

**A STUDY ON THE SYMPTAMATOLOGY AND DIAGNOSTIC
METHODOLOGY OF MADAKKU PILAVAI**



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DOCTOR OF MEDICINE

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October – 2017

DECLARATION BY THE CANDIDATE

I hereby declare that this Dissertation entitled “*A STUDY ON THE SYMPTAMATOLOGY AND DIAGNOSTIC METHODOLOGY OF MADAKKU PILAVAI*” is a bonafide and genuine research work carried out by me under the guidance of **Dr.G.J.CHRISTIAN, M.D(S), HOD**, Dept of Noi Naadal, National Institute of Siddha, Chennai – 47, and the dissertation has not formed the basis for the award of any degree, Diploma, Fellowship or other similar title.

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INTRODUCTION

INTRODUCTION

Siddha System is one of the ancient and holistic medical systems of the world. It is very potent and unique system when compared with traditional systems in existence. Siddha system propounded by the Siddhars is a vast and unique systems which defines health as a perfect state of Physical, Psychological, Social and Spiritual well being of an individual.

The system not only deals with medicine but also with spirituality ,righteous way of living, rejuvenation and its main aim is attainment of perfection.Siddha medicine is the only system which bestows immortality.

Kaya kalpam, Varmam, Attanga Yogam are present exclusively in Siddha system of Medicine.Siddha systems emphasize not only a healthy body but a peaceful mind and pure soul hence it is unique when compared to any other medical system. In simply we say Siddha system is fully philosophical based scientific system, Until one who hope and believe with it, He will be always successful in life.

As per Siddha literature,human physiology and pathology are based on tridoshas and pancha boothas theory .Health is defined as Physical, Mental and Social well being of an individual. Any alteration is own nature of Mukkutram, and udal thathukkal leads to disease.This can be cleared by the words of sage thiruvalluvar,

மிகினுங் குறையினும் நோய்செய்யும் நூலோர்

வளிமுதலா வெண்ணிய மூன்று.

The diagnostic methodology in siddha system is unique as it made purely on the basis of clinical acumen of the physician.

The diagnosis is arrived from interrogation , inspection through

1. Assessment of deranged three humours ,udal thathukal and 96 principles
2. Eight fold examination(Envagai thervu)
3. Wrist circumference(Manikadainool)
4. Astrology(Sothidam)

According to the Siddha system of medicine diseases are classified into 4448 in number. Meganeer is one among the disease has been described by sage theraiyar in theraiyar karisal.Meganeer are produced in Meganeer Kattigal.Ten types of meganeer kattigal is there.

Siddha Maruthuvam classified Meganeer Kattigal into 10 types. One such type is Madakku Pilavai. Madakku pilavai has been described in Siddha maruthuvam. The symptoms of lumpy swelling in joints and muscles ,Reddish black discoloration, Pain in severe stage it produced in excessive sweating.

The signs and symptoms of Madakku Pilavai maybe correlated with Carbuncle in Modern system of medicine.

Carbuncles are associated with malnutrition, heart failure, drug addiction, severe generalised skin disease and prolonged steroid therapy. The evidence is conflicting with regard to association with diabetes.

It is a common occurrence amongst the adolescent group and in early adulthood years. Boys are more prone to develop carbuncles than girls. Children are less likely to develop such a type of skin abscess.

The 10-20% of the population and around 30-50% of healthy adults are colonized with staphylococcus aureus at some site, at any given time. 10% of patient with a abscess develop a repeat abscess within 12 months. Obesity, diabetes, young age, smoking and prescription of an antibiotic in the six months before initial presentation have been shown to be associated with recurrent infection.

A carbuncle grows in size for a few days to reach a diameter of 2 cm occasionally more. After 5- 7 days suppuration occurs and multiple pustules soon appear on the surface ,draining externally around multiple hair follicles.

Of all the Meganeer Katti types, Madakku Pilavai is frequently reported by a sizeable number of patients, with symptoms Meganeer in Meganeer Kattigal in the OPD of National Institute of Siddha. So, with the aim to establish the diagnostic methods for the above disease based on Siddha concept in mind, the author selected the disease “Madakku Pilavai”. The author with meticulous examination of pulse, urine, eyes, modulation in speech, complexion, tongue examination etc., and also with the help of modern parameters, aims to shed light on the unforeseen prospects of improving the diagnostic methods in the detection of the Madakku Pilavai.

The another most examination of Envagai thervugal, Udal thathukal, Uyir thathukal, Imporigal, kanmenthriyangal, Neerkuri, Neikuri and also identify the Manikadainool, Natchathiram, Raasi.

The author wants to elaborate on the madakku pilavai mentioned the literature, to get a better insight and vivid explanation, so that this study might form a basis for the management and evaluate the diagnostic methodology of “Madakku Pilavai” including the validation of the literature.

**AIM
&
OBJECTIVES**

AIM AND OBJECTIVE

AIM:

To evaluate the diagnostic methodology and symptomatology for “**MADAKKU PILAVAI**” through Envagai thervu, Kaalam, Nilam and Manikadai Nool.

OBJECTIVES:

1. To collect literary evidences about Madakku Pilavai.
2. To study in detail about the etiological factors of Madakku Pilavai.
3. To find out the changes of Udal Thathu and Uyir Thathu.
4. To analyse the signs and symptoms of Madakku Pilavai.
5. To correlate the symptoms of Madakku Pilavai with that of closely resembling conditions in modern medical literature.
6. To have an idea of incidence of the Madakku Pilavai with reference to sex, age and habit.
7. To prescribe a standard line of treatment for Madakku Pilavai.
8. To recommend a dietary regimen for Madakku Pilavai.

SIDDHA PHYSIOLOGY

All the existing things in this world and universe around it are made up by the five basic elements namely Man (Earth), Neer (Water), Thee (Fire), Kaal (Air) and Aagayam (Space) are called the Panja Boothams (Fundamental Elements). These elements constituting the human body and other worldly substances are explained as Pancheekaranam (Mutual Intra Inclusion). Anyone of these elements cannot act independently by itself. They can act only in co-ordination of the other four elements. The living creatures and the non-living things are made up of these five elements.

உலகம் பஞ்ச பூதம்

"நிலம் நீர்தீவளி விசம்போடைந்தும்
கலந்தமயக் கமுலகம் இது.
- தொல்காப்பியம்

தேகம் பஞ்ச பூதம்

"தலங்காட்டி இந்தச் சடமான ஐம்பூதம்
நிலங்காட்டி நீர் காட்டி நின்றிடுந் தீ காட்டி
வலங்காட்டி வாயுவால் வளர்ந்தே இருந்தது
குலங்காட்டி வானில் குடியாய் இருந்ததே
- பதினெண் சித்தர் நாடி சாஸ்திரம்.

As per the above lines the Universe and the Human Body are made of five elements.

A. THE 96 BASIC PRINCIPLES (96 THATHUVAM) :

According to Siddha system of medicine, 'Thathuvam' is considered as a science that deals with basic functions of the human body. Siddhars described 96 principles as the basic constituents of human body that include physical, physiological, psychological and intellectual components of an individual. These 96 Thathuvams are considered to be the cause and effect of our physical and mental well-being. The Thathuvam is the author of the conception of human embryo on which the theory of medicine is based.

1. BOOTHAM - 5 (ELEMENTS) :

- Man - Earth
- Neer - Water
- Thee - Fire
- Vaayu - Air
- Aagayam - Space

2. PORI - 5 (SENSORY ORGANS) :

- Mookku (Nose) - It is a component of Mann bootham
- Naakku (Tongue) - It is a component of Neer bootham
- Kan (Eye) - It is a component of Thee bootham
- Thol (Skin) - It is a component of Vaayu bootham
- Kadhu (Ear) - It is a component of Aagayam bootham

3. PULAN - 5 (FUNCTIONS OF SENSORY ORGANS) :

- Nugarthal - Smell : It is a component of Mann bootham
- Suvaithal - Taste : It is a component of Neer bootham
- Paarthal - Vision : It is a component of Thee bootham
- Thoduthal - Touch : It is a component of Vaayu bootham
- Kettal - Hearing: It is a component of Aagayam bootham

4. KANMENTHIRIYAM - 5 (MOTOR ORGANS)

- Vaai (Mouth) - The speech occur in relation with Space element
- Kaal (Leg) - The walking take place in relation with Air element
- Kai (Hands) - Giving and taking are carried out with Fire element
- Eruvaai (Rectum) - The excreta is removed in association with water element
- Karuvaai (Genital Organ) - Sexual acts are carried out in association with earth element

5. KARANAM - 4 (INTELLECTUAL FACULTIES) :

- Manam - Thinking about a thing
- Bhuddhi - Deep thinking or analyzing of the thought
- Siddham - Determination to achieve it
- Agankaaram - Achievement faculty

6. ARIVU - 1 (WISDOM OF SELF REALIZATION)

7. NAADI - 10 (Channels of Life Force responsible for the Dynamics of Pranan)

- Idakalai - Starts from the right big toe and ends at the left nostril.
- Pinkalai - Starts from the left big toe and ends at the right nostril.
- Suzhimunai - Starts from moolaathaaram & extend upto centre of head.
- Siguvai - Located at the root of tongue, helps in swallowing food.
- Purudan - Located in right eye.
- Kanthari - Located in left eye.
- Aththi - Located in right ear.
- Alampudai - Located in left ear.
- Sangini - Located in genital organs.
- Gugu - Located in anorectal region.

8. VAYU - 10 (Vital nerve force which is responsible for all kinds of movements)

i. PIRANAN (UYIR KAAL) :

This is responsible for the respiration of the tissues, controlling Knowledge, mind and five sense organs and digestion of the food taken in.

ii. ABANAN (KEEL NOKKU KAAL) :

It lies below the umbilicus. It is responsible for the downward expulsion of stools and urine, ejaculation of semen and menstruation.

iii. VIYANAN (PARAVU KAAL) :

This is responsible for the motor and sensory functions of the entire body and the distribution of nutrients to various tissues.

iv. UTHANAN (MAEL NOKKU KAAL) :

It originates at Utharakini. It is responsible for digestion, absorption and distribution of food. It is responsible for all the upward movements.

v. NADUKKAAL (SAMAANAN) :

This is responsible for the neutralization of the other 4 Valis i.e. Piranan, Abanan, Viyanan and Uthanan. Moreover it is responsible for the nutrients and water balance of the body.

vi. NAAGAN :

It is a driving force of eye balls and responsible for their movements.

vii. KOORMAN :

It is responsible for the opening and closing of the eyelids and also vision. It is responsible for yawning.

viii. KIRUKARAN :

It is responsible for the salivation of the tongue and also nasal secretion. Responsible for cough and sneezing and induces hunger.

ix. DEVATHATHAN :

This aggravates the emotional disturbances like anger, lust, and frustration etc. As emotional disturbances influence to a great extent the physiological activities, it is responsible for the emotional upsets.

x. DHANANCHEYAN :

Expelled 3 days after the death by bursting out of the cranium. It is responsible for edema, plethora and abnormal swelling in the body in the pathological state.

9. ASAYAM - 5 (VISCERAL CAVITIES) :

- **Amarvasayam** (Reservoir organ): Stomach (digestive organ). It lodges the ingested food.
- **Pakirvasayam** (Digestive site): Small Intestine. The digestion of food separation and absorption of saaram from the digested food are done by this asayam.
- **Malavasayam** (Excretory organ for the solid waste): Large Intestine, especially rectum. Responsible for the expulsion of undigested food parts and flatus.
- **Salavasayam** (Excretory organ for the liquid waste): Urinary Bladder, Kidney. Responsible for the formation and excretion of urine.
- **Suckilavasayam** (Genital organs): Place for the formation and growth of the sperm and ovum

10. KOSAM - 5 (FIVE STATES OF THE HUMAN BODY OR SHEATH) :

- Annamaya Kosam - Physical Sheath (Gastro intestinal system)
- Pranamaya Kosam - Respiratory Sheath (Respiratory system)
- Manomaya Kosam - Mental Sheath (Cardio vascular system)
- Vignanamaya Kosam - Intellectual Sheath (Nervous system)
- Ananthamaya Kosam - Blissful Sheath (Reproductive system)

11. AATHARAM - 6 (STATIONS OF SOUL) :

- **MOOLADHARAM :**

Situated at the base of the spinal column between genital organ and analorifice. Letter “Xk;” is inscribed

- **SWATHITANAM :**

Located 2 finger above the Mooladharam, (i.e) between genital and naval region. Letter “e” is Inscribed. Earth element attributed to this region.

- **MANIPOORAGAM :**

Located 8 finger above the Swathitanam, (i.e) at the naval center. Letter “k” is inscribed. Element is water.

- **ANAKATHAM :**

Located 10 finger above Manipooragam, (i.e) location of heart. Letter “rp” is inscribed. Element is Fire.

- **VISUTHI :**
Located 10 fingers above the Anakatham (i.e) located in throat. Letter “t” is inscribed. Element is Air.
- **AAKINAI :**
Located between two eyebrows. Element is Space. Letter “a” is inscribed.

12. MANDALAM - 3 (REGIONS) :

- **Thee Mandalam (Agni Mandalam)**
Fire Region, found 2 fingers width above the Mooladharam.
- **Gnayiru Mandalam (Soorya Mandalam)**
Solar Region, located with 4 fingers width above the umbilicus.
- **Thingal Mandalam (Chandra Mandalam)**
Lunar Region, located at the center of two eye brows.

13. MALAM - 3 (THREE IMPURITIES OF THE SOUL):

- **AANAVAM :**
This act makes clarity of thought, knowing power of the soul, yielding to the Egocentric consciousness like ‘I’ and ‘Mine’ considering everything is to hisown.
- **KANMAM :**
Goes in collusion with the other two responsible for incurring Paavam (the Sin) and Punniyam (virtuous deed).
- **MAYAI :**
Climbing ownership of the property of some one else and inviting troubles.

14.THODAM - 3 (THREE HUMOURS) :

- **VALI (VATHAM) :**
It is creative force, formed by Vaayu & Aakaya bootham
- **AZHAL (PITHAM) :**
It is protective force, formed by Thee bootham
- **IYYAM (KABAM) :**
It is destructive force, formed by Mann & Neer bootham

15. EADANAI - 3 (PHYSICAL BINDINGS) :

- **Porul Patru** - Material Bindings
- **Puthalvar Patru** - Offspring Bindings
- **Ulaga Patru** - Worldly Bindings

16. GUNAM - 3 (THREE COSMIC QUALITIES) :

- **Sathuva Gunam** (*Characters of Renunciation or Ascetic Virtues*) :

The grace, control of sense, wisdom, penance, generosity, excellence, silence, and truthfulness are the 8 traits.

- **Raso Gunam** (*Characters of Ruler*) :

Enthusiasm, wisdom, valour, virtue, offering gift, art of learning and listening are the 8 traits.

- **Thamo Gunam** (*Carnal and Immoral Characters*) :

Immortality, lust, killing laziness, violation of justice, gluttonousness, falsehood, forge fulness and fraud.

17. VINAI - 2 (ACTS) :

- **Nalvinai** - Good Acts
- **Theevinai** - Bad Acts

18. RAGAM - 8 (THE EIGHT PASSIONS) :

- Kaamam - Desire
- Kurotham - Hatred
- Ulobam - Stingy
- Moham - Lust (Intense or Sexual desire Infatuation)
- Matham - Pride (The feeling of respect towards yourself)
- Marcharyam - Internal Conflict
- Idumbai - Mockery
- Ahankaram - Ego

19. AVATHAI - 5 (FIVE STATES OF CONSCIOUSNESS) :

- **NINAIVU**

Wakefulness with the 14 karuvikaranathigal (5 pulan, 5 kanmaenthiriyam and 4 karanam) and feels the good and sad things.

- **KANAVU**

Dreams. In these 10 karuvi karanathigal (5 pulan, 5 kanmaenthiriyam) except karanam present in the neck.

- **URAKKAM**

Sleep. The state in which hearing and seeing can't explained to others. The respiration present in the heart.

- **PERURAKKAM**

Repose (Tranquil or Peaceful State). The seevaanma stands in the naabi, producing the respiration.

- **UYIRPADAKKAM**

Oblivious of Surroundings. The seevaanma goes to moolathaaram and produce insensibility.

THE UYIR THATHUKKAL :

The physiological units of the Human body are **Vali** (Vatham), **Azhal** (Pitham) and

Iyyam (Kabam). They are also formed by the combination of the five elements.

Vaatham = Vali+Aagayam : Creative force

Pitham = Thee + Force of preservation

Kabam = Man+Neer : Destructive force

As per the above lines the Universe and the human body are made of fiveelements. These three humours are in the ratio 1:½:¼ in equilibrium or Normalcondition, they are called as the Life forces.

SITES OF UYIR THATHUKKAL :

பொங்கிய தைந்துக்குள் பொல்லாதது இம் மூன்றும்தான்
தங்கிய வாயு சமத்தன் மகாவாதம்
பங்கிய வன்னியால் பகுந்தது நல்லையும்
பகுந்த சலத்தில் பாசிக்கும் நல்லையும்
வகுந்த இம்மூன்றால் வளர்த்து நோயெல்லாம்
அகுந்தது தானறிந்து அளவிட்ட யோகிகள்
மகிழ்ந்தே யிதில் நின்ற மயக்கம் அறிவாரே"

- பதினெண் சித்தர் நாடி சாஸ்திரம்.

THE FORMATION OF UYIR THATHUKKAL :

"தாது முறையெ தனிஇடை வாதமாம்
போதுறு பின்கலை புகன்றது பித்தமாம்
மாது சுழிமுனை வழங்கிடும் ஐயமாம்
ஒரு முறை பார்த்து உணர்ந்தவர் சித்தரே"

- பதினெண் சித்தர் நாடி சாஸ்திரம்.

"உணர்ந்த அபானன் உறும் அந்த வாதத்தில்
புணர்ந்த பிராணன் புகும் அந்தப் பித்தத்தில்
அணைந்த சமானன் அடங்கும் கபத்தொடு
இணைந்திவை மூன்றுக்கு எடுத்தகுறி ஒன்றே"

- பதினெண் சித்தர் நாடி சாஸ்திரம்

Vali = Abanan + Idagalai
Azhal = Piranan + Pinkalai
Iyyam = Samanan + Suzhimunai

I.VALI (VATHAM) :

a) THE NATURE OF VALI :

Vali is soft, fine and the temperature (coolness and hotness) could be felt by touch.

b) SITES OF VALI :

"நெளிந்திட்ட வாதமபானத்தைப் பற்றி
நிறைந்திடையைச் சேர்ந்துந்திக் கீழே நின்று
குளிந்திட்ட மூடமதூா டெழுந்து காமக்
கோடியிடையைப் பற்றியெழுங் குணத்தைப் பாரே
குணமான வெலும்பைமேற் றொக்கை நாடி
நிணமான பொருத்திடமும் ரோமக் காலும்
நிறைவாகி மாங்கிசமெல் லாம்பரந்து"

- வைத்திய சதகம்

According to Vaithya sathakam, vali dwells in the following places: They are Umbilicus, rectum, faecal matters, abdomen, anus, bones, hip joint, navel plexus, joints, hair follicle and muscles.

"அறிந்திடும் வாத மடங்கு மலத்தினில்"

- திருமூலர்

"நாமென்ற வாதத்துக் கிருப்பிடமே கேளாய்
நாபிக்குக் கீழென்று நவில லாகும்"

- யூகி முனிவர்

According to Sage Thirumoolar and Yugi muni, the places of vatham are the anus and below the naval region.

c) THE PROPERTIES OF VALI :

ஓய்விலே தாதேழ் மூச்சோங்கி இயங்க
எழுச்சிபெற எப்பணியுமாற்ற எழுந்திரிய
வேகம் புலன்களுக்கு மேவச் சுறுசுறுப்பு
வாகளிக்கும் மாந்தர்க்கு வாயு"

- சித்த மருத்துவாங்க சுருக்கம்

d) THE FUNCTIONS OF VALI :

1. To stimulate the respiration
2. To activate the body, mind and the intellect.
3. To expel the fourteen different types of natural reflexes.
4. To activate seven physical constituents in functional co- ordination.
5. To strengthen the five sense organs.

In the above process vatham plays a vital role to assist the body functions.

II. AZHAL (PITHAM) :

a) THE NATURE OF AZHAL :

The nature of Azhal is atomic. It is sharp and hot. The ghee becomes watery, salt crystallizes and jaggery melts because of heat. The heat of Azhal is responsible for many actions and their reactions.

b) SITES OF AZHAL :

According to vaithiya sathagam, the pingalai, urinary bladder, stomach, stomach and heart are the places where Azhal sustains. In addition to the above places, the umbilicus, epigastria region, stomach, sweat, saliva, blood, essence of food, eyes and skin are also the places where Azhal sustains. Yugi muni says that the Azhal sustains in urine and the places below the neck.

c) THE PROPERTIES OF AZHAL :

Azhal is responsible for the digestion, vision, maintenance, of the body temperature, hunger, thirst, taste etc. Its other functions include thought, knowledge, strength and softness.

d) THE FUNCTIONS OF AZHAL :

1. Maintenance of body temperature.
2. Produces reddish or yellowish colour of the body.
3. Produce heat energy on digestion of food.
4. Produces sweating.
5. Induces giddiness.
6. Produces blood and the excess blood are let out.
7. Gives yellowish coloration to the skin, eyes, faeces and urine
8. Produce anger, heat, burning sensation, inaction and determination.
9. Gives bitter or sour taste.

e) THE TYPES OF AZHAL :

1. Aakkanaal - Anala pitham or Pasaka pitham - The fire of digestion.

It lies between the stomach and the intestine and causes digestion and dries up the moist ingested substance.

2. Vanna eri – Ranjaga pitham - Blood promoting fire

The fire lies in the stomach and gives red colour to the chyme and produces blood. It improves blood.

3. Aatralanki – Saathaga pitham – The fire of energy.

It gives energy to do the work.

4. Nokku Azhal – Alosaga pitham – The fire of Vision.

It lies in the eyes and causes the faculty of vision. It helps to visualize things.

5. Ul oli thee – Prasaka pitham – The fire of brightness.

It gives colour, complexion and brightness to the skin.

III. IYYAM (KABAM) :

a) THE NATURE OF IYYAM :

Greasy, cool, dull, viscous, soft and compact are the nature of Iyyam.

b) THE SITES OF IYYAM :

Head, tongue, eyes, nose, throat, thorax, bone, bone marrow, joints, blood, fat, sperm and colon are the seats of Iyyam. It also lies in the stomach, spleen, the pancreas, chyle and lymph.

c) THE PROPERTIES OF IYYAM :

Stability, greasiness, formation of joints, the ability to withstand hunger, thirst, sorrow and distress are the qualities. It also helps to withstand sufferings.

d) THE FUNCTIONS OF IYYAM :

Greasiness, strength, roughness, knowledge, cool, growth, heaviness of bone, restriction of joint movements, pallor, indigestion, deep sleep and to have a sweet taste in tongue are the function of Iyyam. The skin, eyes, faces and urine are white in colour due to the influence of Iyyam.

e) THE TYPES OF IYYAM :

1. Ali iyyam - Avalambagam

Heart is the seat of Avalambagam. It controls all other types of Iyyam.

2. Neerpi iyyam - Kilethagam:

Its location is stomach. It gives moisture & softness to the ingested food.

3. Suvai kaan iyyam - Pothagam:

Its location is tongue. It is responsible for the sense of taste.

4. Niraivu iyyam - Tharpagam

It gives coolness to the vision.

5. Ondri iyyam - Santhigam

It gives lubrication to the bones particularly in the joints.

THE UDAL THATHUKKAL (PHYSICAL CONSTITUENTS):

Udal Thathukkal is the basic physical constituents of the body. They are also constituted by the Five Elements.

1. **Saaram** : This gives mental and physical perseverance.
2. **Senneer** : Imparts colour to the body and nourishes the body
3. **Oon** : It gives shape to the body according to the physical activity and cover the bones.
4. **Kozhuppu** : It lubricates the joints and other parts of the body to function smoothly.
5. **Enbu** : Supports the frame and responsible for the postures and movements of the body.
6. **Moolai** : It occupies the medulla of the bones and gives strength and softness to them.
7. **Sukkilam / Suronitham** : It is responsible for reproduction. These are the seven basic constituents that form the Physical Body. The Bones are predominantly formed by the Earth component, but other elements are also present in it. All the three humours Vali, Azhal and Iyyam present in this 7 constituents.

The intake food converted to udal thaadhu in which the intake food is converted to saaram in the first day, and then it converted to chenkeer in the second day, oon, kozhuppu, enbu, moolai and sukkilam/ Suronitham respectively in the following days. So in the seventh day only the intake food goes to the sukkilam/suronitham.

UDAL THEE (FOUR KINDS OF BODY FIRE) :

There are four kinds of body fire. They are Samaakkini, Vishamaakkini, Deekshaakkini and Manthaakkini.

1. SAMAAKKINI (BALANCED DIGESTIVE FIRE):

The digestive fire is called as Samaakkini. This is constituted by Samana Vayu, Anala Pitham and Kilethaga Kapham. If they are in normal proportion then it is called as Samaakkini. It is responsible for the normal digestion of the food.

2. VISHAMAAKKINI (TOXIC DIGESTION) :

Due to deranged and displaced Samana Vayu, it takes a longer time for digestion of normal food. It is responsible for the indigestion due to slow digestion.

3. DEEKSHAAKKINI (ACCENTUATED DIGESTION) :

The samana vayu rounds up the Azhal, which leads to increased Anala Pitham, so food is digested faster.

