1. Present  □  2. Absent  □

38. Crusting
   1. Present  □  2. Absent  □

39. Lichenification
   1. Present  □  2. Absent  □

40. Oozing

41. Auspitz sign
   1. Present  □  2. Absent  □

42. Koebner’s phenomenon
   1. Present  □  2. Absent  □

43. Candle grease sign
   1. Present  □  2. Absent  □

44. Ulceration
   YES  □  NO  □

45. Macule
   □  □
46. Papule      □      □
47. Pustule      □      □
48. Blister      □      □
49. Vésicule      □      □

50. Pigmentation

**EXAMINATION OF NAILS**

51. Pitting
   1. Present      □  2. Absent      □

52. Thickening
   1. Present      □  2. Absent      □

53. Collection of Hyperkeratotic debris
   1. Present      □  2. Absent      □

54. Separation of distal portion of nail
   1. Present      □  2. Absent      □

**EXAMINATION OF JOINTS**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
55. Joint Involvement      □  □  If yes:............................

**EXAMINATION OF VITAL ORGANS**

<table>
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<tr>
<th>Normal</th>
<th>Abnormal</th>
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</thead>
<tbody>
<tr>
<td>CVS</td>
<td></td>
</tr>
<tr>
<td>RS</td>
<td></td>
</tr>
<tr>
<td>Abdomen</td>
<td></td>
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</tbody>
</table>

147
**SIDDHA ASPECTS**

59. **NILAM**

60. **KALA IYALBU**

61. **UDAL IYALBU**

62. **GUNA IYALBU**
   1. Sathuvam 2. Rasatham 3. Thamasam

**IYMPORIGAL**

<table>
<thead>
<tr>
<th></th>
<th>Normal</th>
<th>Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>63. Mei</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>64 Vaai</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>65. Kan</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>66 Mookku</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>67. Sevi</td>
<td>□</td>
<td>□</td>
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</table>
### KANMENDHIRIUM / KANMAVIDAYAM

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>68. Kai</td>
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</tr>
<tr>
<td>69. Kaal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70. Vaai</td>
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</tr>
<tr>
<td>71. Eruvaai</td>
<td></td>
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<tr>
<td>72. Karuvaai</td>
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### UYIR THATHUKKAL

#### VATHAM

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<tr>
<td>73. Pranan</td>
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<td>74. Abanan</td>
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</tr>
<tr>
<td>75. Uthanan</td>
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</tr>
<tr>
<td>76. Viyanan</td>
<td></td>
<td></td>
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<tr>
<td>77. Samanan</td>
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<td></td>
</tr>
<tr>
<td>78. Nagan</td>
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<tr>
<td>79. Koorman</td>
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<td></td>
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<tr>
<td>80. Kirukaran</td>
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<td>81. Devatham</td>
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<td>82. Dhananjeyan</td>
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#### PITHAM

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<tr>
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<tr>
<td>84. Ranjagam</td>
<td></td>
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<td>85. Sathagam</td>
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<td></td>
</tr>
<tr>
<td>KABAM</td>
<td>Normal</td>
<td>Affected</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>----------</td>
</tr>
<tr>
<td>88. Avalambagam</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>89. Kilethagam</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>90. Pothagam</td>
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<td>☐</td>
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<tr>
<td>91. Tharpagam</td>
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<td>☐</td>
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<tr>
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<table>
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</thead>
<tbody>
<tr>
<td>93. Saaram</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>94. Senneer</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>95. Oon</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>96. Kozhuppu</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>97. Enbu</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>98. Moolai</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>99. Sukkilam / Suronitham</td>
<td>☐</td>
<td>☐</td>
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<table>
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<td>100. Naadi</td>
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<td>☐</td>
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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>101. Sparisam</td>
<td>☐</td>
</tr>
<tr>
<td>102. Naa</td>
<td>☐</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
</tr>
<tr>
<td>-----</td>
<td>---------</td>
</tr>
<tr>
<td>103</td>
<td>Niram</td>
</tr>
<tr>
<td>104</td>
<td>Mozhi</td>
</tr>
<tr>
<td>105</td>
<td>Vizhi</td>
</tr>
<tr>
<td>106</td>
<td>Niram</td>
</tr>
<tr>
<td>107</td>
<td>Erugal</td>
</tr>
<tr>
<td>108</td>
<td>Elagal</td>
</tr>
</tbody>
</table>

**MALAM**

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>106</td>
<td>Niram</td>
<td></td>
<td></td>
</tr>
<tr>
<td>107</td>
<td>Erugal</td>
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</tr>
<tr>
<td>108</td>
<td>Elagal</td>
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**MOOTHIRAM**