4. MANTHAAKKINI (SLUGGISH DIGESTION) :

The samana vayu rounds up the Iyyam, which leads to increased KilethagaKapham. Therefore food is poorly digested for a very longer period and leads to abdominal pain, distention heaviness of the body etc.

THINAI :

There are five thinai (The Land)

1. **Kurinchi** - Mountain
2. **Mullai** - Forest
3. **Marudham** - Agricultural land
4. **Neidhal** - The coastal area
5. **Paalai** - Desert

FEATURES OF THE FIVE REGIONS :

1. KURINCHI :

"குறிஞ்சி வருநிலத்திற்கு கொற்றமுண்டி ரத்தம்
உறிஞ்சி வருசுரமு முண்டாம் - அறிஞருரைக்கஅனை
கையமே தங்குதரா தாமைவல்லை யுங்கதிக்குமட
ஐயமே தங்கும் அறி"

- பதார்த்த குண சிந்தாமணி

Fever causing anemia, any abnormal enlargement in the abdominal organ (vaitrul aamai katti) also leads to Iyya disease.

2. MULLAI :

"முல்லை நிலத்தயமே மூரிநிரை மேவினுமவ்
வெல்லை நிலைத்தபித்த மெங்குறுங்காண் - வல்லை யெனின்
வாதமொழி யாததனுள் மன்னு மவைவழிநோய்ப்
பேதமொழி யாதறையப் பின்பு"

- பதார்த்த குண சிந்தாமணி

This mullai land leads to Azhal, Vallai & Vali diseases

3. MARUDHAM :

"மருதநிலம் நன்னீர் வளமொன்றைக் கொண்டே
பொருதனில் மாதியநோய் போக்கும் - கருதநிலத்
தாறிரதஞ் சூழ அருந்துவரென் றாற்பிணியெல்
லேறிரதஞ் சூழ்புவிக்கு மில்"

- பதார்த்த குண சிந்தாமணி

All the Vali, Azhal and Iyyam disease will be cured in this land.

4. NEIDHAL :

"நெய்தனில் மேலுப்பை நீங்கா துறியுமது
வெய்தனில் மேதங்கு வீடாகும் - நெய்தல்
மருங்குடலை மிக்காக்கும் வல்லுறுப்பைவீக்கும்
கருங்குடலைக் கீழிறக்குங் காண்"

- பதார்த்த குண சிந்தாமணி

This place induces Vali diseases and affects liver and intestines.

5. PAALAI :

"பாலை நிலம்போற் படரைப் பிறப்பிக்க
மேலநில மியாது விரித்தற்கு - வேலைநில
முப்பிணிக்கும் இல்லம் முறையே யவற்றகலாம்
எப்பிணிக்கு மில்லமஃ தெண்"

- பதார்த்த குண சிந்தாமணி

This land produces all the three Vali, Azhal and Iyyam disease

KAALAM :

Ancient Tamilians had divisions over the year into different seasons know as Perumpozhudhu and likewise in the day, it is known as Sirupozhudhu.

a. PERUMPOZHUDHU:

The year is divided into six seasons. They are,

1. Kaarkalam
2. Koothir
3. Munpani

4. Pin pani
5. Ilavenil
6. Mudhuvenil

b. SIRUPOZHUDHU:

The day has been divided into six yamams of four hours each. They are maalai (evening), Idaiyammam (Midnight), Vaikarai (Dawn), Kaalai (Morning), Nannpakal (Noon), Erpaddu (Afternoon). The each perumpozhuthu and sirupozhuthu is associated with the three humours naturally.

FOURTEEN NATURAL REFLEXES / URGES :

The natural reflexes excretory, protective and preventive mechanisms are responsible for the urges and instincts. They are 14 in number,

1. Vatham (Flatus)
2. Thummam (Sneezing)
3. Siruneer (Micturition)
4. Malam (Defecation)
5. Kottavi (Act of yawning)
6. Pasi (Sensation of hunger)
7. Neer vetkai (Sensation of thirst)
8. Erumal (Coughing)
9. Ellaipu (Fatigue)
10. Thookam (Sleep)
11. Vaanthi (Vomiting)
12. Kanneer (Tears)
13. Sukkilam (Semen)
14. Suvasam (Breathing)

These natural reflexes are said to be an indication of normal functioning of our body. A proper maintenance should be carried out and they should not be restrained with force.

THE ASTROLOGY :

MACROCOSM AND MICROCOSM :

Man is said to be microcosm, and the world is macrocosm; because what exist in the world exist in man. Man is an integral part of universal nature. The forces in the microcosm (man) are identical with the forces of the macrocosm (world). The natural forces acting in and through the various organs of the body are intimately related to the similar or corresponding forces acting in and through the organism of the world. This closely follows the Siddhars doctrine.

"அண்டத்தி லுள்ளதே பிண்டம்
பிண்டத்தி லுள்ளதே அண்டம்
அண்டமும் பிண்டமு மொன்றே
அறிந்து தான் பார்க்கும் போது"

- சட்டமுனி ஞானம்

ASTRAL INFLUENCES

All influences that come from the sun, planets and stars act on humanbodies. Moon exercises a very bad influence over the disease in general, especially during the period of new moon. Examples are paralysis, brain affections, dropsy, and stimulation of sexual passions. Mars causes women's suffering from want of blood and nervous strength. A conjunction of the moon with other planets such as Venus, Mars, etc may make her influence still more injurious. The 8th place from the laghanam deals about ones age, chronic disease, death etc.

“சூரணாம் காலமிருத்தியோடு எட்டாம்
துறைலக்கினாதியும் கூடிடில்
பாரமாம் கல்லாகினும் இடியேனும்
பட்டு இறந்திடுவான் மற்றின்னம்
சேரவே அட்டமதி நீசத்தில்
செறிந்து பன்னிரண்டு று எட்டில்
வீரமாம் கருங்கோள் நோக்கவே குன்ம
வியாதியாட் வியமடைந்திடுவன்”

- சோதிட அலங்காரம்

In the organisms of man, these forces may act in an abnormal manner and cause disease. Similarly in the great organism of the cosmos they may act abnormally likewise and bring about disease on earth and its atmospheric condition like earthquake, storms etc. The Mars invisibly influence human's blood constituents. The Venus makes love between two persons of the opposite sex. The following are the instances in which every sign of the Zodiac hastowards some particular parts of the body.

1.ACCORDING TO T.V.S DICTIONARY

1. Aries - To the neck
2. Taurus - Neck and shoulder
3. Gemini - Arms and hands
4. Cancer - Chest and adjacent parts.
5. Leo - The heart and stomach
6. Virgo - The intestine, base of stomach and umbilicus

7. Libra - Kidney
8. Scorpio - Genitals
9. Sagittarius - Lips
10. Capricorns - Knees
11. Aquarius - Legs
12. Pisces – Feet

2. ACCORDING TO LITERATURE THIRUVALLUVAR PERIYA SUNTHARA SEKARAM :

1. Mesam - Head
2. Risabam - Face
3. Mithunam - Neck
4. Kadagam - Shoulder
5. Simmam - Chest
6. Kanni - Side of body
7. Thulam - Posterior trunk (muthugu), stomach
8. Virutchigam - Testis
9. Thanusu - Thigh (thudai)
10. Magaram - Knee
11. Kumbam - Calcaneum
12. Meenam – Foot

THE DIFFERENT PLANETS INFLUENCE THE HUMAN ORGAN :

1. ACCORDING TO LITERATURE SIDDHA MARUTHUVANGA SURUKKAM:

Like the signs of the zodiac each of the planets has jurisdiction over some parts of the body. The seven planets exercise special power over some parts of the body to cause disease or diseases according to their influences on the three humors in the system:

i. SATURN :

It presides over bones, teeth, cartilages, ear, spleen, bladder and brain and gives rise to fever, leprosy, tabes, paralysis, dropsy, cancer, cough, asthma, phthisis, deafness of the right ear, hernia, etc.

ii. JUPITER :

It has jurisdiction over the blood, liver, pulmonary veins, diaphragm, muscles of the trunk and sense of touch and smell.

iii. MARS :

It has power over the bile, gall bladder, left ear, pudendum, kidneys, fever, jaundice, convulsions, hemorrhage, carbuncle, erysipelas, ulcer etc.

iv. VENUS :

It presides over the pituitous blood and semen, throat, breast, abdomen, uterus, genitalia, taste, smell, pleasurable sensation, gonorrhoea, barrenness abscesses or even death from sexual or poison.

v. MERCURY :

It has jurisdiction over the animal, spirit, over legs, feet, hands, fingers, tongue, nerves and ligaments and produces fevers mania, phrenitis, epilepsy, convulsion, profuse expectoration or even death by poison, witchcraft and so on.

Planets Organ influenced

1. Solar force Heart
2. Lunar force Brain
3. Mars Gall Bladder
4. Mercury Kidney
5. Venus Lungs
6. Jupiter Liver
7. Saturn Spleen

2. ACCORDING TO LITERATURE THIRUVALLUVAR PERIYA SUNTHARA SEKARAM :

1. Sooriyan Head
2. Santhiran Face
3. Sevvai Chest

4. Puthan Center of posterior trunk
5. Guru Stomach
6. Sukkiran Groin, Genitalia
7. Sani Thigh (Thudai)
8. Raagu Hands
9. Kedhu Legs

The related Rasi and the organs, like wise the related Kiragam and organs are more prone to disease in their corresponding organ itself. Therefore, the human body is impregnated with the vital forces to be affected by the astronomical bodies in the sky. With the augmented spiritual force, a sage is able to control the above said planets. The others are activated by the force of these asteroids.

3.2. SIDDHA PATHOLOGY

KUGARANA NILAI IN SIDDHA MEDICINE

This is the first medical system to emphasize health as the perfect state of physical, psychological, social and spiritual component of human being. The condition of the human body in which the dietary habits, daily activities and the environmental influence keep the three humors in equilibrium is considered as healthy living.

DISEASE

Disease is also known by other names viz sickness, distemper, suffering and ailment, distress of mind, chronic disease and dreadful illness.

THE CHARACTERISTICS FEATURE OF DISEASE

Diseases are of two kinds

- i. Pertaining to the body
- ii. Pertaining to the mind according to the variation of the three humors.

CAUSES OF DISEASE

Excepting the disease caused by our previous births, the disease is normally caused by our food habits and actions. This has been rightly quoted in the following verses by Sage Thiruvalluvar,

**மிகினுங் குறையினும் நோய்செய்யும் நூலோர்
வளிமுதலா வெண்ணிய மூன்று.**

The food and actions of a person should be in harmony with the nature of his body. Any increase or decrease in a humor viz. Vatham, Pitham, Kabam leads to the derangement of the three humors. The acceptance of food means the taste and quality of the food eaten and a person's ability to digest. "Actions" mean his good words, deeds or bad actions. According to Thiruvalluvar, the disease is caused due to the increase or decrease of three humors causing the upset of equilibrium.

So disease is a condition in which there is derangement in the five elements, which alters the three humors, reflected in turn in the seven physical constituents. The change could be an increase or decrease in the humors. This shows the following signs as per vitiation of the individual humor.

Table 1. Changes of Uyir Thathukkal

HUMOUR	INCREASED	DECREASED
VALI (Vatham)	Wasting, blackish discoloration, affinity to hot foods, tremors, distended abdomen, constipation, weakness, insomnia, weakness in sense organs, giddiness and laziness.	Body pain, feeble voice, and diminished capability of the brain, decreased intellectual Quotient, syncope and increased kaba condition.
AZHAL (Pitham)	Yellowish discoloration of conjunctiva, skin, urine and feces, polyphagia, polydypsia, dyspepsia, burning sensation all over the body and decreased sleep.	Loss of appetite, cold, pallor and features of increased kabam.
IYYAM (Kabam)	Loss of appetite, excessive salivation, diminished activity, heaviness, pallor, cold, decreased physical constituents, dyspnea, flatulence, cough and excessive sleep.	Giddiness, dryness of the joints and prominence of bones. Profuse sweating in the hair follicles and palpitation.

Table - 2 Changes of Udal Thathukkal

UDAL THATHUKKAL	INCREASED FEATURES	DECREASED FEATURES
SAARAM	Loss of appetite, excessive salivation, diminished activity, heaviness, pallor, cold, decreased physical constituents, dyspnea, flatulence, cough and excessive Sleep.	Dryness of skin, tiredness, loss of weight, lassitude and Irritability while hearing louder sounds.
SENNEER	Boils in different parts of the body, splenomegaly, tumors, pricking pain, loss of appetite, haematuria, hypertension, reddish eye and skin, leprosy and jaundice.	Affinity to sour and cold food, nervous, debility, dryness and Pallor.
OON	Tubercular adenitis, venereal diseases, extra growth around neck, cheeks, abdomen, thigh and genitalia.	Lethargic sense organs, pain in joints, muscle wasting in mandibular region, gluteal region, penis and thighs.
KOZHUPPU	Identical feature of increased flesh, tiredness, dyspnea on exertion, extra musculature in gluteal region, external genitalia, chest, abdomen and thighs.	Loins pain, splenomegaly and emaciation.

ENBU	Excessive ossification and dentition	Joint pain, falling of teeth, falling and splitting of hairs and nails.
MOOLAI	Heaviness of the body and eyes, swollen Inter phalangeal joints, oliguria and non-healing ulcers.	Osteoporosis and Blurred vision.
SUKKILAM (OR) SURONITHAM	Increased sexual activity, urinary calculi	Dribbling of sukkilam / suronitham or senner during coitus, pricking pain in the testis and inflamed & contused external genitalia.

Imbalance of tastes resulting in diseases

Tastes	Diseases due to high intake
Enippu	Develops obesity, excessive fat, increased mucous secretion, indigestion, diabetes, cervical adenitis, increased kabam and its diseases
Pulippu	Develops nervous weakness, dull vision, giddiness, anemia, dropsy, dryness of tongue, acne, blisters etc.
Uppu	Ageing, hair loss, leprosy, dryness of tongue, debility
Kaippu	Increased dryness of tongue, defected Spermatogenesis, body weakness, dyspnoea lassitude, tremor, back and hip pain.
Kaarppu	Dryness of tongue, generalized malaise, tremor, back pain, lassitude etc.
Thuvarppu	Abdominal discomfort, chest pain, tiredness, impotency, vascular constriction, constipation, dryness of tongue etc.

Table - 3 Changes of Mukkuttram with Kaalam

KAALAM (Season)	KUTTRAM	STATE OF KUTTRAM
1. Kaar kaalam (Rainy) Aavani – Puratasi (Aug 16 – Oct 15)	Vatham ↑↑ Pitham ↑ Kabam (--)	Ectopic escalation In situ escalation Restitution
2. Koothir Kaalam (Post rainy) Iypasi – Karthigai (Oct 16 – Dec 15)	Vatham (--) Pitham ↑↑ Kabam (--)	Restitution Ectopic escalation Restitution
3. Munpani Kaalam (Winter) Markazhi – Thai (Dec 16 – Feb 15)	Vatham (--) Pitham (--) Kabam (--)	Restitution Restitution Restitution
4. Pinpani Kaalam (Post winter) Masi – Panguni (Feb 16 – Apr 15)	Vatham (--) Pitham (--) Kabam ↑↑	Restitution Restitution In situ escalation
5. Elavenir Kaalam (Summer) Chithirai – Vaikasi (Apr 16 – Jun 15)	Vatham (--) Pitham (--) Kabam ↑↑	Restitution Restitution Ectopic escalation
6. Mudhuvener Kaalam (Post summer) Aani – Aadi (Jun 16 – Aug 15)	Vatham ↑ Kabam (--)	In situ escalation Restitution

Table 4. Changes of Mukkuttram with Thinai

THINAI	LAND	HUMORS
1. Kurinchi	Mountain and its surroundings - Hilly terrain	Kabam
2. Mullai	Forest and its surroundings - Forest ranges	Pitham
3. Marutham	Farm land and its surroundings - Cultivable lands	All three humors are in Equilibrium
4. Neithal	Sea shore and its adjoining areas, Coastal belt	Vadham
5. Paalai	Desert and its surroundings Arid zone	All three humors are Affected

ALTERATION IN REFLEXES (14 Vegangal)

There are 14 natural reflexes involved in the physiology of normal human being. If willfully restrained or suppressed, the following are resulted.

1. Vatham (Flatus)

This urge should not be suppressed. If it is suppressed it leads to chest pain, epigastric pain. Abdominal pain, ache, constipation, dysuria and indigestion predominate.

2. Thummal (Sneezing)

If restrained, it leads to headache, facial pain, low back pain and neurotic pain in the sense organs.

3. Siruneer (Urine)

If restrained, it leads to urinary retention, urethral ulcer, joint pain, pain in the penis, gas formation in abdomen.

4. Malam (Feces)

If restrained, it leads to pain in the knee joints, headache, general weakness, flatulence and other diseases may also originate.

5. Kottavi (Yawning)

If restrained, it leads to indigestion, leucorrhoea, and abdominal disorders.

6. Pasi (Hunger)

If restrained, it leads to the tiredness of all organs, emaciation, syncope, apathetic face and joint pain.

7. Neer vetkai (Thirst)

If restrained, it leads to the affection of all organs and pain may supervene.

8. Kaasam (Cough)

If it is restrained, severe cough, bad breath and heart diseases will be resulted.

9. Ilaippu (Exhaustiveness)

If restrained, it will lead to fainting, urinary disorders and rigor.

10. Nithirai (Sleep)

All organs will get rest only during sleep. So it should not be avoided. Disturbance will lead to headache, pain in the eyes, deafness and slurred speech.

11. Vaanthi (Vomiting)

If restrained, it leads to itching and symptoms of increased Pitham.

12. Kanneer (Tears)

If it is restrained, it will lead to Sinusitis, headache, eye diseases and Chest pain.

13. Sukkilam (Semen)

If it is restrained, there will be joint pain, difficulty in urination, fever and chest pain.

14. Suvasam (Breathing)

If it is restrained, there will be cough, abdominal discomfort and Anorexia.

3.3. DIAGNOSTIC METHODOLOGY IN SIDDHA

The methodology of diagnosing disease in Siddha system shows uniqueness in its principle. The principle comprises of examination of Tongue, Complexion, Modulation in speech, inspection of eyes and findings by palpation. It also includes examination of Urine and Stool. The reinforcement of Diagnosis is based on Naadi (Pulse) examination. All these together constitute „Envagai thervugal which form the basis of diagnostic methodology in Siddha system of Medicine. These stools not only help in diagnosis but also to observe the prognosis of the disease and for reassuring the patient and to be informed about the nature of diseases. Besides these Envagai thervugal there are some other parameters in Siddha system which are greatly helpful in diagnosing various disease, they are Madikadai nool (Wrist circummetric sign) and Soditham (Astrology).

ENVAGAI THERVUGAL (Eight fold examination)

“நாடி பரிசம் நாநிறம் மொழிவிழி

மலம் மூத்திரம் மருத்துவராயுதம்”

“மெய்குறி நிறதொனி விழிநாவிருமலம் கைக்குறி”

-தேரையர்

The eight methods of diagnosis are Naadi (Pulse), Sparisam (Palpation), Naa (Tongue), Niram (Color), Mozhi (Voice), Vizhi (Eyes), Malam (Feces) and Neer (Urine).

NAADI (Examination of pulse)

The pulse Diagnosis is a unique method in Siddha Medicine. The pulse should be examined in the right hand for male and the left hand for female. The pulse can be recorded at the radial artery. By keenly observing the pulsation, the diagnosis of disease as well as its prognosis can be assessed clearly. Naadi is nothing but the manifestation of the vital energy that sustains the life with in our body. Naadi plays an most important role in Envagai thervu and it has been considered as foremost thing in assessing the prognosis and diagnosis of various diseases. Any variation that occurs in the three humors is reflected in the Naadi.

These three humors organize, regularize and integrate basic functions of the human body.
So Naadi serves as good indicator of all ailments.

நாடி பார்க்கும் வகை

"இடுமென்ற நாடிகள்பார்க்கும் வகையைக் கேளு
என்னவென்றால் நடுவிரல் நீவிப்பின்னே
அடுமென்ற அடுத்தவிரல் மோதிரமாம் விரலை
அப்பனே இழுத்தபின்பு சுண்டுவிரலிழுத்து
உடுமென்ற தூண்டுவிர லிழுத்து அப்பால்
உத்ததொரு அங்குட்ட விரலைநீ விக்கரத்தில்
படுமென்ற சீயோதி அங்குலமோ தள்ளி
பார்தவிட மூன்றுதரம் சுரம்பார்க்கும் வகையே
வகைஎன்ன வாதமது ஒண்ணரையாம் பித்தம்
வளமையொன்று அய்யங்கால் வளமாய்நிற்கில்
பகையில்லை நாடிகளுந் தொந்த மில்லை
பண்பான்சுகரொசருருபக் கூறுசொன்னேன்"

-அகத்தியர் கனக மணி 100

Naadi is felt by

Vali - Tip of index finger

Azhal - Tip of middle finger

Iyyam - Tip of ring finger

மூவகையும் மாத்திரை அளவும்

"வழங்கிய வாதம் மாத்திரை ஒன்றாகில்
வழங்கிய பித்தம் தன்னில் அரைவாசி
அழங்கும் கபந்தான் அடங்கியே காலோடில்
பிழங்கிய சீவர்க்குப் பிசுகொன்று மில்லையே"

-நோய் நாடல் முதல் பாகம்

The pulse is measured in wheat/grain expansile heights. The normal unit of pulse diagnosis is 1 for Vali (Vaadham), ½ for Azhal (Pitham) and ¼ for Iyyam

(Kabam).

நாடி நடை

“வாகிலன்னங் கோழி மயிலென நடக்கும் வாதம்
ஏகிய வாமையட்டை யிவையென நடக்கும் பித்தம்
போகிய தவளை பாம்பு போலவாம் சேத்துமந்தான்”
-நோய்நாடல் முதல் பாகம்

Compared to the gait of various animals, reptiles and birds.

Vali - Movement of Swan and peacock

Azhal - Movement of Tortoise and Leech

Iyyam - Movement of Frog and Serpent

SPARISAM (Examination by touch)

நேயமுடனே வாதத்தின் தேசந்தானும்

நேர்மையாய்க் குளிர்ந்து சில விடத்திலே தான்

மாயமுடனு ட்டணமுந் துடிதுடிப்பு

மறுவுதலாம் பித்தத்தின் தேகந் தானும்

தோயவே வுட்டணமதாயிருக்குந் தெளிவாய்

சேத்துமத்தின் தேகமது குளிர்ந்திருக்கும்

பாய தொந்த தேகமது பலவாறாகும்

பரிந்து தொட்டுத் தேகத்தைப் பார்த்துப் பேசே

-கண்ணுசாமி பரம்பரை வைத்தியம்

- ❖ In Vali disease, some regions of the body felt chill and in some areas they are hot.
- ❖ In Azhal disease, we can feel heat.
- ❖ In Iyya disease, chillness can be felt.
- ❖ In Thontham diseases, we can feel altered sensations.

NAA (Examination of tongue)

பலமான ரூசியறியும் நாவின் கூற்றைப்
பகர்கின்றேன் வாதரோகி யின்றன் நாவு
கலமாக வெடித்து கறுத்திருக்கு மட்போல்
கண்டு கொள்வாய் பித்தரோகியின்றன் நாவு
நலமுற சிவந்து பச்சென்றிறுக்கும் நட்பிலா
சிலேத்துமரோகி யின்றன் நாவு
தலமதனிலுற்றமுதி யோர்கள் சொன்ன
தன்மையடி தடித்து வெளுத்திருக்கும்பாரே
-கண்ணுசாமி பரம்பரை வைத்தியம்

- ❖ In Vali derangement, tongue will be cold, rough, furrowed and tastes pungent.
- ❖ In Azhal, it will be red or yellow and bitter taste will be sensed.
- ❖ In Iyyam, it is pale, sticky and sweet taste will be lingering.
- ❖ In depletion of Thontham, tongue will be dark with raised papillae and dryness.

NIRAM (Examination of complexion)

மூன்றாகும் வாதபித்த சிலேத்து மத்தால்
மிருந்தமுறத் தொந்தித்த ரோகி தேகம்
தோன்றாத சீதய வுஷ்ணங் காலமூன்றுந்
தொகுத்தேன்யான் திரேகத்தி னிறத்தைக் கேளு
ஊன்றாத வாதவுடல் கறுத்துக் காணும்
ஊரியபித்த முடல் சிவப்புப் பசுமைகாணும்
போன்றாத வையவுடல் வெண்மை தோன்றும்
பொருந்துந் தொந்த ரோகவுடற் கிவற்றை யொக்கும்
-கண்ணுசாமி பரம்பரை வைத்தியம்

In Vali, Azhal and Iyyam variations, the colour of the body will be dark, yellow or red and fair respectively.

VIZHI (Examination of Eyes)

*உண்மையாய் கண்குறிப்பதைக் கேள் வாதம்
உற்றவிழி கறுத்துநொந்து நீறுங் காணும்
தண்மையிலாப் பித்தரோகி யின்றன் கண்கள்
சார்பாகப் பசுமைசிவப் பேறுங்காணும்
வண்மையிலா வையரோகி விழிகள் தானும்
வளமான வெண்மைநிற மேதா நாதம்
திண்மையிலாத் தொந்தரோகி யின்றன் கண்கள்
தீட்டுவாய் பலநிறமென் றறைய லாமே
-கண்ணுசாமி பரம்பரை வைத்தியம்

- ❖ In Vali disease the tears are darkened.
- ❖ In Azhal disease tears are yellow.
- ❖ In Iyya disease tears are whitish in colour
- ❖ In Thontha disease the tears are multi coloured.
- ❖ In Vali disease there will be excessive tears (epiphora).
- ❖ In disturbance of all three humors, eyes will be inflamed and reddish.

MOZHI (Examination of voice)

பார்ப்பதான் வாதரோகி யின்றன் வார்த்தை
பக்குவமாய்ச் சமசத்த மாயிருக்கும்
சேர்ப்பதுதான் பித்தரோகியின்றன் வார்த்தை
செப்பக்கோள பெலத்துமே யுறத்திருக்கும்
ஏற்பதுதான் ஐயரோகி யின்றன் வார்த்தை
யெளிதாகச் சிறுத்திருக்குமியல்பதாகும்
கேசற்கவே யிம்மூன்றுந் தொந்தமாகில்
கூசாமற் பலவிதமாய் பேசுவாரே
-கண்ணுசாமி பரம்பரை வைத்தியம்

In variation of Vali, Azhal and Iyyam the voice will be medium, high and shrill / low pitched respectively. By the voice, the strength of the body can be assessed.

MALAM (Examination of feces)

ஓக்குமே வாத நோய் மலத்தைப் பார்க்கில்
உகந்த மலம் கறுகியே கறுத்திறுக்கும்
மிக்கபித்த நோய்மலத்தை யுற்று பார்க்கில்
மிசுந்த சிவப்புடன் பசுமை தானும் தோன்றும்
மைசுவளை மாணேகே ளைய ரோகம்
மலமதுதான் வெண்மைனிற மாயிறுக்கும்
பக்குவமா யிம்மூன்றுந் தொந்திப் பாகில்
பகருமின் நிறங்கள் வகை பரிந்து காணும்
- கண்ணுசாமி பரம்பரை வைத்தியம்

- ❖ In excacerbated Vali, faces is hard, dry and black in colour.
- ❖ In Azhal vitiation, it is yellow.
- ❖ In Iyyam disturbances it is pale.
- ❖ In Thondham, it is mixture of all colours.

MOOTHIRAM (Examination of urine)

ஓங்கிய வாதத்தோர்க்கு நீர்விழுங் குணந்தா நுரைக்கின்ற
பூங்கொடி கறுத்து நொந்து சிறுத்துடன் பொருமி வீழும்
பாங்குடன் பித்தததோர்க்கும் பசிய நீர் சிவந்து காட்டி
ஏங்கவே கறுக்கதாக ளரித்துடன் கடுத்து வீழும்
வீழுமே சிலேற்பனத்தோர் நீர்க்குணம் விளம்பக் கேளாய்
நாளுமே வெளுத்துறைந்து நலம்பெற வீழுங் கண்டாய்
வாள்விழி மாணேதொந்த ரோகமானிடர்க்குந் தானே
தாளுநீர் பலநிறந்தா னெனவே சாற்றி னோமே
-கண்ணுசாமி பரம்பரை வைத்தியம்

- ❖ In Vali disease the urine is darkened.
- ❖ In Azhal disease it is reddish in colour.
- ❖ In Iyya disease it is whitish in colour.
- ❖ In Thontha disease it is multi coloured.

தேரர் நீர்குறி, நெய்குறி

"அருந்துமாறிரதமும் அவிரோதமதாய்
அஃகல் அலர்தல் அகாலவூன் தவிர்ந்தழற்
குற்றளவருந்தி உறங்கி வைகறை
ஆடிக்கலசத் தாவியே காது பெய்
தொருமுகூர்த்தக் கலைக்குட்படு நீரின்
நிறக்குறி நெய்க்குறி நிறுமித்தல் கடனே"
- தேரையர்

Theraiyar, one of the renowned authors of Siddha medicine described urine examination and stages of health. He had explained about the colour and consistency of the urine in vitiated humor and disease (Neerkuri). He also emphasized the spreading nature of a single drop of oil on the surface of the urine indicating the imbalance of specific dosha and prognosis of disease (Neikkuri).

Neerkuri

"வந்த நீர்க்கரி எடை மணம் நுரை எஞ்சலென்
றைந்தியலுளவவை யறைகுது முறையே"

Five characters of urine has to be examined. Those are colour, consistency, odour, foam and deposits.

Colour of the urine

Normal urine is straw colored and odourless. The time of the day and food taken will have an impact on the colour of the urine.

Colour of the urine in diseased condition Yellow colour (Similar to straw soaked water)	- Indigestion
Lemon colour	- Good digestion
Reddish yellow	- Heat in body
Colour similar to flame of forest red or flame coloured	- Excessive heat
Colour of saffron	- Extreme heat

Neikkuri

அரவென நீண்டின.:கே வாதம்

ஆழிபோல் பரவின் அ.:தே பித்தம்

முத்தொத்து நிற்கின் மொழிவதன் கபமே

-தேரன் நீர்குறி நெய்குறி

The spreading pattern of oil drop is the indicative of Vali, Azhal and Iyyam diseases.

Aravu (Snake Pattern of spread) indicates Vali disease,

Aazhi (Ring Pattern of spread) indicates Azhal disease.

Muthu (Pearl Pattern of spread) indicates Iyya disease.

In Neikkuri, the rapid spread of oil drop; Pearl beaded and Sieve type of spreading pattern indicates incurable state of the disease. From this, we can assess the prognosis by the Neikkuri.

Indications of spreading pattern of oil

Lengthening	-	Vali
Splits	-	Azhal
Sieve	-	Iyyam

Stands as a drop	-	Poor prognosis
Slowly spreads	-	Good prognosis
Drop immerses into Urine	-	ncurable disease

Manikadai nool inference

(Ref: Agathiyar soodamanikayaru soothiram)

When the Manikkadai nool is 11 fbs, the person will be stout and he will live a healthy life for many years. When the Manikkadai nool measures between 4 & 6, it indicates poor prognosis of disease and the severity of the illness will be high and it leads to death.

Measurement Possible conditions

- 10 fbs Pricking pain in chest and limbs, gastritis and ulcer result.
- 9 $\frac{3}{4}$ fbs Fissure, dryness and cough will be resulted.
- 9 $\frac{1}{2}$ fbs Odema, increased body heat, burning sensation of eye, fever, Mega noi & Anorexia.
- 9 $\frac{1}{4}$ fbs Dysuria, Insomnia, Sinusitis and Burning sensation of Eye.
- 9 fbs Impaired hearing, pain around waist, thigh pain, unable to walk.
- 8 $\frac{3}{4}$ fbs Increased body heat, skin disease due to toxins, abdominal discomfort, cataract, sinusitis.
- 8 $\frac{1}{2}$ fbs Leucorrhoea, venereal disorder and Infertility will occur.
- 8 $\frac{1}{4}$ fbs Stout and painful body. Headache, Sinusitis and toxins induced Cough.
- 8 fbs Abdominal discomfort, gastritis, anorexia & venereal diseases.
- 7 $\frac{3}{4}$ fbs Piles, burning sensation of limbs, headache, numbness occur. Within 2 years cervical adenitis and epistaxis results.
- 7 $\frac{1}{2}$ fbs Osteoporosis, abdominal discomfort, burning sensation of eyes, increased body temperature. Within 6 days all the joints of the limbs presents a swelling.
- 7 $\frac{1}{4}$ fbs Lumbar pain, increased pitha in head, anemia, eye pain, odema and somnolence
- 7 fbs Pitham ascends to head, haemetemesis, phlegm, burning sensation of limbs and constipation.
- 6 $\frac{3}{4}$ fbs Eye ache, dizziness, testis disorder. Within 3 years it causes anuria, pain and burning sensation over limbs, facial sweating results.
- 6 $\frac{1}{2}$ fbs Thirst, anorexia, increased body heat and vatham results.
- 6 $\frac{1}{4}$ fbs Diarrhea, belching, vomiting and mucous dysentery
- 6 fbs Reduced weight, phlegm in chest. It results in death within 20 days.
- 5 $\frac{3}{4}$ fbs Delirium, dizziness, loss of consciousness. It results in death even if the patient takes gruel diet
- 5 $\frac{1}{2}$ fbs Severity of illness is increased. Toxins spread to the head. Tooth darkens. Patient will die in 10 days.
- 5 $\frac{1}{4}$ fbs Patient seems to be sleepy and death results on the next day.
- 5 fbs Pallor and dryness of the body. Kabam engorges the throat and the person will die.

4 $\frac{3}{4}$ fbs Dryness of tongue and tremor present. Patient will die in 7 days.

4 $\frac{1}{2}$ fbs Shrunken eyes, odema will present and death results in 9 days.

4 $\frac{1}{4}$ fbs Tremor, weakness of limbs and darkening of face occurs. Finally death results in two days.

4 fbs Pedal odema will be present. Patient will die in 5 days.

**READING BETWEEN
LINES OF MADAKKU
PILAVAI FROM
SIDDHA
MARUTHUVAM TO
MODERN LITERATURE**

**READING BETWEEN THE LINES OF MADAKKU PILAVAI FROM SIDDHA
MARUTHUVAM PHRASES TO MODERN LITERATURE**

மடக்குப் பிளவை

மடக்குப் பிளவை குறித்தன்மை

வருமே கீலில் தசையிடங்கள்

அடிக்கணகன்று சுற்றி யேதான்

அணைகளுயர்ந்து நடுப்பள்ளம்

படவே விசுந்து கருஞ்செம்மைப்

பாங்காய் வியர்வை வலியுண்டாய்

மடக்குக் கவிழ்ந்தாற்போல் வடிவாம்

வருமே நீரும் எனக்கூறே

- சித்த மருத்துவம் .

BREAKUP SYMPTOMOLOGY OF MADAKKU PILAVAI

S.NO	LINES OF POEM	Breakup symptomatology
1.	கீல்	Joints
2.	தசை	Muscles
3.	கணம்	Warmth
4.	கருஞ்செம்மை	Reddish black
5.	வலி	Pain
6.	நீர் வடியும்	Pus discharge

**TABLE-5 MEANING FROM TVS DICTIONARY FOR SIDDHA
MARUTHUVAM**

S.No	SIDDHA MARUTHUVAM	T V SAMBASIVAM BILLAI DICTIONARY MEANING IN TAMIL	TV SAMBASIVAM BILLAI DICTIONARY IN ENGLISH	LEXICON.REF
1.	கீல்	உடல் பொருத்துகள்	Joints	1471 Vol – II
2.	தசை	மாயிசம்	Muscles	777 Vol – IV
3.	கணககுழ்	காந்தல், உடல் சூடாயிருத்தல்	Warmth	1008 Vol – II
4.	கருஞ்செம்மை	கருப்பு கலந்த செந்நிறம்	Reddish black	1146 Vol – II
5.	வலி	நோவு	Pain	1015 Vol –V
6.	நீர் வடியும்	நீரொழுக்கு	Pus discharge	1877 Vol – IV

**READING BETWEEN LINES OF MADAKKU PILAVAI FROM SIDDHA
MARUTHUVAM TO MODERN LITERATURE**

SIDDHA MARUTHUVAM PHRASES ABOUT MADAKKU PILAVAI

மடக்குப் பிளவை குறித்தன்மை
வருமே கீலில் தசையிடங்கள்

QUOTING FROM MODERN TEXT

“.....Carbuncle present in fleshMuscles
(back, neck, thigh).”

Illustrated synopsis of dermatology and sexuallytransmitted diseases
4th edition 2011, P.No.250

Ramji Gupta-Textbook of dermatology ,3rd edition 2011,pg no 52.

**READING BETWEEN LINES OF MADAKKU PILAVAI FROM SIDDHA
MARUTHUVAM PHRASES TO MODERN LITERATURE**

SIDDHA MARUTHUVAM PHRASES ABOUT MADAKKU PILAVAI

அடிக்கண்கண்டு சுற்றி யேதான்

QUOTING FROM MODERN TEXT

“.....Constitutional symptoms like fever always present.”

*Kasper Braunwald fauci Hauser Longo Jameson Harrison's, Principles of Internal Medicine -volume 1, 16th edition
Illustrated synopsis of dermatology and sexually Transmitted diseases 4th edition 2011, P.No.250*

**READING BETWEEN LINES OF MADAKKU PILAVAI FROM SIDDHA
MARUTHUVAM PHRASES TO MODERN LITERATURE**

SIDDHA MARUTHUVAM PHRASES ABOUT MADAKKU PILAVAI

அணைகளுயர்ந்து நடுப்பள்ளம்

QUOTING FROM MODERN TEXT

“Lobulated and indurated”

Illustrated synopsis of dermatology and sexually transmitted diseases, 4th edition 2011, P.No.250

**READING BETWEEN LINES OF MADAKKU PILAVAI FROM SIDDHA
MARUTHUVAM PHRASES TO MODERN LITERATURE**

SIDDHA MARUTHUVAM PHRASES ABOUT MADAKKU PILAVAI

படவே விசுந்து கருஞ்செம்மை

QUOTING FROM MODERN TEXT

“ Erythematous Plaque.....”

*J S Pasricha.Ramji Gupta–Illustrated textbook of dermatology,3rd
edition,2006*

*Illustrated synopsis of dermatology and sexually transmitted diseases
4th edition 2011, P.No.250.*

SIDDHA MARUTHUVAM ABOUT MADAKKU PILAVAI

பாங்காய் வியர்வை வலியுண்டாய்

QUOTING FROM MODERN TEXT

“.....Lesions excruciatingly Painful .”

*R C Gharami–Clinical dermatology,2nd edition–2014,P.NO 178.
Illustrated synopsis of dermatology and sexually transmitted
diseases , 4th edition 2011, P.No.250*

**REVIEW
OF LITERATURE
(SIDDHA)**

REVIEW OF LITERATURE-SIDDHA

MADAKKU PILAVAI;

Siddha system of medicine is an ancient system and it deals not only with the body of man but also with the inner soul. The word Siddha comes from Siddhi which means an object to be attained. It generally refers to the Asthma Siddhi i.e. the eight super natural powers.

Both Nature and Human body is made up of five elements (Mann, Neer, Thee, Vali & Veli). Any adverse changes in the universe causes the same effect in man because what exists in universe exists in man also.

In Siddha system of medicine, diseases are classified into 4448 types. According to Yugi Vaithiya Chinthaamani, Meganoi is classified into 20 types. Madhumeagam is one among them, which comes under Pitha type.

MADHUMEGAM

Definition:

Mathumeagam is a clinical condition characterized by frequent and excessive passage of urine with 'sweetness' eventually leading to deterioration of seven thathus.

இனிப்பான இனிப்பல்ல ஈ வந்தாடும்
ஒரு துளிவாய் விட்டார்கைப் பிணியாய் தோன்றும்.
-குரு நாடி

The above description quotes that ant and flies are attracted to the site of voided urine and when the urine is heated ,honey odour is enamated.

அண்மையாயடிக் கடிக்கு நீரிறங்கு
மடிக்கடிக்கு அரை நாழிதனிலெ காணும்
வெண்மையான தடியதனிற்றான் பிடிக்கும்
மிக்கான சடம் வெளுத்து மேனி கன்றும்
-யூகி வைத்திய சிந்தாமணி.

This poem comprises the clinical features of Mega Neer.

சரியாக மேகத்தா லபான வாயு
தான்புகைக்கு மேலேறிக் கபாலச் சூடாம்
பெரிதான மேகத்தா லத்தி வெந்து
போமப்பா தசைவெந்து ரத்தம் வற்றிப்
பரிவாகித் தசவாய்ப்பால் மந்தங் கொண்டு
பெருந்தீனி மலபந்தம் உதான வாயு
விரிவாகித் தேகமெலாம் விட நீராலே
மெய்யழிந்து தேகமென்ற திருப தாச்சே

-சித்தர் நாடிநூல்

“Tamilians who knew about its prominent manifestation of persistent polyuria named the disease Megam, Mathu means honey (sweetness)”

Synonyms of Mathumegam:

According to Siddha Maruthuvam, The synonyms of Mathumegam are Enippu neer and Neerizhivu.

Etiology:

The authentic etiological factors described by various Siddhars are as follows:

கோதையர் கலவி போதை கொழுத்தயீ னீறைச்சி போதை
பாதுவாய் நெய்யும் பாலும் பரிவுட னுண்பீ ராகில்
சோதபாண் டுருவ மிக்க சுக்கில பிரமேக கந்தான்
ஓதுநீ ரீழிவு சேரவுண்டென வறிந்து கொள்ளே.

-அகத்தியர் 1200

The above poem quotes that excessive intake of calorie rich foods like Ghee, Milk, Fish, toddy and excessive indulgence in sex leads to Mathumegam. The same also features in the below poem with increased body heat (pitham) and excessive hunger which supposedly lead to Madhu Megam.

உட்டிண ரோகத் தாலும் முறும்பெரும் பசியினாலும்
கட்டவிழ் கோதைமாதர் கலவிமட்டிலா மையலாலு
முட்டறா நாலுமாறு மும்மூன்று மொன்று மென்று
திட்டமாய் வருவதென்று திருமமுனி யருளிச் செய்தார்

- அகத்தியார் -1200

Sexual indulgence :

All Siddhars attribute Megam mainly due to excessive indulgence in sex which results in depletion of total strength and vigour of the body as a whole, making the individual susceptible to this disease.

ஸ்திரிபோகம் செய்ததினால் வேவுகொண்டு
சிரசு மட்டும் வெந்துருகிக் கனலே மீறிக்
குறியுடனே மேகந்தான் கொடுமை செய்து
குறைந்து வரும் தாதுவெல்லாம் குன்றிப் போகும்.

-குருநாடி

கன்னி மயக்கத்தால் கண்டிடு மேகமே.

-நாடிநூல்

நிறைபூத்த கொங்கையாள் நாயகன் மோகத்தால்
மறைபோற்றும் கருப்பத்தில் வளர்ந்தது மேகமே.

-திருமூலர்

கிரந்தி புண்ணிரன மேககீசகனெறுந் துன்மார்க்கன்
அருந்ததி என்னும் பாஞ்சாலி யன்னையைக் கண்ணுற்றானே.

-தேரன் மருத்துவ பாரதம்

The conclusion from the above said verses indicate that all Siddhars attributed unananimously the cause of Meganeer is mainly due to excessive indulgence in sex which results in total depletion of total strength of the body as a whole making the individual susceptible to this disease.

PSYCHOSOMATIC FACTORS :

All Siddhars said that psychosomatic stress resulting in diseases like Megam, Gunmam and Kuruthi azhal. Yugimuni and other Siddhars stress a great importance to psychosomatic factor. All antisocial activities ultimately result in subjective guilt and psychosomatic stress resulting in diseases like Diabetes, Peptic ulcer and Hypertension.

மதங்கொண்டு பெரியோரை வைகையாலும்
மாதர் கற்புநிலைமை தன்னை அழிக்கையாலும்
பதங்கொண்ட சிவயோகி சாபத்தாலும்
பத்துவகை சிலேற்பனங்கள் மேகநீராம்.

-யூகி வைத்திய சிந்தாமணி

இயம்பவே ஆறுகுளம் பின்னஞ் செய்தல்
அயம்பவே ஆலயத்திற் சலம்விட் டோர்க்கும்
ஆதியாம் வேதத்தை த்தூவித் தோர்க்கும்
துயம்பவே சூரியனை வணங்கா தோர்க்கும்
சுருக்காக மேகம்வந் துற்பவிக்குந் தானே.

-யூகி வைத்திய சிந்தாமணி

KANMA NOI:

According to Therayar and Agathiyar, Megam also occurs as a result of bad deeds committed in his or her past (kanmam). Nowadays they are drawn parallel with “Genetic factors”.

CLASSIFICATION:

Classifications of Piramegam as in various texts of medicine are as follows:

I. YUGIMUNI VAIDIYA CHINTHAMANI 800 AS FOLLOWS:

VARIETIES UNDER VATHAM-4

- நெய்மணநீர்
- பசுமணநீர்
- சீழ்நீர்
- சதைநீர்

VARIETIES UNDER PITHAM-6

- யானைக்கொழுப்பு மணநீர்
- கற்றாழை மணநீர்
- சுண்ணமணநீர்
- இனிப்பு மேகம்
- பளிங்கு நீர்
- முயற்குருதி நீர்

VARIETIES UNDER KAPAM -10

- ஐயநீர்
- தூய்மைநீர்
- முளைநீர்
- இளநீர்
- உள் நீர்
- வெண்ணீர்(தவளைநீர்)
- கழுநீர்
- தேன்நீர்
- உப்புநீர்
- கவிச்சிநீர்

II. IN AYURVEDHA TEXT AS FOLLOWS:

VADHAMEGAM - 4:

1. Vasaamegam
2. Meehamegam
3. Asthimegam
4. Kshouthamegam or Madhumegam

PITHAMEGAM - 6:

1. Megam
2. Neelamegam
3. Kalamegam
4. Arthramegam
5. Manjishtamegam
6. Rathamegam

KABAMEGAM – 10:

1. Udhayamegam
2. Ikshumegam
3. Santhiramegam
4. Suramegam
5. Pishtamegam
6. Sukkilamegam
7. Sigathamegam
8. Seethamegam
9. Sainarmegam
10. Lalamegam

III. THIRUMOOLAR 600:

In Thirumoolar 600 megam is classified into 21 varieties, they are as follows:

1. Muyarchiyal vanthamegam (Self-acquired-6)
2. Karuppathal vanthamegam (Hereditary or constitutional-5)
3. Palakkaarna Megam (Miscellaneous-7)

NOI KURI KUNANGAL (CLINICAL FEATURES) :

a.PREMONITORY SYMPTOMS

Megam patients have the following symptoms in initial stage

1. Excessive hunger, thirst, and passing large Quantity of urine.
2. Body pain, Tiredness.

SIGNS AND SYMPTOMS OF MEGAM

Yugimuni has described the signs and symptoms of Megam as follows:

கூறான மேகமது இருபதுக்கும்
குணந்தனை சிவன் சொல்ல தேவிகேட்க
தாறான தாகமொடு சோக மேகந்
தரியாமல் நீரிழித லிருமல்முச்சு
ஆறான அருசிசத்தி சித்த பிரமை
அடிக்கடிக்குத் தண்ணீர்தா னன்னங் கேட்டல்
ஈறான இடுப்புக்குள் கடுப்பு காணல்
எலும்பு முற்றலழற்றலோ டெரிவுண்டாமே.

எரிலோடு சரீரமெல்லா மறைபட்டாற் போல்
எழிலுடம்பு நோதல் நித்திரை யில்லாமை
வரிவோடு மாய்வுமெத்த வம்பறித்தல்
மனது சஜ்சலப்படுத்தல் காற்று வேண்டல்
மெரிவோடு மேல்முச்சு மிகவுண்டாதல்

விக்கலோடு மயக்கந்தான் மெத்தக் காணல்
தெரிவோடு தேகமெங்கும்வெளுருண்டாதல்
தேகமெத்த வாலோபப்படுதல் காணே.

தன்மையாய்ச் சலந்தானும் பசுப்பு மஞ்சள்
தானிறங்கும் பீசமுங் கோசமுங் கடுக்கும்
அண்மையாயடிக்கடிக்கு நீரிறங்கு
மடிக்கடிக்கு அரைநாழிதனிலே தானும்
வெண்மையாய டியதனிற்றான் பிடிக்கும்
மிக்கான் சடம் வெளுத்து மேனி கன்றும்
பன்மையாய்ப் பஞ்சவாண்டதனிற் கொல்லும்
பகர்கின்ற மது மேகத்தின் பாங்குதானே.

-யூகி வைத்திய சிந்தாமணி

Passing of urine in large quantity at regular intervals, while passing urine the patient experiences burning and spasmodic pain in the urethra and dull pain in the testis.

The urine thus passed is cold, slimy to touch, has brownish yellow in colour produces white sediments which adhere to the bottom of the vessel in which it is collected. The skin is pale and there is generalized tenderness. If it is not diagnosed in time and not instituted proper treatment with diet restriction, the disease will run a fulminating course resulting in death within five years of periods.

Yugimuni has described another variety of urinary disorder called Then neer (Pirasa megam) under kaba vitiation.

NAADI

இருமியே வாதமும் பித்தமுங் கூடில்
மருவுசல மேகம் வாருதி போலாகும்
உருவம்வே ராகும் உண்டவுடல் காந்திடும்
உருகவே ஊனோடு உறிஞ்சி இனிக்கும்
பார்த்திடு மூன்றும் பதிந்துமெலிந்து நிற்கில்
தேர்ந்திடு மேகம் உள்ளே
தோன்றியே பொருந்தி மெய்யில்

Synonyms of Madakku Pilavai:

According to siddha maruthuvam , The synonyms of Madakku Pilavi are mega katti, madhumeaga katti, Neerizhivu katti, Neerkatti, Inippu katti, Thithippu katti, Pilavai, Neerpilavai Mega neer pilavai.

NOI ENN(CLASSIFICATION):

Ten varieties of Mega Neer kattigal have been discussed by Siddha Maruthuvum,, Noi naadal-II.

மேகத்தா லுண்டாகும் நீரிருபதிற்
பிளவை நிகழும் பத்தாம்
ஆகுமவை கடுகோடு கடலை
நிலப்பூசனி மரியக் கட்டி
வாகு பெறுமடக் காமை
பேய்ச்சுரைக்காய் கூன்வலைக் கண்ணாகும்
நாடுபெறுக் கூட்டென்னும் பிளவை
வகைகளிங்கவிர் நவிற்பி னாரே.

-சித்த மருத்துவம்

In Siddha literature Madakku Pilavi is one among the 10 varieties of Madakku Pilavai. Each author who have dealt Mega neer kattigal disorders have differently classified them under three doshas and have given names according to their concept. But the number, signs and symptoms of the classified disorders are almost identical in the description of the disease.