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<tr>
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<tbody>
<tr>
<td>109. Niram</td>
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<tr>
<td>110. Manam</td>
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<tr>
<td>111. Edai</td>
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<td></td>
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<tr>
<td>112. Nurai</td>
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<td></td>
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<tr>
<td>113. Enjal</td>
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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Neikkuri</td>
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</tbody>
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GOVERNMENT SIDDHA MEDICAL COLLEGE & HOSPITAL,
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TREATMENT OF ‘KALANJAGA PADAI’ (PSORIASIS)

Form IV - LABORATORY INVESTIGATIONS

1. OP/IP No: 2. BED No: 3. Sl. No:
4. NAME: 5. AGE: 6. GENDER:
7. OCCUPATION: 8. SOCIAL STATUS
9. DATE OF ENROLLMENT: 10. DATE OF DISCHARGE:
11. POSTAL ADDRESS:

<table>
<thead>
<tr>
<th>Lecturer</th>
<th>HOD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Date:</td>
<td></td>
</tr>
</tbody>
</table>

I. BLOOD:

1. TC: (Cells/Cumm)
2. DC (%): N L M E
3. ESR (mm): ½ hr 1 hr
4. Hb:
5. Blood Sugar: a) Fasting b) Post prandial
6. Kidney function tests:
   Blood urea: Serum creatinine:
7. Lipid profile:

<table>
<thead>
<tr>
<th>Lipid</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDL</td>
<td></td>
</tr>
<tr>
<td>LDL</td>
<td></td>
</tr>
<tr>
<td>VLDL</td>
<td></td>
</tr>
<tr>
<td>Total Cholesterol</td>
<td></td>
</tr>
<tr>
<td>TGL</td>
<td></td>
</tr>
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</table>

7. Liver Function tests:

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>SGOT</td>
<td></td>
</tr>
<tr>
<td>SGPT</td>
<td></td>
</tr>
<tr>
<td>Alk. Phosphatase</td>
<td></td>
</tr>
<tr>
<td>Albumin</td>
<td></td>
</tr>
<tr>
<td>Globulin</td>
<td></td>
</tr>
<tr>
<td>Total Protein</td>
<td></td>
</tr>
<tr>
<td>Serum Bilirubin</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Direct</td>
<td></td>
</tr>
<tr>
<td>Indirect</td>
<td></td>
</tr>
</tbody>
</table>

II. URINE:

1. Albumin : 
2. Sugar : 
3. Epithelial cells : 
4. Pus cells : 
5. Red blood cells : 
6. Casts/Crystals :

III. MOTION:

1. Ova : 
2. Cyst : 
3. Occult blood :
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TREATMENT OF ‘KALANJAGA PADAI’ (PSORIASIS)

FORM - V ASSESSMENT PROFORMA

1. IP / OP No .......................... 2. Sl. No...........................

4. Name ..........................................................

5. Date of admission

6. Date of discharge

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Signs and Symptoms</th>
<th>15th day</th>
<th>30th day</th>
<th>48th day</th>
</tr>
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<tbody>
<tr>
<td>1</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Itching</td>
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<tr>
<td>3</td>
<td>Thickening</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Erythema</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Pigmentation</td>
<td></td>
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<tr>
<td>6</td>
<td>Vesicle</td>
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<td>7</td>
<td>Pustules</td>
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<tr>
<td>8</td>
<td>Oozing</td>
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<tr>
<td>9</td>
<td>Crusting</td>
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<tr>
<td>10</td>
<td>Lichenification</td>
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<td></td>
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</tbody>
</table>
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TREATMENT OF ‘KALANJAGA PADAI’ (PSORIASIS)

FORM - VI PATIENT WITHDRAWAL FORM

1. OP / IP No ————  2. S.No. ————  3. Date: __________

4. Name ————  5. Age ————  6. Gender ————

7. Postal address:

____________________________________________________________________

Complaints and Duration:

Irregular Treatment:

Adverse Reactions:

Other causes:
GOVERNMENT SIDDHA MEDICAL COLLEGE & HOSPITAL
PALAYAMKOTTAI.

POST GRADUATE DEPARTMENT OF SIRAPPU MARUTHUVAM

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FORM VII - DRUG COMPLIANCE FORM

Name of the Drug: NEERADI MUTHU VALLATHY MELUGU

Drugs issued: .................(mgs/Grams)

Drugs returned: .................(mgs/Grams)

<table>
<thead>
<tr>
<th>S.NO</th>
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<th>DRUG TAKEN TIME</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>MORNING/TIME</td>
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<tr>
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<td>Up to day 48</td>
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</tbody>
</table>

Date:

Station:

Signature of the Investigator:

Signature of the Lecturer: Signature of the HOD
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❖ Noi Naadal Noi Mudhal Naadal Thirattu-part 11 Dr.P. Shanmugavelu.
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