CLASSIFICATION:

Classification of meganeer kattigal are as follows

மேக நீர்த் துன்பத்தால் பிறக்கும் கட்டிகளை (பிளவை) பத்து வகையாகப் பிரித்துள்ளார்கள். அவையாவன

1. கடுகுக் கட்டி(கடுகுப் பிளவை)
2. கடலைக் கட்டி(கடலைப் பிளவை)
3. நிலப்பூசனிக் கட்டி(நிலப்பூசனிப் பிளவை)
4. விப்புருதிக் கட்டி(கட்டிப் பிளவை)
5. மடக்குக் கட்டி(மடக்குப் பிளவை)
6. ஆமையோட்டுக் கட்டி(ஆமையோட்டுப் பிளவை)
7. பேய்ச் சுரைக்காய்க் கட்டி(பேய்ச் சுரைக்காய் பிளவை)
8. அதோமுகக் கட்டி(கூன் பிளவை)
9. வலைக்கண் கட்டி(வலைக்கண் பிளவை)
10. புத்திராதிக் கட்டி(கூட்டுப் பிளவை)

குற்ற அளவாய் -4

குருதி அளவாய்-1

அடிபடல் வெட்டுப்படலாகிய காரணம்-1

அவை முறையே வளி, அழல், ஐயம், முக்குற்றம், குருதி,காயக்கட்டிகள் என வழங்கப்படும்.

தீரும், தீராதவை;

மேகநீர் நோயில் வருந்தி மெலிந்தவர்களுக்கு மார்பு,

- அடிமுதுகு,
- முலைக்காம்பு
- தோள்
- குதம்
- தலைமையம்,
- கீல்கள்

- கால் விரல்கள்
- கை விரல்கள்
- அக்குள்
- புருவமையம்
- கழுத்தின் பின்புறம்
- இருதயம்
- நடுத் தொப்புள்
- உதடு
- அண்டம்
- முழங்கால்
- கெண்டச் சதை
- தொடைச் சதை
- கடிஸ் தானம்

இவ்விடங்களில் மேகநீர்க்கட்டி உண்டானல் எளிதில் தீராது. மற்ற இடங்களில் கட்டிகளுண்டானல் எளிதில் தீரும்.

நாடி நடை;

"விரணமுடன் புண்புரைக்கு வாத பித்தம்"

என்பதனால் வளி அழல் நாடி புண்,புரை,கட்டி முதலியவற்றை அறிவிக்கும்.

நாடி சாஸ்திரம்

காணிதத்தில் வாதமென்றாற் சேதம் வாதம்
காணுமடா சூலையெதிராற் சேதம் பித்தம்
விரணமுடன் புண்புரைக்கும் வாத பித்தம்
விதியறியாய் பீனிசந்தன் பித்த சேதம்
துரணமுடன் நீற்பாடு சர்ப்பப் பாடு
சொல்லுகின்ற நாயெல்லாம்சு ழன்று காணும்
சிரணமென்ற பாம்புவிஷந் தாது வெல்லாங்
கெதிகெட்டுக் காணாது கெர்ப்ப மாமே.

(பரி பூரண நாடி)

NOI KURI KUNANGAL(CLINICAL FEATURES) PREMONITARY SYMPTOMS;

Megam patients have the following symptoms in initial stage

1. Excessive hunger, thirst, and passing large quantity of urine.
2. Body pain ,tiredness.

The increased level of sugar are produced in another symptoms of

- Weight loss
- Sweating
- Itching
- Abscess
- Dryness of skin
- Hyper pigmentation of skin.

MODERN ASPECTS

DIABETES MELLITUS

Definition:

Diabetes mellitus is a group of metabolic diseases in which there are high blood sugar levels over a prolonged period. This high blood sugar produced the symptoms of frequent urination, increased thirst, and increased hunger. Untreated diabetes cause many complications.

EPIDEMIOLOGY;

Diabetes mellitus represents worldwide an extremely important public health problem considering its high prevalence, the serious complications triggered by the disease, the associated rate of mortality and, not the least, the extremely high economic and social costs.

In most western countries, type 1 diabetes accounts for over 90% of childhood and adolescent diabetes, although less than half of individuals with type 1 diabetes are diagnosed before the age of 15 years. Type 2 diabetes is becoming more common and accounts for a significant proportion of youth onset diabetes in certain at risk populations. In Europe incidence rates show a close correlation with the frequency of HLA susceptibility genes in the general population.

The total number of people with diabetes is projected to rise from 171 million in 2000 to 366 million in 2030. The prevalence of diabetes is higher in men than women, but there are more women with diabetes than men. The urban population in developing countries is projected to double between 2000 and 2030. The most important demographic change to diabetes prevalence across the world appears to be the increase in the proportion of people 65 years of age. . The prevalence of diabetes according to WHO criteria was 5.6% and 2.7% among urban and rural areas respectively.

The exact incidence of carbuncles is unknown. It is a common occurrence amongst the adolescent group and in early adulthood years. Boys are more prone to develop carbuncles than girls. Children are less likely to develop such a type of skin abscess. There has been a rise in the incidence of methicillin-resistant staphylococcus aureus infections in the past 20 years.

Most individuals with carbuncles are otherwise healthy and have good personal hygiene, but they are among the 10-20% of population that are staphylococcus aureus carriers on surface of skin. Common in obese patients. Carbuncle may occur in patients with immune deficiency, anemia, diabetes or iron deficiency.

CLASSIFICATION :

Etiologic Classification of Diabetes Mellitus

I. Type 1 diabetes (-cell destruction, usually leading to absolute insulin deficiency)

A. Immune-mediated

B. Idiopathic.

II. Type 2 diabetes (may range from predominantly insulin resistance with relative insulin deficiency to a predominantly insulin secretory defect with insulin resistance)

III. Other specific types of diabetes

A. Genetic defects of -cell function characterized by mutations in:

1. Hepatocyte nuclear transcription factor (HNF) 4 (MODY 1)
2. Glucokinase (MODY 2)
3. HNF-1 (MODY 3)
4. Insulin promoter factor (IPF) 1 (MODY 4)
5. HNF-1 (MODY 5)
6. Mitochondrial DNA
7. Proinsulin or insulin conversion

B. Genetic defects in insulin action :

1. Type A insulin resistance
2. Leprechaunism
3. Rabson-Mendenhall syndrome
4. Lipotrophic diabetes

C. Diseases of the exocrine pancreas :

Pancreatitis, Pancreatectomy, Neoplasia, cystic fibrosis, hemochromatosis, fibrocalculous pancreatopathy

D. Endocrinopathies :

Acromegaly, Cushing's syndrome, glucagonoma, pheochromocytoma, hyperthyroidism, somatostatinoma, aldosteronoma

E. Drug :

Chemical-induced Vacor, pentamidine, nicotinic acid, glucocorticoids, thyroid hormone, diazoxide, -adrenergic agonists, thiazides, phenytoin, interferon, protease inhibitors, clozapine, beta blockers

F. Infections:

Congenital rubella, cytomegalovirus, coxsackie

G. Uncommon forms of immune-mediated diabetes:

"Stiff-man" syndrome, anti-insulin receptor antibodies

H. Other genetic syndromes sometimes associated with diabetes:

Down's syndrome, Klinefelter's syndrome, Turner's syndrome, Wolfram's syndrome, Friedreich's ataxia, Huntington's chorea, Laurence-Moon-Biedl syndrome, myotonic dystrophy, porphyria, Prader-Willi syndrome.

ANATOMY OF PANCREAS

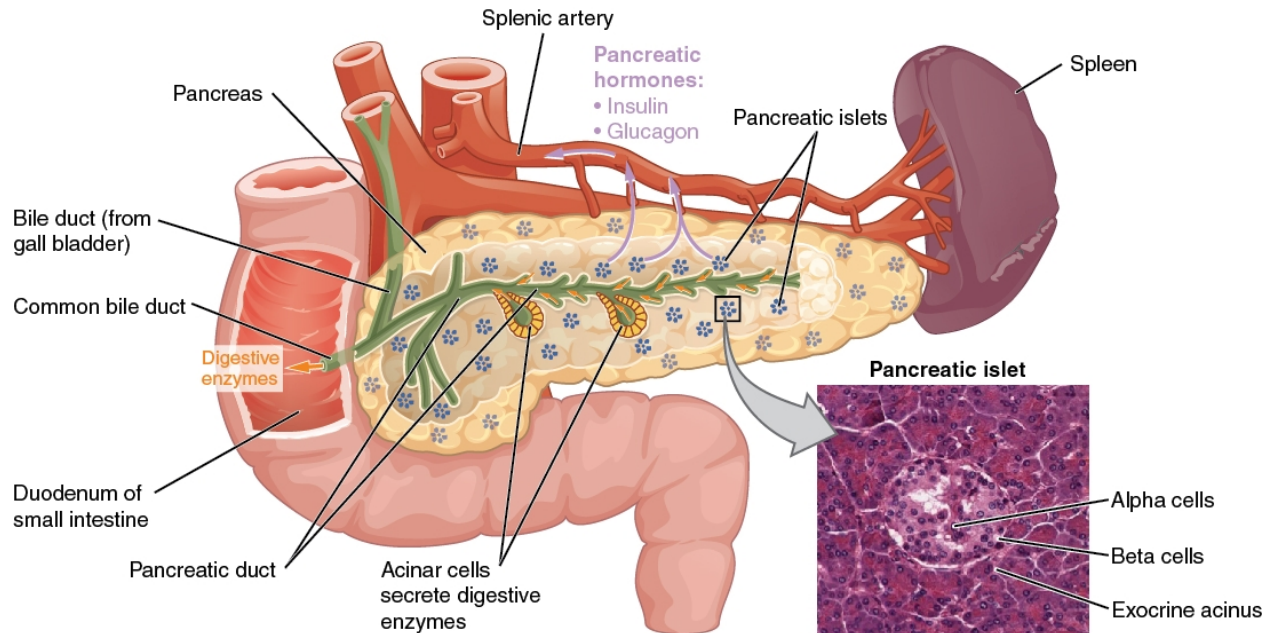


FIGURE-1

Pancreas is a retro-peritoneal, fleshy organ, has both endo and exocrine function. It is supra-umbilical, intra hepatic, postero abdominal, retroperitoneal organ, crossing the mid-line from right to the left. As it's retroperitoneal, the organ does not move with respiration.

Generally, it has head, neck, body and tail. The head of the pancreas is within the concavity of the duodenum. The neck crosses the portal vein. The body crosses the great vessels of the abdomen like, inferior vena cava, aorta, and left renal blood vessels. The tail of the pancreas is in the left hypochondrium and it contacts the hilum of the spleen. The superior border is related to splenic artery.

The anterior border gives attachment of transverse mesocolon. Histophysiologically, this is a compound tubular gland showing endo and exocrine functions of which are correlated with pituitary gland.

Microscopic anatomy of islets of – langerhans

They are found more in the tail of the pancreas than in the other parts. They form about 1 – 2% of pancreatic weight. There are about 2 millions of islets in human pancreas. Each islet has an epithelial mass, tunneled by labyrinthine capillaries. The position of the islets is mostly within the lobules, rather than between them. Each spheroid islet is surrounded by reticular membrane. Islet tissue is arranged in irregular anatomizing cellular plates. Their epithelial cords are separated by blood vessels. A sphincter controls the blood supply. The histological structure of the islets shows Alpha, Beta and Delta cells of which,

Alpha cells form about 20% and glucagon secreting Beta cells form about 75% and insulin secreting Delta cells form about 5% and gastrin secreting

Beta cells are the source of insulin hormone. The cells are polyhedral, the nuclei are centrally or eccentrically placed, the cytoplasm is granular, filled with prominent secretory vacuoles containing few ribosomes. The secretory granules show species variations. In man they are spherical or elongated crystalline body.

INSULIN BIOSYNTHESIS, SECRETION AND ACTION :

BIOSYNTHESIS :

Insulin is produced in the beta cells of the pancreatic islets. It is initially synthesized as a single-chain 86-amino-acid precursor polypeptide, proinsulin. Subsequent proteolytic processing removes the amino terminal signal peptide, giving rise to proinsulin. Proinsulin is structurally related to insulin-like growth factors I and II, which bind weakly to the insulin receptor. Cleavage of an internal 31-residue fragment from proinsulin generates the C peptide and the A (21 amino acids) and B (30 amino acids) chains of insulin, which are connected by disulphide bonds.

The mature insulin molecule and C peptide are stored together and secreted from secretory granules in the beta cells. Because the C peptide is less susceptible than insulin to hepatic degradation, it is a useful marker of insulin secretion and allows discrimination of endogenous and exogenous sources of insulin in the evaluation of hypoglycemia. Human insulin is now produced by recombinant DNA technology; structural alterations at one or more residues are useful for modifying its physical and pharmacologic characteristics.

SECRETION:

Glucose is the key regulator of insulin secretion by the pancreatic beta cell, although amino acids, ketones, various nutrients, gastrointestinal peptides, and neurotransmitters also influence insulin secretion. Glucose levels >3.9 mmol/L (70 mg/dL) stimulate insulin synthesis, primarily by enhancing protein translation and processing, as well as inducing insulin secretion. Glucose stimulates insulin secretion through a series of regulatory steps that begin with transport into the beta cell by the GLUT2 glucose transporter.

Glucose phosphorylation by glucokinase is the rate-limiting step that controls glucose-regulated insulin secretion.

NORMAL BLOOD SUGAR LEVEL :

In normal persons, blood glucose level is controlled within a narrow range. After the overnight fasting, in early morning, the blood glucose level ranges between 80 and 90 mg/dl of blood. Between first and second hour after meals (postprandial), the blood glucose level raises to 120-140 mg/dl. The glucose level in the blood is brought back to normal at the end of second hour after the meals

NECESSITY OF REGULATION OF BLOOD GLUCOSE LEVEL :

Regulation of blood glucose level is very essential because, glucose is the only nutrient that can be utilized by tissues of brain, retina and germinal epithelium of the gonads.

ROLE OF LIVER IN THE MAINTENANCE OF BLOOD SUGAR LEVEL :

Liver acts as an important glucose buffer system. When blood glucose level increases after a meal, the excess glucose is converted into glycogen and stored in liver. Afterwards, when blood glucose level falls, the glycogen in liver is converted into glucose and released into the blood from the liver cells.

ROLE OF INSULIN IN THE MAINTENANCE OF BLOOD SUGAR LEVEL :

Insulin is the ant diabetic hormone, as it reduces blood sugar level. It reduces the blood sugar level by the following actions.

i. TRANSPORT AND UPTAKE OF GLUCOSE :

When a food with excess amount of carbohydrate is taken, the blood sugar level is increased. Immediately, pancreas secretes insulin. The insulin facilitates the transport of glucose from the blood into the cells by increasing the permeability of cell membrane to glucose.

Insulin enhances the uptake of glucose by all the tissues particularly by liver, muscle and adipose tissues. However, insulin is not required for glucose uptake in some tissues like brain (except hypothalamus), renal tubules, mucus membrane of intestine and red blood cells.

ii. PERIPHERAL UTILIZATION OF GLUCOSE :

The glucose entering the cells is oxidized by most of the cells immediately. The rate of utilization depends upon intake of glucose, and the glucose utilization is enhanced by insulin.

iii. STORAGE OF GLUCOSE :

Insulin promotes the rapid conversion of glucose into glycogen (glycogenesis) in muscle and liver. Thus, glucose is stored in these two organs in the form of glycogen. The insulin causes conversion of glucose into fatty acids.

iv. INHIBITION OF GLYCOGENOLYSIS :

Insulin prevents the breakdown of glycogen into glucose in muscles and liver.

v. INHIBITION OF GLUCONEOGENESIS :

Insulin prevents gluconeogenesis i.e., it prevents the formation of glucose from proteins by following ways:

- a. Inhibiting the release of amino acids from muscle and
- b. Inhibiting the activities of enzymes involved in gluconeogenesis.

Thus insulin decreases the blood sugar level in following manner:

1. Facilitating the transport and uptake of glucose by the cells.
2. Increasing the peripheral utilization of glucose.

3. Conversion of glucose into glycogen in liver and muscle.
4. Prevention of glycogenolysis
5. Inhibition of gluconeogenesis.

ROLE OF GLUCAGON IN THE MAINTENANCE OF BLOOD SUGAR LEVEL :

1. Glucagon increases glycogenolysis (breakdown of glycogen into glucose) in liver. And, the glucose thus formed is released from the liver cells into the blood. Glucagon does not induce glycogenolysis in muscle
2. Glucagon increases gluconeogenesis (formation of glucose from proteins) in liver. It promotes gluconeogenesis by:
 - a. Activating the enzymes which convert pyruvate into phosphoenol pyruvate
 - b. Increasing the transport of amino acids into the liver cells.These amino acids are utilized for glucose formation.

ROLE OF HORMONES IN THE MAINTENANCE OF BLOOD SUGAR LEVEL

I. GROWTH HORMONE :

Growth hormone increases the blood sugar level by the following ways:

1. Decrease in the peripheral utilization of glucose for the production of energy
2. Increase in the deposition of glycogen in the cells
3. Decrease in the uptake of glucose by the cells
4. Diabetogenic effect of growth hormone

II. CORTISOL :

Cortisol increases the blood glucose level by acting on liver cells and the peripheral tissues. Following are the actions of cortisol on glucose metabolism.

- a. It increases the gluconeogenesis in liver from amino acids. When the amino acids enter the liver, gluconeogenesis is accelerated.

b. It decreases the glucose (anti-insulin action) uptake by peripheral cells and the utilization of glucose.

III. ADRENALINE :

Adrenaline increases the blood glucose level. Blood glucose level is increased by the glycogenolysis in liver and muscle. So, a large quantity of glucose enters the blood.

IV. THYROXIN :

Thyroxin increases the blood sugar level by the following ways:

- a. It increases the absorption of glucose from gastrointestinal tract.
- b. It increases the breakdown of glycogen into glucose.
- c. It accelerates the process of gluconeogenesis.

TYPE 1 DIABETES : (Insulin dependent Diabetes Mellitus)

Diabetes mellitus type 1 (Insulin dependent diabetes or juvenile diabetes) is a form of diabetes mellitus that results from the autoimmune destruction of the insulin-producing beta cells in the pancreas. The subsequent lack of insulin leads to increased blood and urine glucose. The classical symptoms are polyuria (frequent urination), polydipsia (increased thirst), polyphagia (increased hunger) and weight loss.

Lack of care can be lethal and administration of insulin is essential for survival. Insulin therapy must be continued indefinitely and does not usually impair normal daily activities. People are usually trained to manage their disease independently; however, for some this can be challenging. Untreated, diabetes can cause many complications. Acute complications include diabetic ketoacidosis and non-ketotic hyperosmolar coma. Serious long-term complications include heart disease, stroke, kidney failure, foot ulcers and damage to the eyes. Furthermore, complications may arise from low blood sugar caused by excessive treatment.

DEPRESSION:

Depression and depressive symptoms are generally more common in people living with type 1 diabetes. The prevalence rate of depression is more than three times higher in diabetics than non-diabetics; an average prevalence of 12% was found (range of 5.8–43.4% in studies reviewed) Women with type 1 diabetes are more likely to be depressed than men with type 1 diabetes, and an increased incidence of depression has also been associated with youth with type 1 diabetes. According to the Canadian Diabetes Association, 15% of people living with diabetes have major depression.

SOCIAL COGNITION AND SELF-CARE :

People with type 1 diabetes may neglect precise self-care due to social fear related to fear of hypoglycemia. Type 1 diabetics may also neglect physical activity due to reduced perceived positive effects as well as increased perceived negative aspects of that activity.

CAUSES:

The cause of type 1 diabetes is unknown. A number of theories have been put forwards including that one or more of the following: genetic susceptibility, a diabetogenic trigger and/or exposure to an antigen are involved

GENETICS:

Type 1 diabetes is a disease that involves many genes. Depending on locus or combination of loci, they can be dominant, recessive, or somewhere in between. The strongest gene, IDDM1, is located in the MHC Class II region on chromosome 6, at staining region 6p21. Certain variants of this gene increase the risk for decreased histocompatibility characteristic of type 1. Such variants include DRB1 0401, DRB1 0402, DRB1 0405, DQA 0301, DQB1 0302 and DQB1 0201, which are common in North Americans of European ancestry and in Europeans.

ENVIRONMENTAL :

Environmental factors can influence expression of type 1. For identical twins, when one twin had type 1 diabetes, the other twin only had it 30%–50% of the time. Despite having exactly the same genome, one twin had the disease, whereas the other did

not; this suggests environmental factors, in addition to genetic factors, can influence the disease's prevalence.

VIRUS:

One theory proposes that type 1 diabetes is a virus-triggered autoimmune response in which the immune system attacks virus-infected cells along with the beta cells in the pancreas. The Coxsackie virus family or rubella is implicated, although the evidence is inconclusive.

In type 1, pancreatic beta cells in the islets of Langerhans are destroyed, decreasing endogenous insulin production. This distinguishes type 1's origin from type 2. The type of diabetes a patient has is determined only by the cause— fundamentally by whether the patient is insulin resistant (type 2) or insulin deficient without insulin resistance (type 1).

CHEMICALS AND DRUGS :

Some chemicals and drugs preferentially destroy pancreatic cells. Pyrinuron (Vacor, N-3-pyridylmethyl-N'-p-nitrophenyl urea), a rodenticide introduced in the United States in 1976, selectively destroys pancreatic beta cells, resulting in type 1 diabetes after accidental or intentional ingestion. Vacor was withdrawn from the U.S. market in 1979, but is still used in some countries.

An antibiotic and antineoplastic agent used in chemotherapy for pancreatic cancer; it also kills beta cells, resulting in loss of insulin production. Other pancreatic problems, including trauma, pancreatitis or tumors (either malignant or benign), can also lead to loss of insulin production.

PATHOPHYSIOLOGY:

The pathophysiology in diabetes type 1 is a destruction of beta cells in the pancreas, regardless of which risk factors or causative entities have been present. Individual risk factors can have separate pathophysiological processes to, in turn, cause this beta cell destruction. Still, a process that appears to be common to most risk factors is an autoimmune response towards beta cells, involving an expansion of auto reactive

CD4+ T helper cells and CD8+ T cells, autoantibody-producing B cells and activation of the innate immune system. After starting treatment with insulin a person's own insulin levels may temporarily improve. This is believed to be due to altered immunity and is known as the "honeymoon phase".

TYPE 2 DM (NON INSULIN DEPENDENT DIABETES MELLITUS)

Type 2 Diabetes mellitus is a metabolic disorder that is characterized by hyperglycemia (high blood sugar) in the context of insulin resistance and relative lack of insulin. This is in contrast to diabetes mellitus type 1, in which there is an absolute lack of insulin due to breakdown of islet cells in the pancreas. The classic symptoms are excess thirst, frequent urination, and constant hunger.

Type 2 diabetes makes up about 90% of cases of diabetes, with the other 10% due primarily to diabetes mellitus type 1 and gestational diabetes. Obesity is thought to be the primary cause of type 2 diabetes in people who are genetically predisposed to the disease.

Type 2 diabetes is initially managed by increasing exercise and dietary changes. If blood sugar levels are not adequately lowered by these measures, medications such as metformin or insulin may be needed. In those on insulin, there is typically the requirement to routinely check blood sugar levels.

CAUSES:

The development of type 2 diabetes is caused by a combination of lifestyle and genetic factors. While some of these factors are under personal control, such as diet and obesity, other factors are not, such as increasing age, female gender, and genetics. A lack of sleep has been linked to type 2 diabetes. This is believed to act through its effect on metabolism. The nutritional status of a mother during fetal development may also play a role, with one proposed mechanism being that of altered DNA methylation.

LIFESTYLE:

A number of lifestyle factors are known to be important to the development of type 2 diabetes, including obesity and overweight (defined by a body mass index of greater than 25), lack of physical activity, poor diet, stress, and urbanization. Excess body fat is associated with 30% of cases in those of Chinese and Japanese descent, 60-80% of

cases in those of European and African descent, and 100% of cases in Pima Indians and Pacific Islanders. Those who are not obese often have a high waist– hip ratio.

Dietary factors also influence the risk of developing type 2 diabetes. Consumption of sugar-sweetened drinks in excess is associated with an increased risk. The type of fats in the diet are also important, with saturated fats and trans fatty acids increasing the risk, and polyunsaturated and monounsaturated fat decreasing the risk. Eating lots of white rice appears to also play a role in increasing risk. A lack of exercise is believed to cause 7% of cases.

GENETICS:

Most cases of diabetes involve many genes, with each being a small contributor to an increased probability of becoming a type 2 diabetic. If one identical twin has diabetes, the chance of the other developing diabetes within his lifetime is greater than 90%, while the rate for non identical siblings is 25–50%. As of 2011, more than 36 genes had been found that contribute to the risk of type 2 diabetes. All of these genes together still only account for 10% of the total heritable component of the disease. The TCF7L2 allele, for example, increases the risk of developing diabetes by 1.5 times and is the greatest risk of the common genetic variants. Most of the genes linked to diabetes are involved in beta cell functions.

There are a number of rare cases of diabetes that arise due to an abnormality in a single gene (known as monogenic forms of diabetes or "other specific types of diabetes"). These include maturity onset diabetes of the young (MODY), Donohue syndrome and Rabson-Mendenhall syndrome, among others. Maturity onset diabetes of the young constitute 1–5% of all cases of diabetes in young people.

MEDICAL CONDITIONS

There are number of medications and other health problems that can predispose to diabetes. Some of the medications include glucocorticoids, thiazides, beta blockers, atypical antipsychotics and statins. Those who previously had gestational diabetes are at a higher risk of developing type 2 diabetes.

PATHOPHYSIOLOGY :

Type 2 diabetes is due to insufficient insulin production from beta cells in the setting of insulin resistance. Insulin resistance, which is the inability of cells to respond adequately to normal levels of insulin, occurs primarily within the muscles, liver, and fat tissue. In the liver, insulin normally suppresses glucose release.

However, in the setting of insulin resistance, the liver inappropriately releases glucose into the blood. The proportion of insulin resistance versus beta cell dysfunction differs among individuals, with some having primarily insulin resistance and only a minor defect in insulin secretion and others with slight insulin resistance and primarily a lack of insulin secretion.

Other potentially important mechanisms associated with type 2 diabetes and insulin resistance include: increased breakdown of lipids within fat cells, resistance to and lack of incretin, high glucagon levels in the blood, increased retention of salt and water by the kidneys, and inappropriate regulation of metabolism by the central nervous system. However, not all people with insulin resistance develop diabetes, since an impairment of insulin secretion by pancreatic beta cells is also required.

MANAGEMENT :

Management of type 2 diabetes focuses on lifestyle interventions, lowering other cardiovascular risk factors, and maintaining blood glucose levels in the normal range. Self-monitoring of blood glucose for people with newly diagnosed type 2 diabetes was recommended by the British National Health Service in 2008, however the benefit of self monitoring in those not using multi-dose insulin is questionable.

Managing other cardiovascular risk factors, such as hypertension, high cholesterol, and micro albuminuria, improves a person's life expectancy. Intensive blood pressure management (less than 130/80 mmHg) as opposed to standard blood pressure management (less than 140–160/85–100 mmHg) results in a slight decrease in stroke risk but no effect on overall risk of death.

Intensive blood sugar lowering (HbA1c<6%) as opposed to standard blood sugar lowering (HbA1c of 7–7.9%) does not appear to change mortality. The goal of treatment

is typically an HbA1c of less than 7% or a fasting glucose of less than 6.7mmol/L (120 mg/dl); however these goals may be changed after professional clinical consultation, taking into account particular risks of hypoglycemia and life expectancy.

It is recommended that people affected by type 2 diabetes get into regular ophthalmology examination. Treating gum disease in those with diabetes may result in a small improvement in blood sugar levels.

LIFESTYLE :

A proper diet and exercise are the foundations of diabetic care, with a greater amount of exercise yielding better results. Aerobic exercise leads to a decrease in HbA1c and improved insulin sensitivity. Resistance training is also useful and the combination of both types of exercise may be most effective. A diabetic diet that promotes weight loss is important. While the best diet type to achieve this is controversial a low glycemic index diet has been found to improve blood sugar control.

Culturally appropriate education may help people with type 2 diabetes control their blood sugar levels, for up to six months at least. If a change in lifestyle in those with mild diabetes has not resulted in improved blood sugars within six weeks, medications should then be considered. There is not enough evidence to determine if lifestyle interventions affect mortality in those who already have DM.

GESTATIONAL DIABETES:

Gestational diabetes is a condition in which women without previously diagnosed diabetes exhibit high blood glucose levels during pregnancy (especially during their third trimester). Gestational diabetes is caused when insulin receptors do not function properly. This is likely due to pregnancy-related factors such as the presence of human placental lactogen that interferes with susceptible insulin receptors. This in turn causes inappropriately elevated blood sugar levels.

Gestational diabetes generally has few symptoms and it is most commonly diagnosed by screening during pregnancy. Diagnostic tests detect inappropriately high levels of glucose in blood samples. Gestational diabetes affects 3-10% of pregnancies, depending on the population studied.

CLINICAL FEATURES OF DIABETES :

The clinical features of the two main types of diabetes are compared below. Comparative Clinical Features Of Type 1 and Type 2 Diabetes.

S.NO		TYPE-I	TYPE-II
1.	Age at onset	<40 years	>50 years
2.	Duration of symptoms	Weeks	Months to years
3.	Body weight	Normal or low	Obese
4.	Ketonuria	Yes	No
5.	Rapid death without Treatment with insulin	Yes	No
6.	Auto antibodies	Yes	No
7.	Diabetic complications at diagnosis	No	25%
8.	Family history of diabetes	Uncommon	Yes

The classical symptoms of thirst, polyuria, nocturia and rapid weight loss are prominent in type 1 diabetes, many of whom are asymptomatic or have non-specific complaints such as chronic fatigue and malaise.

Uncontrolled diabetes is associated with an increased susceptibility to infection and patients may present with skin sepsis (boils) and genital candidacies and complain of pruritus vulvae and balanitis. Patients with type 1 diabetes often have no physical signs attributable to diabetes, but weight loss is common.

The physical signs in patients with type 2 diabetes at diagnosis depend on the mode of presentation. More than 70% are overweight, and obesity may be central (trunkal or abdominal). Obesity is less common in developing countries.

Hypertension is present in 50% of patients with type 2 diabetes. Although hyperlipidaemia is also common, skin lesions such as xanthelasma and eruptive exanthemata are relatively rare.

CARBUNCLES;

Etymology

The word is believed to have originated from the Latin: *carbunculus*, originally a small coal; diminutive of *carbon-*, *carbo*: charcoal or ember, but also a carbuncle stone "precious stones of a red or fiery colour", usually garnets

DEFINITION;

It is a deep infection of a group of contiguous follicles accompanied by intense inflammatory reaction in surrounding and underlying tissues including subcutaneous fat. It occurs commonly in uncontrolled diabetic, patients with malnutrition or on prolonged steroid therapy. It manifests as a huge painful swelling in a localized area discharging pus from multiple follicular openings. The lesions occur on the nape of the neck, shoulders, hips and thighs. Carbuncle also can develop in other areas of the body such as the buttocks, thighs, groin, and armpits.

CAUSES OF CARBUNCLE;

Carbuncle spoils the skin's defensive barricade as a result certain skin problems for instance eczema and acne, makes an individual more vulnerable to carbuncles and boils. When several boils amalgamate to form one bump, it leads to the formation of carbuncle. It arises when various hair follicles become at once infected by the microorganism. The condition in which numerous carbuncles appear is called carbunculosis.

Other stimulating factors that may bring about carbuncle formation include

- Folliculitis
- Rash due to shaving
- Hair pulling
- Poor hygiene
- Poor nutrition
- Immunodeficiency state

Moreover diabetic patients or those suffering from HIV infection or AIDS are particularly at high risk of developing a carbuncle. The reason is that the body immunity is low and it is not able to fight against the infections. When a person is healthy with immunity it remains safe from lots of infectious microorganisms. The immune response within the body kills the invading microorganism. But when it is low, people become susceptible to a number of those infections known as opportunistic infections that cannot be occurred in a healthy person.

CERTAIN OTHER RISK FACTORS;

There are various risk factors associated with carbuncle formations. These include;

- Overall poor health
- Older age
- Chronic skin conditions
- Diseases of the kidney and liver
- Diabetes mellitus
- Skin damage as a result of an abrasive rubbing
- Treatment with immunomodulating agents

Carbuncle can also develop in otherwise healthy individual and is particularly common in people living in the dormitories, hostels or any such places.

SIGNS AND SYMPTOMS OF CARBUNCLE;

A carbuncle results into a more severe and the deeper sort of infection. It also heals slowly and is likely to leave a scar after healing.

SIGNS;

- A carbuncle size is just like a pea but it can be as a bigger size of golf ball.
- It usually grows faster
- It possesses white or yellow centre from which pus is oozing out.
- The area around it would be red and irritable
- There may be enlargement of the lymph nodes of the affected side.

SYMPTOMS

- There is a symptom of pain in the affected area by the carbuncle
- A person suffering from a carbuncle usually feels unwell.
- He/she may be having a fever with rigors and chills
- There is generalized body weakness and feeling of illness

PATOPHYSIOLOGY

For a bacterium to cause an infection, it must first gain entry into the skin. Individuals with skin rashes such as folliculitis, or cuts during practices such as shaving and friction due to clothing can also cause the skin to break. In such situations, bacteria such as *Staphylococcus aureus* can gain entry into the skin causing an infection

A carbuncle has several openings and is pus filled. Individuals with diabetes or compromised immune systems are more prone to contract carbuncles. Carbuncles more commonly develop on moist areas of the body which is apt for the growth and development of the bacteria. Body areas such as groin, mouth, thighs, nose and armpits are the common regions for development of carbuncles.

Pathogenesis:

- 1- Infection starts inside multiple hair follicles.
- 2- The pus will be under tension severe pain.
- 3- The pus may extruded along the fibrous strands connecting the hair follicles to the deep fascia involvement of S.C. tissues.
- 4- Gangrenous process occurs due to:
 - a- High tension inside follicles prevent blood supply
 - b- Thrombosis of the vessels.
 - c- Direct action of toxins on the tissues.
- 5- Amultilocular lesion will result which open to the surface at multiple points.
- 6- Rarely, the overlying skin will slough giving big ulcer "ulcerating carbuncle".

THE CARBUNCLES COMPLICATIONS;

If not properly managed, these carbuncles may lead to serious sequelae. Bacteria may be absorbed in the circulation and consequently cause sepsis. This is an overwhelming infection of the body characterized by fever, tachycardia, and chills. If untreated, it may lead to fatality.

Less serious complications include infections of the lungs, joints, heart, bones, blood and central nervous system. To be more specific, this skin condition, if neglected, may lead to complications; Encephalitis, Meningitis, Endocarditis, osteomyelitis and abscess formation.

PREVENTION;

- Practicing good personal hygiene is the basis for prevention of carbuncle and its recurrence.
- Individuals are advised to wash hands after using the bathroom and before eating.
- Regular bathing also keeps the skin free from bacteria.
- Individuals should also avoid squeezing boils in order to prevent spread of infection.
- It is also advised that clothes and towels should be regularly washed in hot water. In cases, when chances of developing carbuncles repeatedly are high, then antibiotics may be prescribed as a preventive regime.

SUMMARY:

Carbuncles are infectious and may spread by contact. Family members can develop carbuncles at almost the same time. Some individuals develop more than one carbuncle, such a condition is termed as carbunculosis. Carbuncles appear to be larger than furuncles and are filled with pus. The infection is deep rooted in the skin and includes hair follicles as well. Such a type of condition can turn painful and can be accompanied by fever.

DIAGNOSING CARBUNCLES;

Physical examination is of extreme importance. carbuncles are diagnosed and assessed based on their appearance and pertinent physical examination findings.

It is important to keep track of how long you had the carbuncle. if it lasted longer than two weeks. You should also mention if you've had the same symptoms before.

If you keep developing carbuncles. It may be a sign of other health issues. such as diabetes. it may want to run urine or blood tests to check your overall health.

CRITERIA FOR THE DIAGNOSIS OF DIABETES MELLITUS :

The revised criteria for the diagnosis of DM emphasize the FPG (fasting plasma glucose) as the most reliable and convenient test for diagnosing DM in asymptomatic individuals. A random plasma glucose concentration >11.1 mmol/L (200 mg/dL) accompanied by classic symptoms of DM (polyuria, polydipsia, weight loss) is sufficient for the diagnosis of DM. Oral glucose tolerance testing, although still a valid mechanism for diagnosing DM, is not recommended as part of routine screening.

GLYCATED HEMOGLOBIN: HBA1C :

Glycated hemoglobin provides an accurate and objective measure of glycaemic control over a period of weeks to months. This can be utilized as an assessment of glycaemic control in a patient with known diabetes, but is not sufficiently sensitive to make a diagnosis of diabetes and is usually normal in patients with impaired glucose tolerance.

URINE TESTING :

i. GLUCOSE :

Testing the urine for glucose is the usual procedure for detecting diabetes, using sensitive glucose-specific dipstick methods. If possible, testing should be performed on urine passed 1-2 hours after a meal since this will detect more cases of diabetes than a fasting specimen. Glycosuria always warrants full assessment.

The greatest disadvantage of using urinary glucose as a diagnostic or screening procedure is the individual variation in renal threshold. Apart from diabetes, the most common

cause of glycosuria is a low renal threshold for glucose, which is common during pregnancy and in young people, and is a more frequent cause of glycosuria than diabetes.

ii. Ketones

iii. Protein

iv. Blood Lipids

LABORATORY EVALUATION :

If the patient is a known diabetic, the following tests are to be advised

- Fasting blood sugar (FBS)
- Postprandial blood sugar (PPBS)
- Glycated hemoglobin (HbA1c)
- Blood urea
- Serum creatinine
- Urine protein
- Haemogram
- Urine complete examination
- Lipids (total cholesterol, triglycerides, HDL, LDL)
- Liver function tests (LFT)

If the patient is not a known diabetic, the following tests can be advised

- Glucose tolerance test (GTT)
- Glycated hemoglobin (HbA1c)
- Blood urea
- Serum creatinine
- Urine P/C ratio
- Urine complete examination
- Lipids (total cholesterol, triglycerides, HDL, LDL)
- Liver function test(LFT)
- ECG

PATHOGENESIS OF MADAKKU PILAVAI

PATHOGENESIS OF MADAKKU PILAVAI

குறியுடனே மேகந்தான் கொடுமை செய்து

குறைந்து வந்து வருந்தாது வெல்லாங் குன்றிப் போகும்

-பதினெண் சித்தர் நாடி நூல்

The whole ancient medicine is based upon the 'Mukkutra verupadu'. Due to intrinsic and extrinsic factors, the Pitham in the body gets altered. This is followed by the derangement of metabolic energy caused by the involvement of Vatham. Finally the function of Vatham and Kabam also altered resulting in affecting normal structure and functions of the seven thathus. Gradually the body becomes emaciated and they are excreted through urine.

For this there must be the involvement of three doshas and their subdivision especially, the sub division of Vatham i.e. the five types of vayus. The severity of disease is measured by the defective functions of three doshas, five vayus and seven thathus. Clinically this can be indicated by the deficiency of kukkianal leading to emaciation of seven udal kattugal and other complications associated with this disease.

TABLE- 6.UDAL THATHUKKAI:

These are seven basic principles which constitute the entire body.

Decreased and increased features of Udal Thathukkal

S.NO	UDAL THATHUKKAL	INCREASED FEATURES	DECREASED FEATURES
1.	SAARAM	Leads to a disease identical to the increase in kabam like loss of appetite, profuse salivation, depression etc.	Dryness of skin, tiredness, diminished activity of sense organs, loss of weight, lassitude and irritability while hearing louder sounds.
	SENNEER	Increased blood pressure, boils in eye brow, scalp, neck, lips and legs, skin, jaundice, haematuria, colic pain	Eagerness to sour and foods, Tiredness, lassitude, cold & anemia
	OON	Deposition of fat around the neck, cheeks, abdomen, thigh and genitalia.	Tiredness, , Muscle wasting
	KOZHUPPU	Identical feature of increased oon, associated with dyspnoea on exertion	Loin pain, splenomegaly and emaciation.
	ENBU	Sclerotic changes in bone	Joint pain, falling of teeth, falling and splitting of hairs and nails.
	.MOOLAI	Heaviness of the body and eyes, swollen interphalangeal joints, oliguria and non-healing ulcers.	Osteoporosis & Blurred vision.
	SUKKILAM (OR) SURONITHAM	Increased sexual activity, urinary calculi.	Pain in the genitalia, failure in reproduction

In case of Megam, all seven thathus are affected.

1. Saram-Tiredness
2. Senneer-Reduced strength
3. Oon-Weight loss
4. Kozhuppu-Weight loss or Obese
5. Enbu-Joint pain
6. Moolai –Non-healing ulcers

7. Sukkilam-Body becomes dry and loses its lusture due to excessive flow of urine mixed with vital fluid.

In Case of Megam, frequent passage of increased amount of urine results in gradual diminution of seven thathus.

PINIYARI MURAIMAI (DIAGNOSIS)

Pini means the disease which affects the body. Any interruption of the normal functions of any body part, organ or system.

‘Ari’ means identify. ‘Muraimai’ means Methodlogy. Piniyari muraimai is the method of diagnosing the disease affecting the people. It is based upon the following aspects:

1. Poriyaalarithal
2. Pulanaalarithal
3. Vinaathal
4. Envagaithervugal
5. Naadiparitchai

The above principles correspond to the methodology of inspection, palpation and interrogation of modern medicine.

PORIYAALARITHAL AND PULANAALARITHAL :

GNANENDRIYAM (SENSORY APPARATUS)

TABLE-7 GNANENDRIYANGAL

ORGAN	SENSE
Mei(skin)	Touch
Vaai(mouth-tongue)	Taste
Kan(Eye)	Vision
Mooku(Nose)	Smell
Sevi(Ear)	Hearing

TABLE-8 KANMENDHRIYAM (MOTOR ACTIVITIES) :

Table.8 Kanmendhriyangal

ORGAN	SENSE
Vai(Mouth)	Speaking
Kai(Upper limp)	Movement of the upper limbs
Kaal(lower limb)	Movement of the lower limbs
Eruvai (Anal orifice)	Defecation
Karuvai(Reproductive orifice)	Reproduction

Pori is considered as the five sense of perception namely Nose, Tongue, Eye, Skin and Ear .While Pulan are five objects of senses. They are smell, Taste, Vision, Sensation and sound. Physician's pori and pulan are used as the tools for examining the pori, pulan of the patient. Vinaathal is obtaining the information regarding the history of the disease, its clinical features etc... from the patient or his immediate relatives who are taking care of him , when the patient is not in a position to speak or if the patient is a child.

VINATHAL (INTERROGATION) :

It has a procedure for gathering information about the patients name, age, occupation, nativity, socio economic status, family history, dietary habits, allergic factors, period of suffering from the complaints, history of previous episodes, relevant history of habits and treatment etc...from the patient or from his immediate relatives, if the patient is not in a position to speak or if the patient is a child.

In Madhumegam vinathal is very much useful for Piniyarimuraimai, occupation, family history, dietary habits, proper treatment and socio economic status are very important for Madhumegam.

ENVAGAI THERVUGAL (EIGHT FOLD EXAMINATION) :

Eight different kinds of tests to be applied or attended by a physician before inward a correct diagnosis. These are also called Attavitha Paritchai or Attasthanna Parikshai. Envagai thervugal is considered as Physician's tool for diagnosing diseases.

இருமியே பித்தமும் வாதமும் கூடில்
மருவுல மேகம் வாருதி போலாகும்
உருவம் வேறாகு முண்டவுடற் காய்ந்திடும்
உருகவே வுனோடு உறிஞ்சி இனிக்குமே

-திருமூலர் நாடி.

The above stanza describes that excessive elimination of urine containing sugar are always primarily due to combined vitiation of Vatha, Pitha functional factors in the body. The pitha and vatha vitiation is indicated clinically by excessive hunger, thirst, over eating, emaciation and passing of large quantity of urine.

பார்த்திடு மூன்றும் பதிந்து மெலிந்து நிற்கில்
தேர்ந்திடு மேகம் உந்தோன்றியே பொருத்தி மெய்யில்

-திருமூலர் நாடி

The above lines indicate that when there is any functional alteration of the Vatham, Pitham and kabam all the full clinical pictures of Meganeer appears.

இனிக்கின்ற வாதத்திடை சேரில் ஐயந்தான்
பனிக்கின்ற கள்ளுப் பதனிபோல் நீரோடும்
கனிக்கின்ற மேனிகரைந்து வெளுப்பேறும்
கனிக்குமது மேகந் தப்பாதையாமே.

-திருமூலர் நாடி

The above poem indicates that initially vadham and kabam get deranged leading to vitiation of pitha thathu also finally and when the aggravated Vatha naadi blends with the aggravated kaba naadi, there is genesis of Mega Neer in the body.

The meganeer thus formed and eliminated has the consistency and appearance of toddy. The affected individual's body is emaciated thin and pale. This is the typical clinical picture of Megam.

துரணமுடன் நீர்ப்பாடு கெர்ப்பப் பாடானாற்
சொல்லுகிறேன் நாடியெல்லாந் கழன்று காணும்
-பரிபூரண நாடி

In the above lines, it is said that all the three Naadi are feeble and weak in Mega Neer.

பற்பிடிக்க மேகம் என்றால் பித்தமீறும்
பாலகனே காங்கை கொண்டு நீராம் பாரே
-பரிபூரண நாடி

By the above lines it is clearly stated that aggravation of pitha naadi results in increased udal kaangai. Eventually this leads to emaciation of seven udalthathus resulting in Meganeer.

நீர் மேகமானவர்க்கு நாடி காணும்
நிர்ணயமாய் நாடியெல்லாம் பெலமே கெட்டுக்
கார்மேகம் போல வந்த எரியின் மேலே
கண்டு விழும் புழுப்போலவே புரண்டு காணும்

-பரிபூரண நாடி

All three Naadi are felt feeble in those suffering from Mega noi. The character of the pulse is compared to that of a writhing movement of a worm that has fallen into the fire.

2. SPARISAM (PALPATION)

The following points are elicited by Sparse, the temperature of skin (Heat or cold), smoothness, roughness, softness, sweat, dryness, sensation.

3. MALAM (FAECES)

In the examination of Malam, Niram (colour), Nurai (froth), Erugal (Solid), Elagal (Semisolid or liquid), quantity (increased or decreased) smell can be noted other examination like Diarrhea, presence of blood, mucus, undigested matter in the stools and odour can also be studied.

4.MOOTHIRAM (URINE)

In the examination of urine, colour, odour, quantity of urine, the presence of froth, deposits, blood, pus, inorganic sediments, abnormal constituents such as sugar, protein etc... and the frequency of micturitions are to be noted. The diagnosis is usually arrived at by methods of urine examinations called

- i) Neerkkuri
- ii) Neikkuri

i. NEERKKURI

The following parameters in the urine should be examined. Niram Indicates the colour of the urine voided.

Edai - Indicates the sp. gravity of urine (increased or decreased qty)

Manam - Indicates the smell of urine voided.

Nurai - Indicates the frothy nature of urine voided

Enjal - Indicates the quantity of urine

Neerkkuri of Megam is studied as follows:

NIRAM - Clear & white. This is due to kabam vitiation and it is not amenable to treatment.

EDAI - Urine is thick and its consistency is like that of honey.

MANAM - Smells like honey. Ants and flies are attracted towards the voided urine. It indicates that it contains some sweet substances which attract the ants and flies.

NURAI - It is frothy at the time of voiding.

If the urine is slightly transparent, it indicates the vitiation of Kabam in which the prognosis is said to be very bad. Efficient and adequate timely treatment does not give relief to the patient.

The above finding of Neerkkuri in Megam is described in Siddha texts as follows:

புண்ணீர் மேகப்புண் கண் மாப்பிணி
நண்ணில் நித்திய நாதியம் ஆமெனும்

-நித்திய நாதீயம்

ii. NEIKKURI:

A drop of Gingelly oil is dropped into a wide mouthed vessel containing the urine to be tested and kept it under the sunlight in a silent place. The variations of the three thatus in disease can be diagnosed by the behavior of Gingelly oil on the surface of urine.

“அரவென நீண்டினஃதே வாதம்”

The drop of oil lengthening like a snake indicates Vatham

“ ஆழிபோற் பரவின் அஃதே பித்தம்”

The drop of oil spreading like a ring it indicates Pitham

“முத்தொத்து நிற்கின் மொழிவதன் கபமே”

If the oil drops assumes a pearl shape it is presumed to be Kabam. By the careful examination of the urine with gingelly oil, the physicians can know whether the disease is curable or not. For this purpose Siddhars have explained various spreading tendencies of oil on urine surface to define the prognosis of the disease.

DIFFERENTIAL DIAGNOSIS

DIFFERENTIAL DIAGNOSIS;

மடக்குப் பிளவை

மடக்குப் பிளவை குறித்தன்மை

வருமே கீலில் தசையிடங்கள்

அடிக்கணகன்று சுற்றி யேதான்

அணைகளுயர்ந்து நடுப்பள்ளம்

படவே விசுந்து கருஞ்செம்மைப்

பாங்காய் வியர்வை வலியுண்டாய்

மடக்குக் கவிழ்ந்தாற்போல் வடிவாம்

வருமே நீரும் எனக்கூறே

- சித்த மருத்துவம் .

As per Siddha Maruthuvam text, “**Madakku Pilavai**” is characterized by lumpy swelling is presented in joints and muscles with reddish black discoloration, warmth and pain.

பேய்ச் சுரைப் பிளவை

பேய்ச்சுரைப் பிளவை பேசின்

பிறப்பிடம் நெருப்பாற் சுட்ட

தாய்மிகு எரிச்ச லுண்டாய்

தருஞ்செம் மைகரு மைநிறமும்

ஆய்வருங் கொப்பு ளங்கள்

அவைகள்பேய்ச் சுரைப்பிஞ் சாகும்

காய்வுநோ மயக்கஞ் சோர்வு

கழிதல்நீர் வேட்கை சோர்வு.

As per Siddha Maruthuvam text,“**Pei surai pilavai**”is characterized by reddish black pustules any where over the body ,pain, fever ,giddiness tiredness ,diarrhea and Pain.

SIMILARITIES

MADAKKU PILAVAI	PEI SURAI PILAVAI
படவே விசுந்து கருஞ்செம்மைப் Reddish black discoloration	தருஞ்செம் மைகரு மைநிறமும் Reddish black discoloration
பாங்காய் வியர்வை வலியுண்டாய் Pain	நோவு Pain

DISSIMILARITIES

MADAKKU PILAVAI	PEI SURAI PILAVAI
வருமே கீலில் தசையிடங்கள் அணைகளுயர்ந்து Lumpy swelling presented in joints and muscles	கொப்புளங்கள் Pustules
வருமே நீரும் watery discharge	மயக்கஞ் சோர்வு Giddiness

கட்டிப் பிளவை(விப்புருதிக் கட்டி)

கட்டிப் பிளவைதனைக் கூறின்
கட்டியாயுள் வெளியிரண்டில்
கெட்டியாய் மிகு நோயினோடு
கிளர் நீர் வட்டவடிவங்கள்
திட்டமாய் பெற்றும் புடைத்துச்
சேர்ந்த விடத்தில் இருப்பொன்று
விட்டவ் விடத்தை ஓடுவது
மேவு மென்று விளம்பினரே.

As per Siddha Maruthuvam text, “**Katti Pilavai**” is characterized by Abscess under the skin and muscles ,with severe pain and pus discharge.

SIMILARITIES

MADAKKU PILAVAI	KATTI PILAVAI
பாங்காய் வியர்வை வலியுண்டாய் Pain	கெட்டியாய் மிகு நோயினோடு Pain
அணைகளுயர்ந்து Lumpy swelling	வட்டவடிவங்கள் திட்டமாய் பெற்றும் புடைத்துச் Lumpy swelling
வருமே நீரும் watery discharge	கிளர் நீர் Pus discharge

DISSIMILARITIES

MADAKKU PILAVAI	KATTI PILAVAI
படவே விசுந்து கருஞ்செம்மைப் Reddish black discoloration	கட்டியாயுள் வெளியிரண்டில் Abscess in skin and muscles

வலைக் கண் பிளவை(வலைக் கண்கட்டி)

வலைக் கண் பிளவை வழுத்திவிடின்

வன்மை யாக வெழும்பிமரத்

தலைக்கண் வேர்போல் பலகொடிகள்

சேர்ந்து குழம்பு நீர்சொரிந்து

நிலைத்து நாட்கு நாள்பரவி

நேரும் வலையைப் போல்கண்கள்

வலிக்குஞ் சிலகா வில்லாமை

வருநோய்ப் புரையும் போமன்றே.

As per Siddha Maruthuvam text,“Valai kan pilavai” is characterized by abscess ,burning sensation ,pricking pain and pus discharge.

SIMILARITIES

MADAKKU PILAVAI	VALAI KAN PILAVAI
பாங்காய் வியர்வை வலியுண்டாய் Pain	வலிக்குஞ் சிலகா லில்லாமை Pain
வருமே நீரும் Watery discharge	சேர்ந்து குழம்பு நீர்சொரிந்து Pus discharge

DISSIMILARITIES

MADAKKU PILAVAI	VALAI KAN PILAVAI
வருமே கீலில் தசையிடங்கள் அணைகளுயர்ந்து Lumpy swelling presented in joints and muscles	வருநோய்ப் புரையும் போமன்றே. Whole in the abscess

கூட்டுப் பிளவை(புத்திராதிக் கட்டி)

கூட்டுப் பிளவை தனையுரைக்கின்

கூடு பலவாங் கொப்புளங்கள்

காட்டிச் சிலபல பிளவைகளே

கலந்தொன் றாக திரள்வதுவாம்

வாட்டி வுடலை மிகவெ ரிச்சல்

வருவித் தந்த நோயினனை

நாட்டி லிருப்பா நோவென்று

நாடச் செய்யு மீதறியே.

As per Noi Naadal-Part II text “**Kootu Pilavai**” is characterized by pustules,pain and burning sensation.

SIMILARITY

MADAKKU PILAVAI	KOOTU PILAVAI
அடிக்கண்கன்று சுற்றி யேதான் அணைகளுயர்ந்து Abscess	கூடு பலவாங் கொப்புளங்கள் Pustules
வலியுண்டாய் Pain	நோவென்று Pain

DISSIMILARITIES

MADAKKU PILAVAI	KOOTU PILAVAI
கருஞ்செம்மைப் Reddish black discoloration.	வாட்டி வுடலை மிகவெ ரிச்சல் Burning sensation.

LINE OF TREATMENT & DIETARY REGIMEN

LINE OF TREATMENT

The Siddha treatment is not only for removal of disease, but for the prevention and improving the body condition.

வைத்தியச் செயல் வைத்தியமாமே
பலவாறு மாறுதலடைந்து கெடுக்கின்ற உடலை நிலைக்கும்
மாறுதல் அணுகாணும் ஒரே தன்மையாக
செய்தும் அதனாலாள் செயிலக் குறைவின்றி
நடக்கச் செய்வது தெதுவோ அதுவே வைத்தியம்
-திருமூலர் 800.

This is said as follows:

- a. Kaappu (Prevention)
- b. Neekkam (Treatment)
- c. Niraivu (Restoration)

Siddha system has unequivocally stated that even during the time of conception, some defects would have crept into the fertilized embryo.

The defects form the basis for the manifestation of certain constitutional diseases later on during the existence of the individual.

The disease for which no known cause is given is designated as diseases of idiopathic origin or hereditary disorders. In Siddha system such diseases are described as Karma noikal.

KAAPPU (PREVENTION) :

To prevent karma (idiopathic or hereditary diseases) the Siddha science has advocated preventive measures to be taken into consideration even while arranging for marital alliances the object of which is to be get healthy pregnancy to build a robust and healthy nation. The rules affecting healthy alliances have been elaborately described in the science of Astrology. They married on the basis of physical, emotional, intellectual and social compatibility.

NEEKKAM (TREATMENT) :

The three uyir thathus which are responsible for organization, regularization and integration of the bodily structures and their physiological functions are always kept in a

state of equilibrium by word, thought, deed and food of the individual. The general etiological factors for constitutional discomfort is said to be incompatible diet, mental and physical activities. When treating for removal of the diseases, the following principles must be noted.

“நோய் நாடி நோய்முதல் நாடி அது தணிக்கும்
வாய்நாடி வாய்ப்பச் செயல்”.

“உற்றானளவும் பிணி யளவுங் காலமுங்
கற்றான் கருதிச் செயல்”.

So it is essential to know the disease and the cause for the onset of the disease, before treating the patient so also the nature of the patient, the severity of illness, the season and time of the occurrence of the diseases must be observed.

NIRAIVU (RESTORATION) :

Patients need good education, motivation and persuasion to accept the eventuality of Diabetes and prepare for a lifestyle that provides optimization of metabolic status. For Megam, suitable effective medicinal preparations have to be administered in the beginning itself to neutralize and eliminate the megam from the body tissues.

Siddhars aimed at bringing the three doshas in equilibrium in the treatment of disease. Towards this end we treat with herbs and mineral preparations are used, while treating Madhumegam. Siddhars prescribed a minimum dosage initially and then increased the dose gradually.

There are thousand preparations for Madhumegam and for its complications found in various Siddha text books kudineer, chooranams, Ilahams, Parpam and chendooram.

LINE OF TREATMENT ACCORDING TO THERIYAR MARUTHUVA BHARATHAM :

In Theran maruthuva baratham, it is said that the disease has been caused by excessive sexual indulgence which gradually affects all the seven thaathus and finally sets in the genito urinary system resulting in excessive secretion of urine, tasting sweet as honey.

கன்னி மயக்கத்தால் கண்டிடும் மேகமே
கிரந்தி புண்ணிரண மேக கீசகமென்னும் துன்மார்க்கன்
அருந்ததியென்றும் பாஞ்சாலியன்னையைக்
கண்ணுற்றானே

-தேரையர் மருத்துவ பாரதம்

In Theran maruthuva baratham, Megam is alluded to Keesagan and Mathumegam is alluded to Sagehavan, are also allegorically equated to certain metals namely Rasam (Mercury) for Bheeman, Dharmar for Ayam (Iron) and other brothers for steel, Gold, Lead and copper.

கொன்றை மாலையைப் போட்டு சயிந்தவனைக்
கொல்லெனக் கொல்லமன்ன மல்ல தப்படியே
ஆகுதென்சிந் துபதியபீமனை யடித்தல்
முடித்தல் படிக்களே விழுவே.

-தேரையர் மருத்துவ பாரதம்

Arjuna was wearing the kontraimaalai at the time of killing Sagehavan by his weapon pasupathasthram which is compared to Passupathasthra maathirai. Paasu pathasthra mathirai is administered along with Kontrai flower juice as appropriate anupaanam for Madhumegam and its complications.

DIETARY REGIMEN

VEGETABLES :

Table: 9 Vegetables

EAT	AVOID
Brinjal, Broad beans, Bitter gourd, Lady's finger, Cluster beans, Onion, Turnip, Cauliflower, White pumpkin, Cabbage, Drumstick, Spadix of the Plantain, Cucumber, Beans, Green vegetables, Pulses.	Unripe plantain, Potato, Carrot, Beetroot, Elephant yam, Colachasia, Sweet pumpkin, Tubers, Tender coconut, Radish, Groundnut, Cashew nut.

FRUITS

Table: 10 Fruits

EAT	AVOID
Small Apple 1, Papaya 1piece, Small Orange, Muskmelon 1 piece, small Pear (1/2) piece, Guava small piece 1.	Dates, Jackfruit, Dried fruits, Banana, Tinned fruits, Apple, Sapota, Mango, Guava .

DRINKS

Table: 11 Drinks

EAT	AVOID
Eat Avoid Coffee, Tea without sugar, Soda, Lime juice, Soup, Tomato juice, Tender coconut (If sugar level is controlled)	Sugar items, Honey, Oval, Horlicks, Bournvita

NON VEGETARIAN FOODS

Table: 12 Non Vegetarian Foods

EAT	AVOID
Egg yolk	Dry fish, Meat, Chicken

OTHER FOODS

Table :13 Other Foods

EAT	AVOID
Chutney items: Tomato, Mint, Coriander, Onion, Sambar, Gingelly oil, Sesame, cotton seed, rice bran and safflower oil. Salt up to 6g/day is permitted. Restrict pickles, papad and salty processed food.	Jaggery, Sugar candy, Badam, Cashew nut, Cake items, Ice cream, Beetle, areca nut.

Siddha system lays a great importance on the observation of rules regarding diet in everyday life because the Siddha system has rightly realized that the basic factor of the body is food. That is Annamayakosam is the first among the five kosams constituting our physical and mental existence. To prevent the occurrence of the disease, elaborate inference regarding food item in our daily diet is given in the textbook of Siddha.

மருந்தென வேண்டாவாம் யாக்கைக்

கருந்தியதற்றது போற்றி யுண்ணின்.

தீயளவு அன்றி தெரியான் பெரிதுன்னின்

நோயளவு இன்றிப் படும்.

மாறுபாடில்லாத வுண்டி மறுத்துண்ணின்

ஊறுபாடி ல்லையு யிர்க்கு.

-திருக்குறள்

Generally when a medicine is administered Siddha physician prescribes diet regimen according to the nature of the medicine and severity of the disease. As over intake or consuming unbalanced and incompatible diet is considered to be the prime causative factor for upsetting the tridosha balance leading to the manifestations of various ailments. Regarding diet regimen in Megam there is special instructions found in Agasthiyar kanma kaandam and Agasthiyar Ayulvetham-1200.

LIST OF ARTICLES RECOMMENDED FOR MEGAM PATIENTS:

- i. Kelvaragu (Ragi)
- ii. Sirukeerai (Amaranthus)
- iii. Murungaipoo
- iv. Gothumai (Wheat)
- v. Ponnanganni (Sessile plant)
- vi. Pagal (Bittergourd)
- vii. Pudal (Snakegourd)
- viii. Avarai (The Tanners Cassia)
- ix. Thuthuvalai (Climbing Brinjal)
- x. Peerku (Ridgedgourd)
- xi. Athipinchu (Cluster fig)
- xii. Venthayam (Greek hayes)
- xiii. Murungai (House radish)
- xiv. Ellu (Gingelly)
- xv. Sirupayaru (Green gram)

DIET SHEET

1400 calories- Diabetic- Low cholesterol diet-Vegetarian

Morning: 6:00am to 7:00am

Coffee /Tea -1 cup (without sugar)

Breakfast: 8:00am to 9:00am

Idlies-3, Chapathi-3, Dosai-2, Pongal-3/4 cup, Dhal vada-1, Chutney, Sambar-1/2 cup

Mid-morning: 10:30 am to 11:00 am

Vegetable half boiled-1 cup /vegetable salad, Vegetable soup, Buttermilk 1 cup/
Lime / Tomato juice/ Coffee /Tea -1 cup (without sugar)

Lunch: 1:00 pm to 2:00 pm

Rice-1 cup or Wheat -1 cup/ chapathi-1, Sambar ½ cup, Green leafy ½ cup
/Rasam-2 cup /vegetable poriyal /skimmed curd-1 cup /buttermilk -2 cup Whole grams-
1kgs/day (green gram, Bengal gram, Cow pea /Rajmah)

Tea Time: 3:00 pm to 4:00 pm

Whole wheat bread-1 slice with Gram /Dhal/ vegetable filling or Wheat rava
kitchadi -1/2 kgs or Rice flakes Uppuma-1/2kgs, Coffee /Tea -1 cup (without sugar)

Dinner: 8:00 pm to 9:00 pm

Same as Lunch or Chappathi -3, Dhal /Vegetables (salad, Kootu, Poriyal)

Bed Time: 1 cup of Skimmed milk (without sugar)

Oil for Cooking:

Groundnut oil /Gingelly oil /Sunflower oil -10gms/day' Skimmed milk allowance
-500ml /day

Yoga therapy :

Yoga is India's unique contribution to the world. The word Yoga is derived from the Sanskrit word 'Yuj' which means blind, join or attach. Yoga therefore is an art which brings an incoherent and scattered mind to a reflective and coherent state.

Yogaasana is a kind of Yogic exercise. There are innumerable types of Aasanas. According to Thirumoolar,

இயம நியமமே எண்ணிலா ஆதனம்
நயமுறு பிராணா யாமம்பிரத் தியாகாரஞ்
சயமிகு தாரணை தியானஞ் சமாதி
அயமுறும் அட்டாங்க மாவது மாமே

- திருமூலர்

Each Yogasanam is indicated for a definite effect in a particular region of the system by stimulating the internal organs to function in a normal way and to coordinate bodily functions. Villaasanam and Mayuraasanam helps in the treatment of Mathumegam.

- ❖ In Mayuraasanam the presence of conjoined elbow against umbilicus region activates the pancreas to activate more.
- ❖ In Villaasanam the whole abdominal organs including the pancreas are properly tuned and stimulated well by the increase of intra abdominal pressure motivated towards pancreas.
- ❖ The following Aasanas are advised for controlling Madhumegam (Diabetes mellitus)
 - ❖ Padmaasanam
 - ❖ Balasanam
 - ❖ Vajrasanam
 - ❖ Halasanam
 - ❖ Chakkaraasanam
 - ❖ Mathsyaasanam
 - ❖ Pachimothasanam
 - ❖ Pujangasanam
 - ❖ Sarvangasanam
 - ❖ Dhanurasana
 - ❖ Udiyan Bandh
- ❖ All these asanas should be practiced daily and regularly which can be of immense value to patients of Mathumegam. All these asanas activate the pancreatic cells and have a curative value. These help in restoring cellular function of the pancreas and activate them to work more.






TABLE-14 Pictures of Asanas

1.	Padmasanam		7.	Pachimothasnam	
2.	Balasanam		8.	Pujangasanam	
3.	Vajrasanam		9.	Sarvangasanam	
4.	Halasanam		10.	Dhanurasanam	
5.	Chakrasanam		11.	Udiyan bandh	
6.	Mathsyasanam				

MUDRAS FOR DIABETES MELLITUS

- Surya mudra
- Prana mudra
- Apana mudra
- Gyana mudra
- Linga mudra

PICTURES OF MUDRAS

1.	SURYA MUDRA	 A photograph showing two hands held palm-to-palm, fingers pointing downwards. The index and middle fingers of each hand are crossed at the tips, with the thumb tucked in towards the palm.
2.	PRANA MUDRA	 A photograph of a right hand with the index, middle, and ring fingers joined at the tips and touching the thumb tip. The little finger is extended straight out to the side. The hand is shown against a red background.
3.	APANA MUDRA	 A photograph of a right hand with the index, middle, and ring fingers joined at the tips and touching the thumb tip. The little finger is extended straight out to the side. The hand is shown against a pink background.
4.	GYANA MUDRA	 A photograph showing two hands. The left hand has the index and middle fingers joined at the tips and touching the thumb tip. The right hand has the index and middle fingers joined at the tips and touching the thumb tip. The hands are shown against a light grey background.
5.	LINGA MUDRA	 A photograph of a right hand with the index, middle, and ring fingers joined at the tips and touching the thumb tip. The little finger is extended straight out to the side. The hand is shown against a light grey background.

**MATERIALS
AND
METHODS**

MATERIALS& METHODS

STUDY TYPE

Observational type of study

STUDY DESIGN

Randomized case control study

STUDY PLACE

Out patient &In patient Department, NIS, Chennai

SAMPLE SIZE

Patients - 30

Healthy Volunteers – 30

SELECTION CRITERIA

INCLUSION CRITERIA :

Group I

Age 20-65

Symptoms of diabetes mellitus

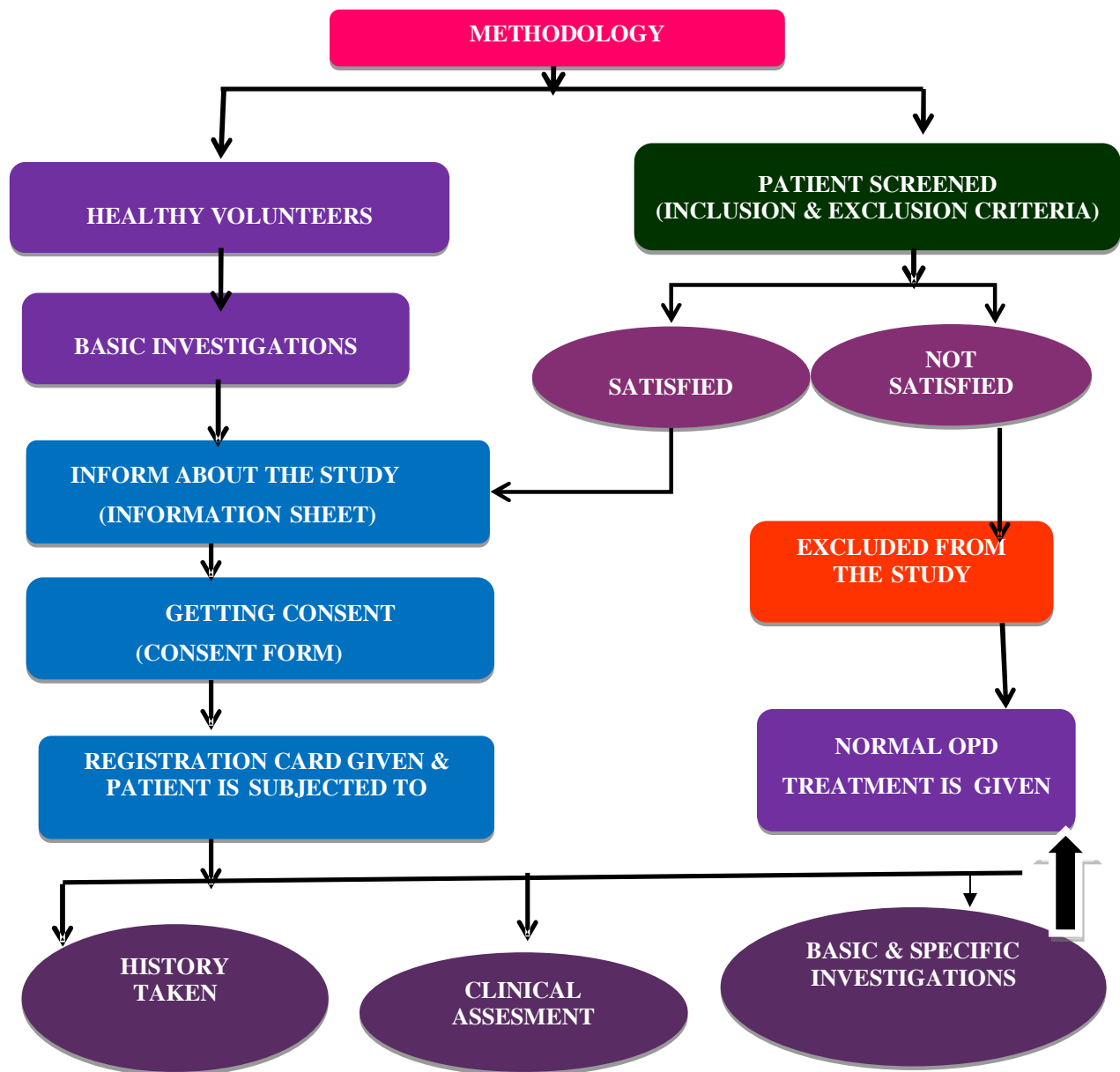
Group II

- ▶ Lumpy swelling presented over the joints and muscle
- ▶ Reddish black discolouration
- ▶ Warmth
- ▶ Pain

EXCLUSION CRITERIA :

- Any Major systemic illness except Diabetes Mellitus
- Signs of septicemia
- Vulnerable group

Patients who fulfill Group-I and any of the 3 criteria in Group-II will be included in this study



INVESTIGATIONS :

A .SIDDHA PARAMETERS:

Establishing the diagnostic characteristics of “Meganeer Noi Avathaigal” through

1. EIGHT FOLD EXAMINATION :

NAADI

- ❖ Naadi nithanam
- ❖ Naadi nadai

SPARISAM

- ❖ Veppam
- ❖ Viyarvai
- ❖ Thodu Vali

NAA (TONGUE)

- ❖ Maa padithal
- ❖ Niram
- ❖ Suvai
- ❖ Vaineer Ooral
- ❖ Vedippu

NIRAM (COMPLEXION)

- ❖ Karuppu
- ❖ Manjal
- ❖ Veluppu

MOZHI (VOICE)

- ❖ Sama oli
- ❖ Urattha oli
- ❖ Thazhntha oli

VIZHI (EYES)

- ❖ Niram
- ❖ Kanneer Vadithal
- ❖ Erichal
- ❖ Peelai Seruthal

MALAM (STOOLS)

- ❖ Niram
- ❖ Sikkal
- ❖ Sirutthal
- ❖ Kalichal
- ❖ Seetham

MOOTHIRAM (URINE)

1. NEERKURI

- Niram
- Manam
- Edai
- Alavu
- Nurai
- Enjal

2. NEIKURI

2. MANIKKADAINOOL

3. YAKKAI ELAKKANAM

4. ASTROLOGY

B . MODERN LABORATORY INVESTIGATIONS :

1. BLOOD :

- ❖ Hb
- ❖ TC
- ❖ DC
- ❖ ESR
- ❖ FBS
- ❖ PPBS
- ❖ S. Cholesterol

URINE :

- ❖ Albumin
- ❖ Sugar
- ❖ Deposits

SPECIAL INVESTIGATIONS :

BLOOD :

- ❖ HBA1C
- ❖ GTT (For fresh diagnosis)
- ❖ Blood Urea
- ❖ Serum Creatinine
- ❖ FBS
- ❖ PPBS

DATA COLLECTION :

Case Record Form

DATA MANAGEMENT :

- ❖ After enrolling the patient in the study, a separate file for each patient will be opened and all forms will be filed in the file. Study No. and Patient No. will be entered on the top of file for easy identification and arranged in a separate rack at the concerned OPD unit. Whenever study patient visits OPD during the study period, the respective patient file will be taken and necessary recordings will be made at the case record form or other suitable form.
- ❖ The Data recordings will be monitored for completion and compliance of patients by HOD and Sr. Research Officer (Statistics). All forms will be further scrutinized in presence of Investigators by Sr. Research Officer (Statistics) for logical errors and incompleteness of data before entering onto computer to avoid any bias. No modification in the results is permitted for unbiased report.
- ❖ Any missed data found in during the study, it will be collected from the patient, but the time related data will not be recorded retrospectively
- ❖ All collected data will be entered using MS access software onto computer.
- ❖ Investigators will be trained to enter the patient data and cross checked by SRO

STATISTICAL ANALYSIS :

All collected data will be entered into computer and the neikuri shape will be recorded as per literature. The shape association with Normal healthy individuals / Madhumegam will be descriptively analyzed and presented. The chi-square, Mantel-Hanzel chi-square, Proportion test will be used to determine the significance of a variable. Multivariate analysis – Factor analysis will also be performed to determine the factors associated with neikuri shapes. Probability less than 0.05 will be taken as significance.

ETHICS ISSUES

1. Patients will be examined and screened unbiased manner and will be subjected to the criteria.
2. Informed consent will be obtained from the patient in writing, explaining in the understandable language to the patient.
3. The data coabout the diagnosis.
4. To prevent any infection, while collecting blood sample from the patient, only disposable syringes, disposable gloves, with proper sterilization of lab equipments will be used.
5. This study involves only llected from the patient will be kept confidential. The patient will be explained the necessary investigations (mentioned in the protocol) and No other investigation would be done.
6. Normal treatment procedure followed in NIS will be prescribed to the study patients and the treatment will be provided at free of cost. There will be no Infringement on the rights of patient.

**OBSERVATION
AND
RESULTS**

TABLE-15.AGE DISTRIBUTION

AGE DISTRIBUTION			
SEX	AGE		
	0-33	34-66	67-100
Male	1	17	0
Female	1	11	0
Total	2	28	0
Percentage	7	93	0

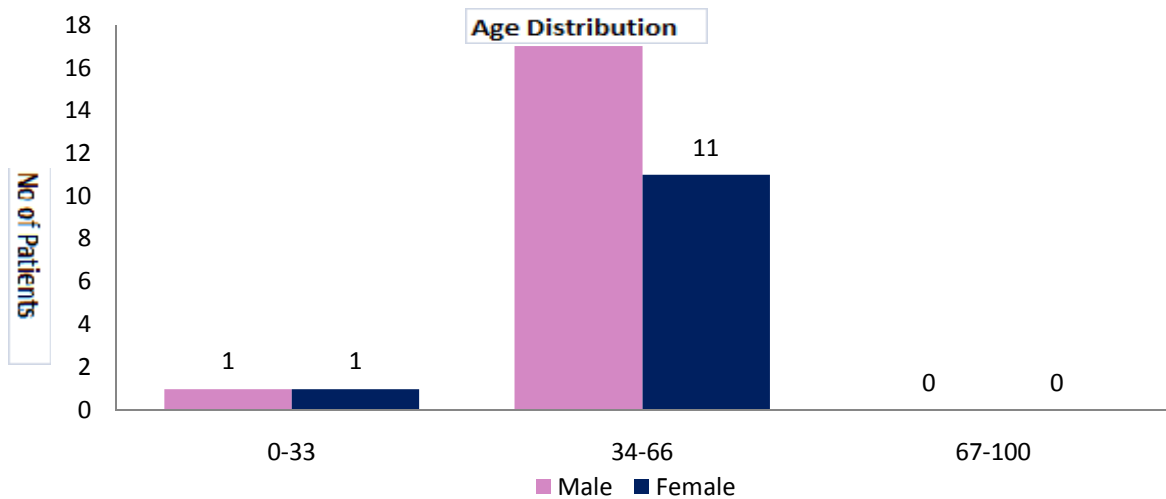


FIGURE-3

OBSERVATION:

Out of 30 cases, 2 cases (7%) were in the 0-33 age group, 28 cases (93%) were in 34-66 age groups.

INFERENCE:

Most of the cases come under the age group of 34-66. These results show increased age factor most prone to oxidative stress and lower immunity level leading to the complications.

TABLE-16 SEX DISTRIBUTION

SEX DISTRIBUTION		
Sex	No.of patients	Percentage
Male	18	60
Female	12	40
Total	30	100

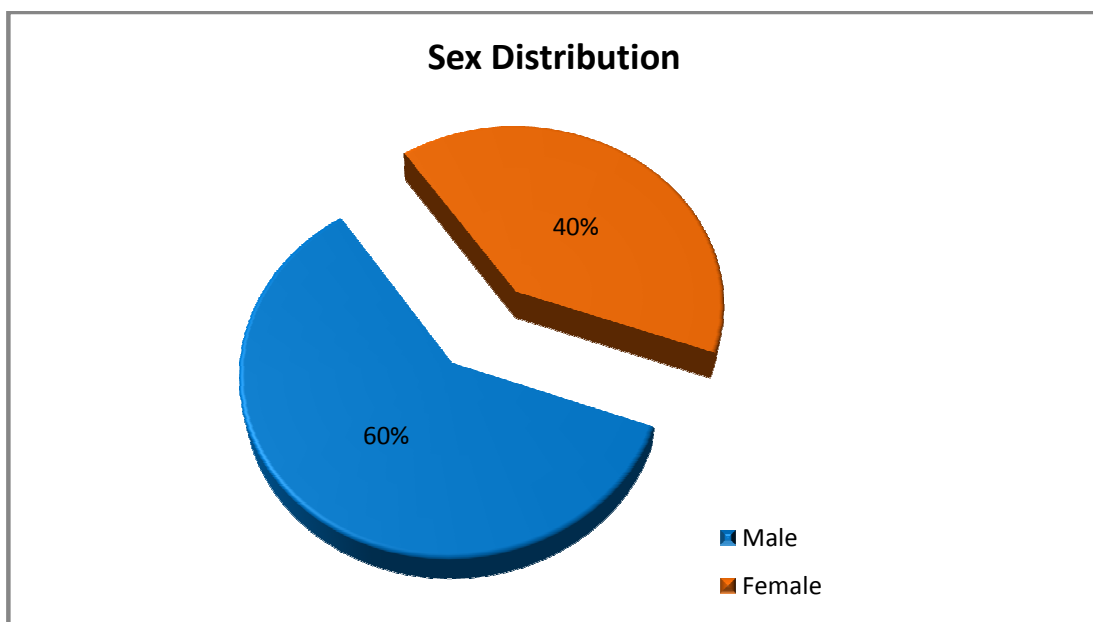


FIGURE-4

OBSERVATION :

30 patients of both sexes were selected for this study. Among them, 18 cases (60%) were male and 12 cases (40%) were female.

INFERENCE :

Larger studies are needed to estimate the sex predilection.

TABLE-17FOOD HABITS

FOOD HABITS		
Food Habits	No.of patients	Percentage(%)
Vegetarian	2	7
Non Vegetarian	28	93
Total	30	100



FIGURE-5

OBSERVATION :

Out of 30 cases, 2 cases (7%) were vegetarian and 28 cases (93%) were non-vegetarian.

INFERENCE :

Since most of them were non-vegetarian in dietary habits. In this study ,no association could be made between the disease and habit.

TABLE-18 SOCIO ECONOMIC STATUS

SOCIO ECONOMIC STATUS		
ECONOMIC STATUS	No.Of Cases	Percentage(%)
Low Income group	11	37
Middle Income group	11	37
High Income group	8	26
Total	30	100

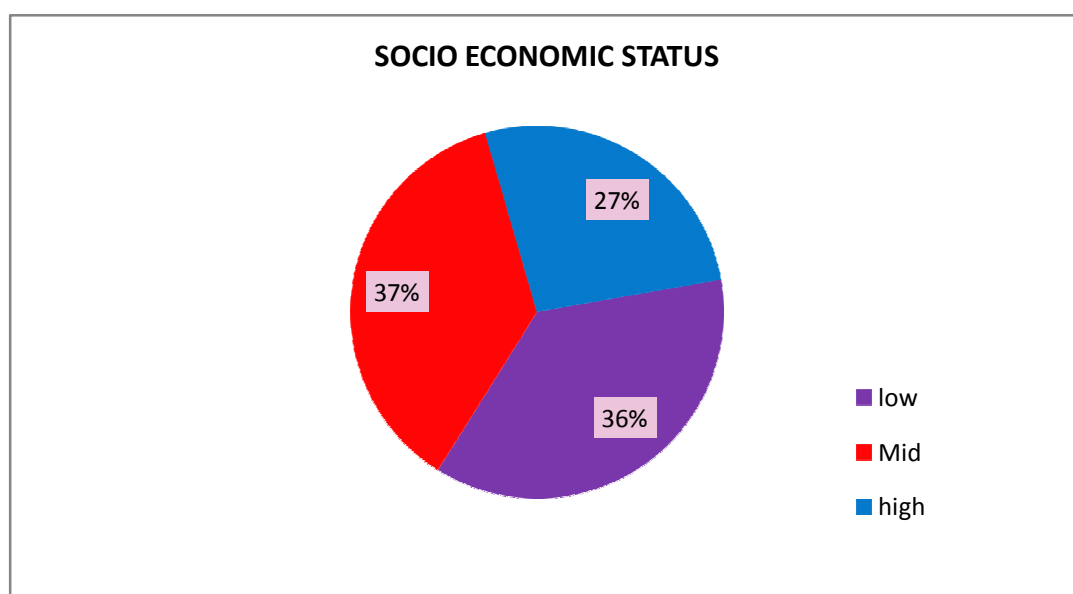


FIGURE-6

OBSERVATION :

Among 30 patients, 37 %(11cases) were from low income group, 37% (11 cases) were from middle income group and 26% (8 cases) were high income group.

INFERENCE :

This studies with larger sample size is warranted to determine the association.

TABLE-19 FAMILY HISTORY

FAMILY HISTORY		
Diabetes History	No of cases	Percentage
Diabetes History in Family	6	20
None diabetes History in Family	24	80
Total	30	100

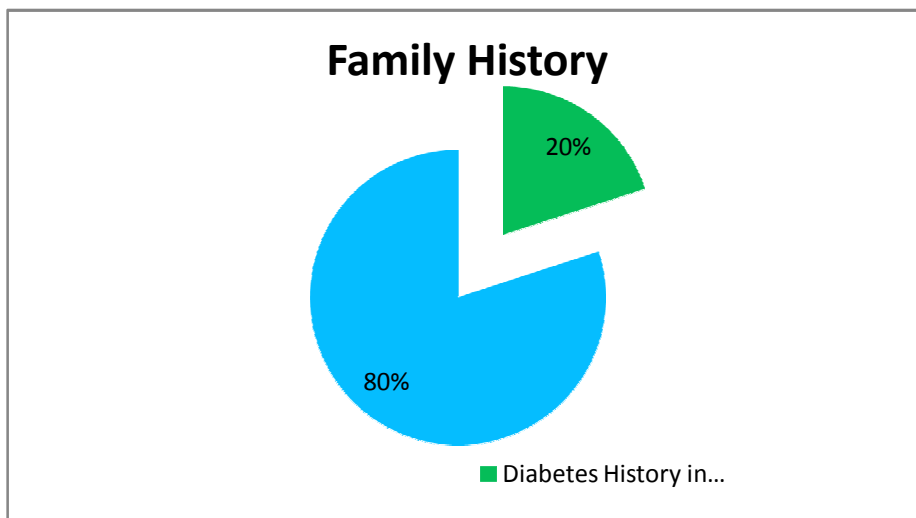


FIGURE-7

OBSERVATION :

Out of 30 Patients, 6 cases (20%) had family history of type 2 diabetes and 24 cases (80%) don't have the family history of diabetes.

INFERENCE :

Out of 30 Patients, 24 cases (80%) had positive family history of type 2 diabetes reveals genetic predisposition of the disease.

TABLE-21 NOI UTTRA KAALAM &NILAM

NOI UTTRA KALAM AND NILAM			
Noi Utra Kalam and Nilam		No.Of patients	Percentage
Noi Utra kalam	Karkaalam	0	0
	Koothirkaalam	1	3
	Munpanikaalam	3	10
	Pinpanikaalam	4	13
	Elavenirkaalam	16	54
	Mudovenirkaalam	6	20
	TOTAL	30	100
Noi Utra Nilam	Kurinji	5	17
	Mullai	3	10
	Marutham	1	3
	Neithal	21	70
	Palai	0	0
	TOTAL	30	100

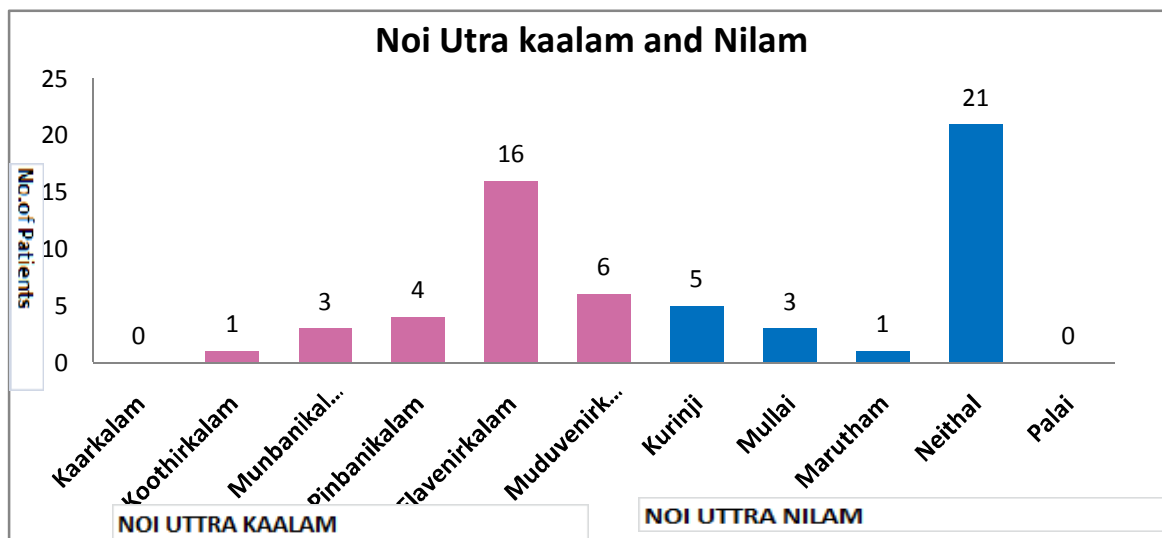


FIGURE -8

OBSERVATION :

Out of 30 cases 70% cases are living in neithal nilam, 10% are living in mullai nilam and 3% are living in marutha nilam, 17% are living kurinji nilam Among 30 cases, 54% of cases fall under, 20% fall under Mudovenirkaalam and few others had occurrence of disease in other seasons.

INFERENCE :

Most of the cases were from neithal nilam (70%). The study center is in neithal nilam, observations can be ascertained only after a multi centric study.

As most of the patients are in Elavenir kaalam and Mudovenir kaalam, pitham is indirectly disturbed by the prevailing vatham and thus the disturbed kabam instigates the disease process of MadakkuPilavai.

TABLE-22
Kanmenthriyangal & Gnanenthriyangal

Kanmenthriyangal & Gnanenthriyangal			
Imporigal and Kanmenthriyangal		No.Of patients	Percentage
Imporigal	Mei	26	87
	Vaai	2	7
	kan	1	3
	Sevi	1	3
	Total	30	100
Gnanthriyangal	Kaal	22	73
	kai	5	17
	Eruvai	3	10
	Total	30	100

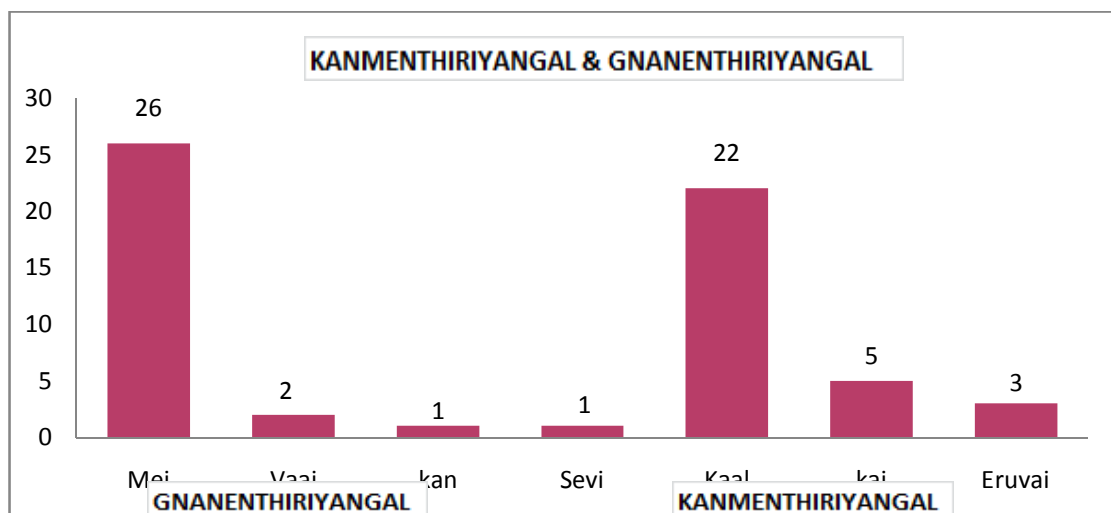


FIGURE -9

OBSERVATION :

Among 30 Cases, 87% of cases were having mei affected in gnanenthriyangal, 7% were having vaai affected in gnanenthriyangal, 3% were having kan affected in gnanenthriyangal and 22% of cases were having kaal affected in kanmaenthriyangal.

INFERENCE:

Mei is the most affected gnanenthriyam in the patients than vaai and kan. Kaal is the higher most affected kanmaenthriyam in Madakku Pilavai.

TABLE-23 UDAL THATHUKKAL

UDAL THATHUKKAL				
Udal Thatthukkal	No. of patients	Percentage	No. of Healthy volunteers	Percentage
Saaram	7	24	3	10
Senneer	4	13	2	7
Oon	10	33	0	0
Kozhuppu	5	17	0	0
Enbu	1	3	0	0
Moolai	2	7	0	0
Sukilam/Suronitham	1	3	0	0
Total	30	100	5	17

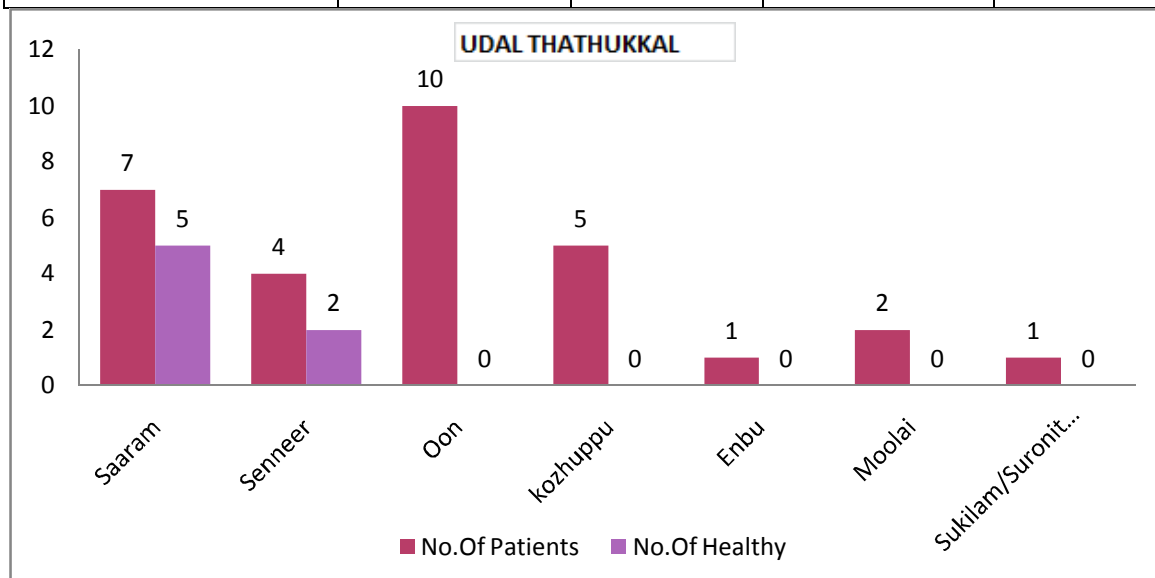


FIGURE-10

OBSERVATION :

Out of the 30 cases, 24% of cases had deranged saaram, 13% had deranged senneer, 33% had deranged oon, 17% had deranged kozhuppu, 3% had deranged enbu, 7% had deranged moolai and 3% had deranged sukilam/suronitham. Out of 30, 37% of them had deranged saaram and senneer. Among healthy volunteers, most of the patients had normal udal thaadhukkal and few of them had deranged saaram and senneer.

INFERENCE:

Majority of cases having deranged udal thathukkal denotes Madakku Pilavai had deranged all seven udal thathukkal.

TABLE -24 UYIR THATHUKAL

UYIR THATHUKKAL					
Uyir thathukkal		No.of patients	Percentage	No.of healthy volunteers	Percentage
Vali	Pranan	0	0	0	0
	Abnan	9	30	8	27
	Samanan	11	37	12	40
	Uthanan	3	10	2	7
	Viyanan	15	50	2	7
	Naagan	0	0	0	0
	Koorman	0	0	0	0
	Kirugaran	2	7	4	13
	Devathathan	0	0	0	0
	Dhananjeyan	0	0	0	0
Azhai	Anarpitham	4	13	3	10
	Ranjagam	0	0	1	3
	Sathagam	25	83	4	13
	Prasagam	30	100	0	0
	Alosagam	0	0	4	13
Iyyam	Avalambagam	1	3	5	17
	Kilethagam	2	7	0	0
	Pothagam	2	7	1	3
	Tharpagam	0	0	0	0
	Santhigam	12	40	5	17

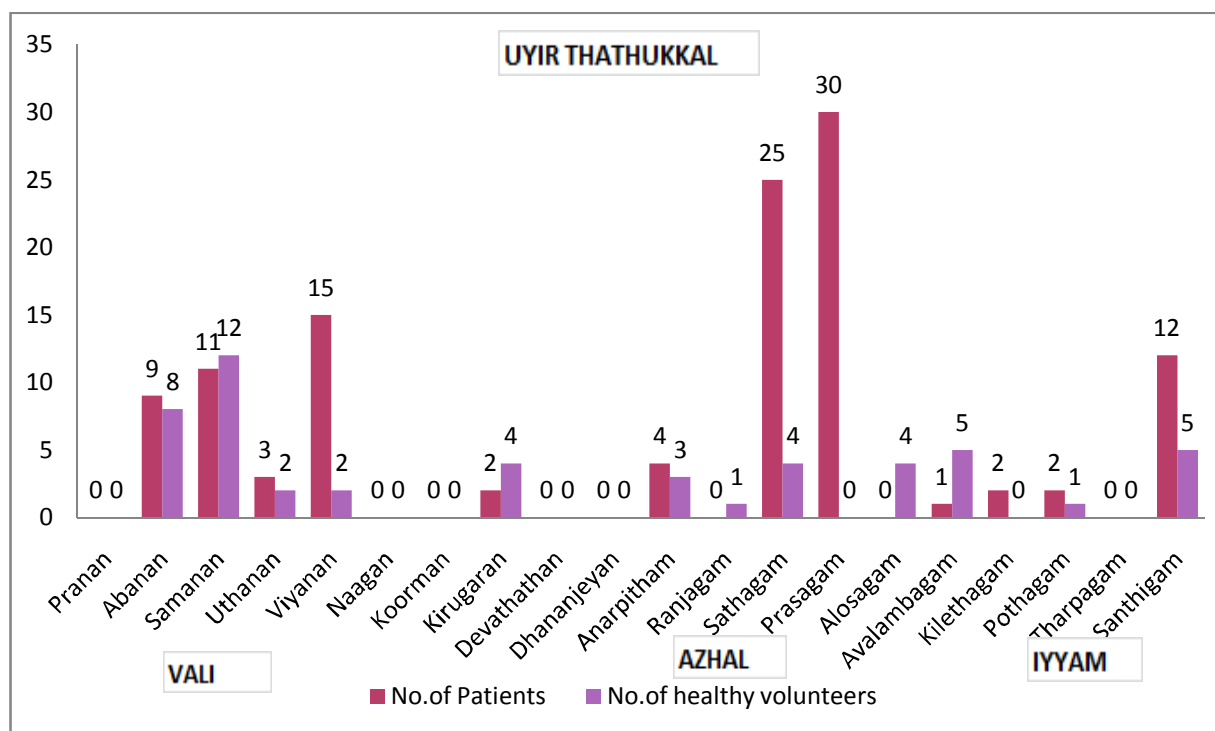


FIGURE -11

OBSERVATION :

Out of 30 Cases, none had been affected by piranan, 30% were having abanan, 37% were having samanana, 10% were having uthanan, 50% were having viyanan, 0% were having nagan, 0% were having koorman, 7% were having kirukaran, 0% were having devathathan and none had dananjeyan.

And 13% of cases were having analam, 0% were having ranjagam, 0% were having alosagam, 100% were having prasagam, 83% were having saathagam.

And 3% of cases were having avalambagam, 7% were having kilethagam, 7% were having pothagam, none had tharpagam 40% were having santhigam.

INFERENCE :

In types of vaatham, most of the patients affected with viyanan and samanana shows loss of integrated functions of the body affected in the illness.

In types of Pitham, most of the patients affected with anala pitham ,prasagam, sathagam shows deranged pitham in meganeer.

In types of Kabam most of the patients affected with avalambagam and kilethagam, santhigam which denotes the derangement occurs in gastro intestinal system.

TABLE-25 NAADI

NAADI					
Naadi		No.of patients	Percentage	No.of Healthy	Percentage
Naadi Panpu	Kalathal	22	73	3	10
	Azhunthal	5	17	2	7
	Paduthal	3	10	25	83
	Total	30	100	30	100
Naadi Nadai	Vazhi Azhal	17	57	25	83
	Azhal vali	7	23	5	17
	vali Iyyam	3	10	0	0
	Azhal Iyyam	3	10	0	0
	Total	30	100	30	100

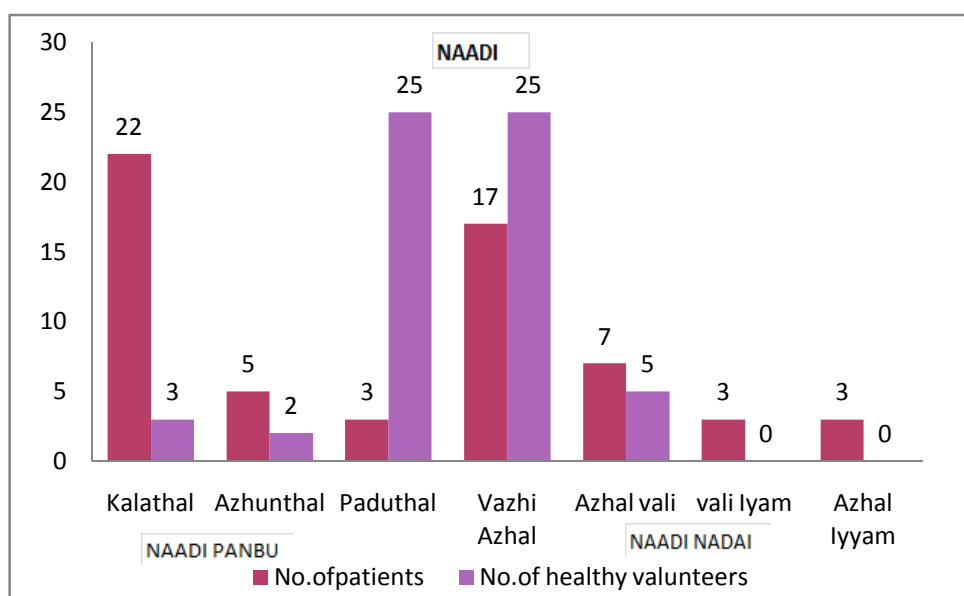


FIGURE-12

OBSERVATION :

Out of 30 cases, 73% showed kalatthal, 17% showed azhundhal and 10% showed padutthal character. Among 30 cases, 23% of cases had azhal vali, 57% had vali azhal, 3% had vali iyyam and 3% had Azhal iyyam. Among healthy volunteers, 80% were having vaatha azhal naadi.

INFERENCE :

In this study most of the patients had the vitiation of pitham which lead pathogenesis of the disease and derange the other two humours (Vatham and Kabam). Among most of the healthy volunteers, vatha naadi is dominant, which is the indicative of healthy individual.

TABLE-26 NAA

NAA		No.of.Cases	Percentage	No.of Healthy Volunteers	Percentage
Thanmai	Maa padithal	4	13	8	27
	vedippu	1	3	2	6
	Iyalbu	25	84	20	67
	Total	30	100	30	100
Niram	Karuppu	2	7	0	0
	Manjal	0	0	0	0
	Veluppu	5	17	5	17
	Iyalbu	23	76	25	83
	Total	30	100	30	100
Suvai	Kaippu	2	7	0	0
	Pulipu	0	0	0	0
	Inipu	10	33	0	0
	Normal	18	60	30	100
	Total	30	100	30	100
Vai neer oral	Increased	0	0	0	0
	Decreased	7	23	0	0
	Normal	23	77	30	100
	Total	30	100	30	100

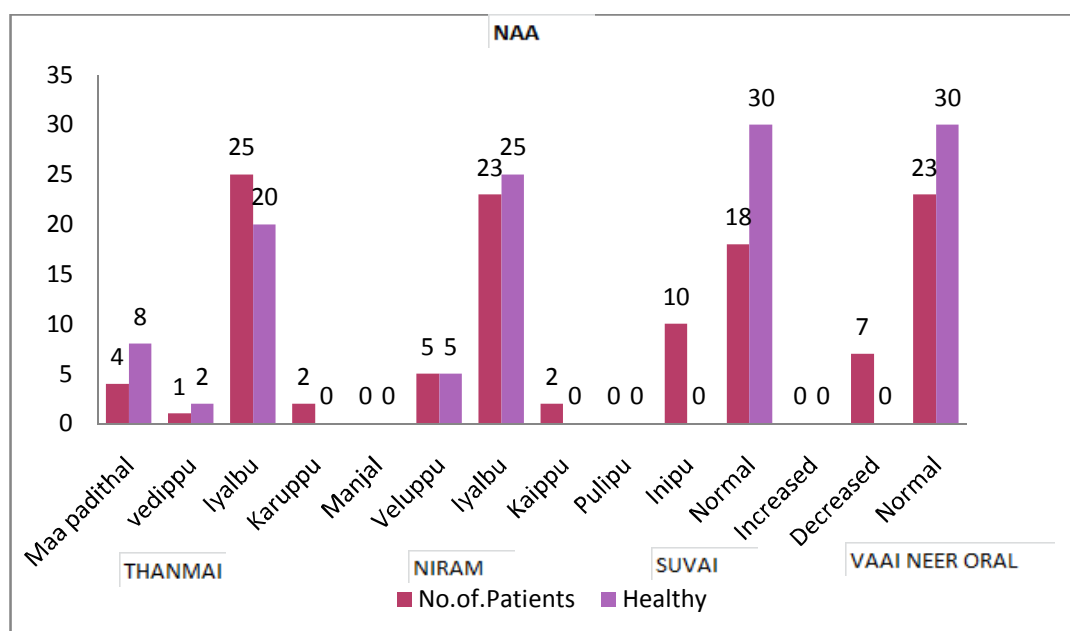


FIGURE-13

OBSERVATION :

Among 30 cases of this study, 13% cases were having maapadithal, 3% had vedippu. In healthy individuals, 8 cases had maapadithal.

In colour of the tongue, 17% cases had veluppu (palloriness) & 7% had karuppu niram. In healthy individuals, majority of cases had normal texture.

In Suvai, 7% cases were having kaippu taste, 33% cases were having inippu taste. In healthy individuals, majority of cases had normal taste.

In salivation, 23% of cases were having decreased saliva secretion. Among healthy individuals, majority of cases had normal salivation.

INFERENCE :

Majority of the patients had normal tongue appearance and no significant difference in between 2 groups. In suvai, there were few cases who were tasteless, bitter taste, sweet taste due to deranged udal kattugal in the illness.

Most of the normal individuals had normal tongue appearance and salivary secretion was normal.

TABLE-27 SPARISAM

SPARISAM					
Mei Kuri		No.of.patients	Percentage	no.of healthy valunteers	Percentage
Veppam	Mitham	22	73	30	100
	Migu	8	27	0	0
	kanivu	0	0	0	0
	Total	30	100	30	100
Viyarvai	Increase	3	10	0	0
	Reduce	2	7	0	0
	Normal	25	83	30	100
	Total	30	100	30	100
Thodu vali	Absent	7	23	30	100
	Present	23	77	0	0
	Total	30	100	30	100

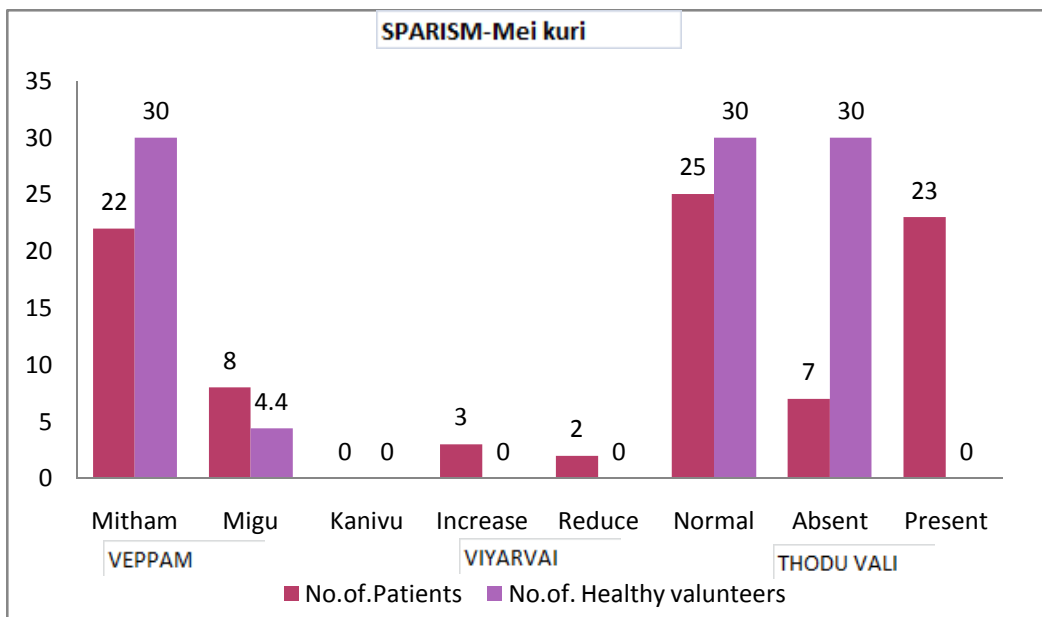


FIGURE-14

OBSERVATION :

Out of 30 cases, 73% had mitha veppam, 83% had normal viyarvai, 77% had thodu vali. Among the healthy volunteers, all of them had mitha veppam and normal viyarvai & thanmai.

INFERENCE:

This results shows most of the patients & healthy individuals having mitha veppam (normal body temperature) and normal perspiration. But in thanmai of skin affected because of ulcers, dermatitis are present in the patients.

TABLE-28 NIRAM,MOZHI,VIZHI

NIRAM,MOZHI& VIZHI					
Niram,Mozhi& Vizhi		No.of.Cases	Percentage	No.f. Healthy Valunteers	Percentage
Niram	Karuppu	17	57	25	83
	Manjal	0	0	0	0
	Velupu	13	43	5	17
	Total	30	100	30	100
Mozhi	Sama oli	27	90	30	100
	Urattha oli	1	3	0	0
	Thazhntha oli	2	7	0	0
	Total	30	100	30	100
Vizhi	Iyalbu	28	93	30	100
	Sivappu	2	7	0	0
	Total	30	100	30	100
Vizhiyin Thanmai	Kan erichal	2	7	2	7
	Peelai seruthal	2	7	1	3
	Iyalbu	26	86	27	90
	Total	30	100	30	100

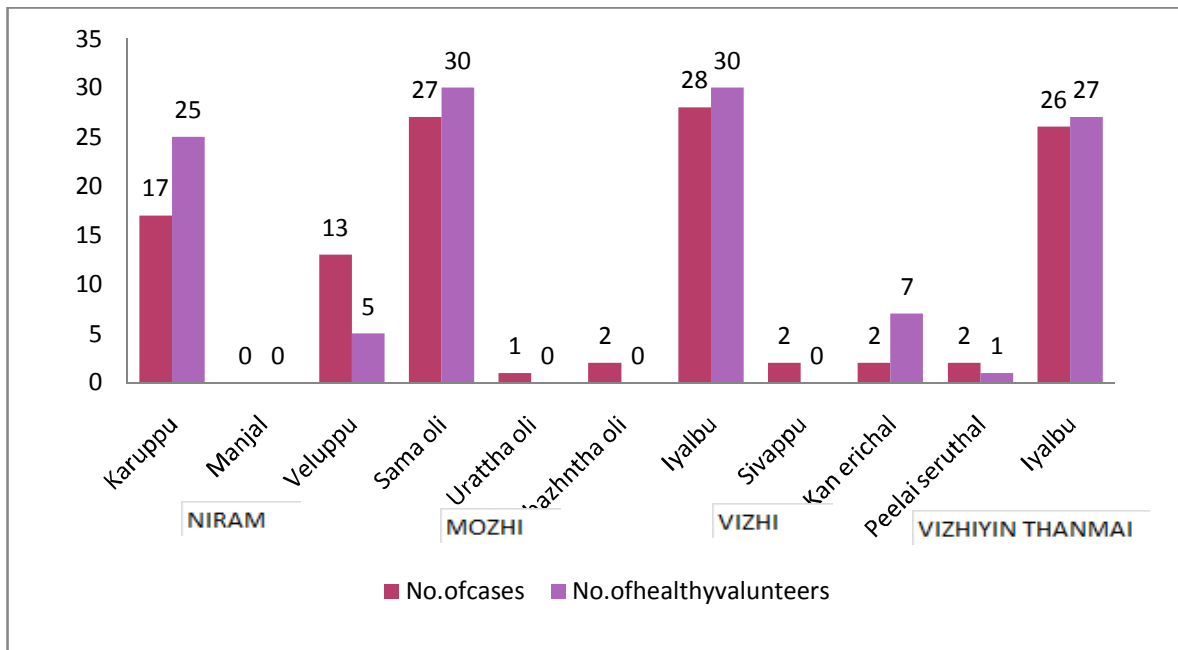


FIGURE-15

OBSERVATION :

Out of 30 cases, 57% were black colour and 90% of cases were having sama oli (medium pitched voice).

In vizhiyin niram, 22 were having veluppu and 3 were sivappu. 3 cases had kan erichchal and 3 cases had vision affected, 2 cases have kanneer vadithal and peelai seruthal.

All the normal individuals had samaoli (medium pitched voice) and there is no discoloration in venvizhi and increased lacrimation.

INFERENCE :

In patients most of them had blackish complexion and normal pitched voice.

Most of the normal individuals were reported with blackish complexion, no discoloration in venvizhi and had normal pitched voice, which denotes the good.

TABLE-29 MALAM

MALAM					
Malam		No.of Cases	Percentage	No.of healthy volunteers	Percentage
Niram	Karppu	1	3	0	0
	Manjal	29	97	30	100
	Sivappu	0	0	0	0
	Velppu	0	0	0	0
	Total	30	100	30	100
Thanmai	Malasikkal	8	27	2	7
	Sinthal	4	13	1	3
	Kalichal	0	0	1	3
	Sosham	0	0	0	0
	Vemmai	5	17	0	0
	Iyalbu	13	43	26	81
	Total	30	100	30	100

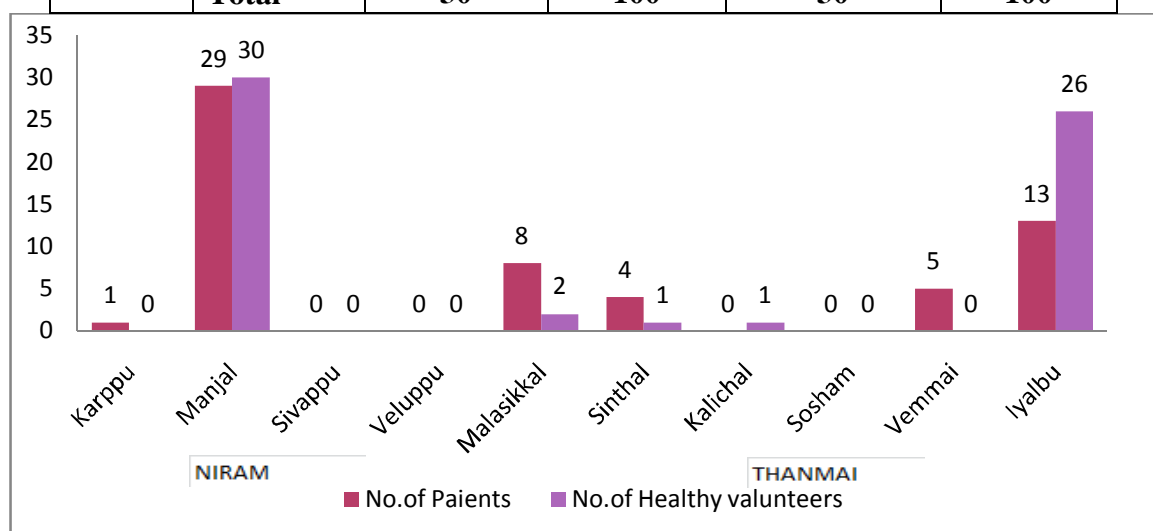


FIGURE-16

OBSERVATION :

Among 30 Cases, 3% case had karuppu color of motion, 97% had pale yellow colour of motion, Out of 30 cases 27% of cases had malasikkal, 13% of cases had siruthal, and 43% are normal in malathanmai.

INFERENCE :

Majority of cases had constipation or diarrhoea respectively. They had altered bowel habits due to the illness.

TABLE-30 MOOTHIRAM

MOOTHIRAM					
Neer kuri		No.of cases	Percentage	No.of healthy volunteers	Percentage
Manam	Pazhamanam	1	3	0	0
	Ammoniacal	29	97	30	100
	Total	30	100	30	100
Neer Niram	Colourless	25	83	29	97
	Milky	0	0	0	0
	Orange	0	0	0	0
	Sivappu	0	0	0	0
	Pachai	0	0	0	0
	Sivappu	0	0	0	0
	Dark brown	3	10	0	0
	Briged red	0	0	0	0
	Karuppu	0	0	0	0
	Sivappu/Manjal	2	7	1	3
	Total	30	100	30	100
Nurai	Clear	20	67	30	100
	kalangal	10	33	0	0
	Total	30	100	30	100
Edai	Low	0	0	0	0
	High	23	77	0	0
	Normal	7	23	30	100
	Total	30	100	30	100
Enjal	Present	2	7	0	0
	Nil	28	93	30	100
	Total	30	100	30	100

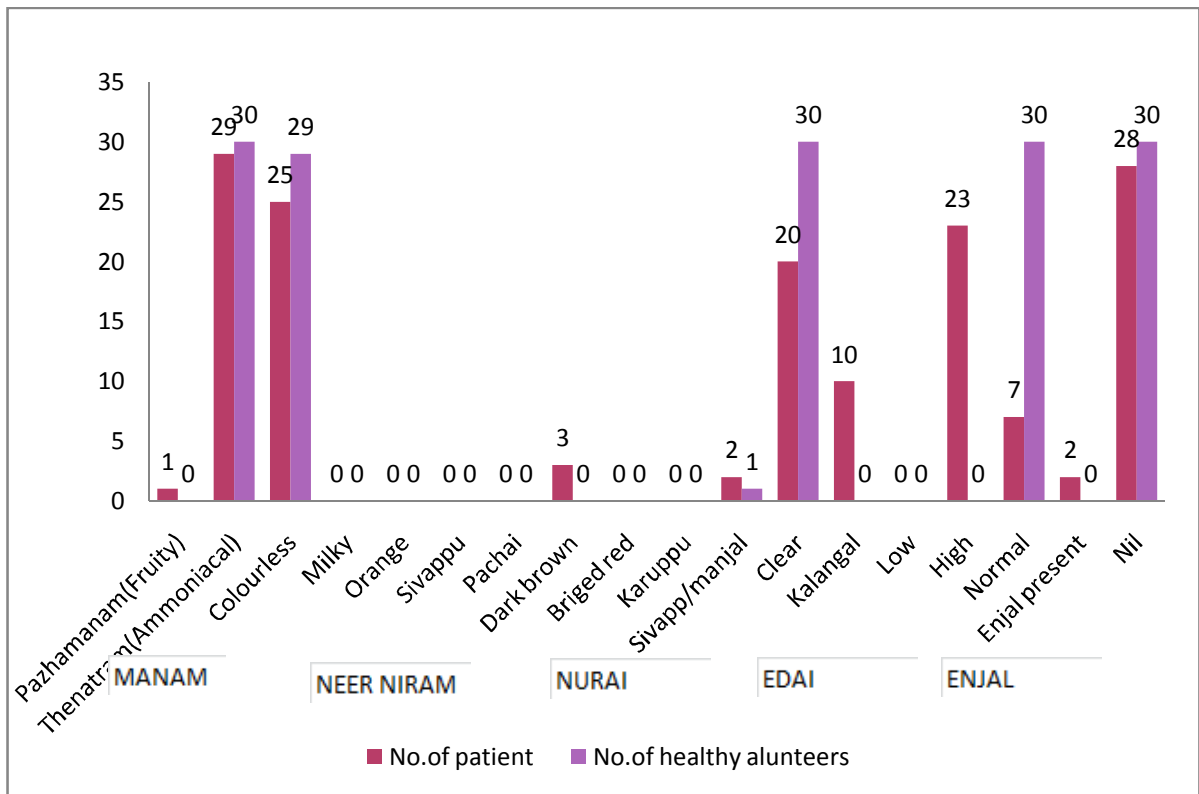


FIGURE-17

OBSERVATION :

Out of 30 Cases, 3% of cases were having fruity odour (inippu manam) urine, % had mild aromatic odour, 83% had colorless urine, 7 %had karuppu urine.

In 67% of cases nurai is present and in 28% of cases, nurai is absent. 77% cases had edai miguthi, 23% had normal enjal in urine.

INFERENCE:

Most of the patients having fruity odour urine probably due to glycosuria and increased edai alavu may be the solutes (glucose) in the urine. Most of the patients had colourless crystal clear urine due to polyuria.

TABLE-31 MANIKADAINOOL

MANIKADAI NOOL				
Manikodi nool	No.of patients	Percentage	No.of Healthy Volunteers	percentage
8	1	3	1	3
8.25	1	3	2	7
8.5	6	20	3	10
8.75	2	7	1	3
9	8	27	1	3
9.5	3	10	1	3
9.75	9	30	2	7
10	0	0	19	64
Total	30	100	30	100

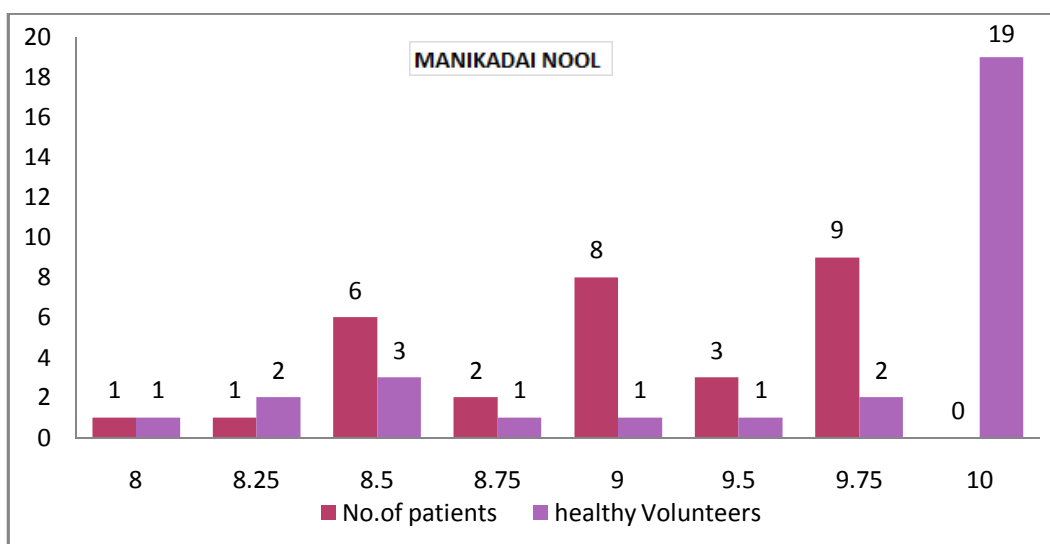


FIGURE-18

OBSERVATION :

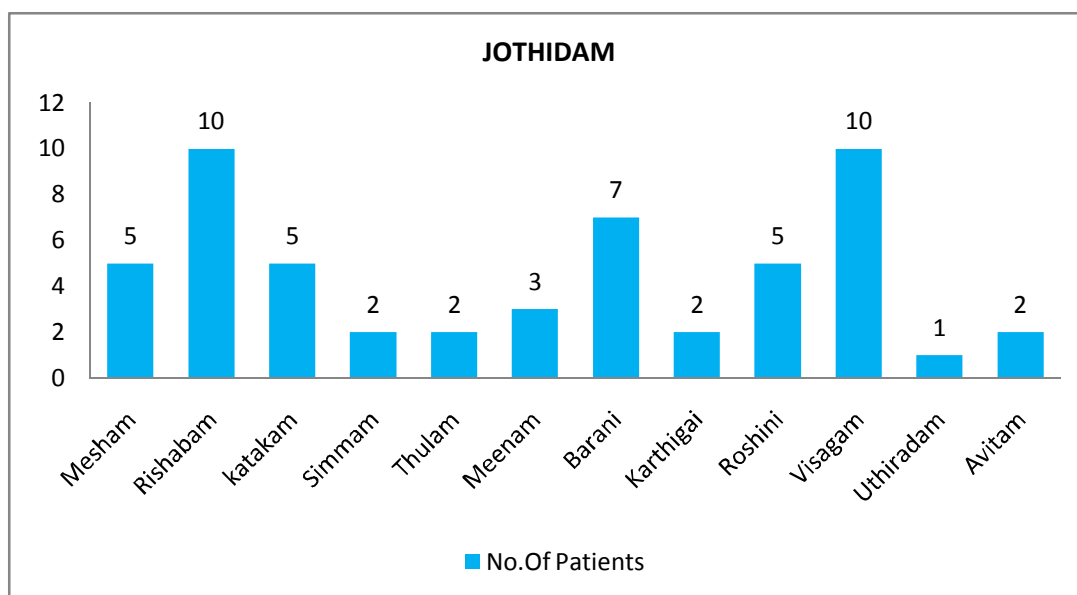
Out of the 30 cases, 3% of cases had 8 viral kadaialavu, 3% of cases had 8 ¼ viral kadaialavu, 20% cases had 8 ½ viral kadaialavu, 7% of cases had 8 ¾, 27% had 9 viral kadaialavu, 10% had 9 ½ viral kadaialavu, 30% had 9 ¾ viralkadaialavu.

INFERENCE :

In manikadainool study, 48 % of cases had Manikadai measurements of 9 1/2 and 9 3/4 Fbs. In the Agasthiyar soodamanikayiru soothiram, wrist circumetric sign for megam has been given as 9 1/2 pilavai in 9 3/4. In this study it was observed that few cases fell with in the above range of fingerbreadths.

TABLE-32 SOTHIDAM

SOTHIDAM			
Raasi and Natchathiram		No.of cases	Percentage
Raasi	Mesham	5	19
	Rishabam	10	33
	katakam	5	19
	Simmam	2	7
	Thulam	2	7
	Meenam	3	11
	Total	27	96
Natchathiram	Barani	7	26
	Karthigai	2	7
	Roshini	5	19
	Visagam	10	33
	Uthiradam	1	4
	Avitam	2	7
	Total	27	96

**FIGURE-19****OBSERVATION :**

Among the 30 cases, 5 cases were documented under mesham, 2 cases were simmam, 3 cases were under meenam, 10 and 2 cases were found to rishabam and also thulam.

INFERENCE :

Above the results no significant conclusion obtained.

TABLE -33 Kaaranangal for Madhumegam

Kaaranangal for Madhumegam	No.of Patients	Percentage(%)
Obesity	20	66
Increased intake of sweets	25	83
Increased intake of non veg	28	93
Dissatisfied diet	20	66
Stress	7	23
Hereditary	6	20

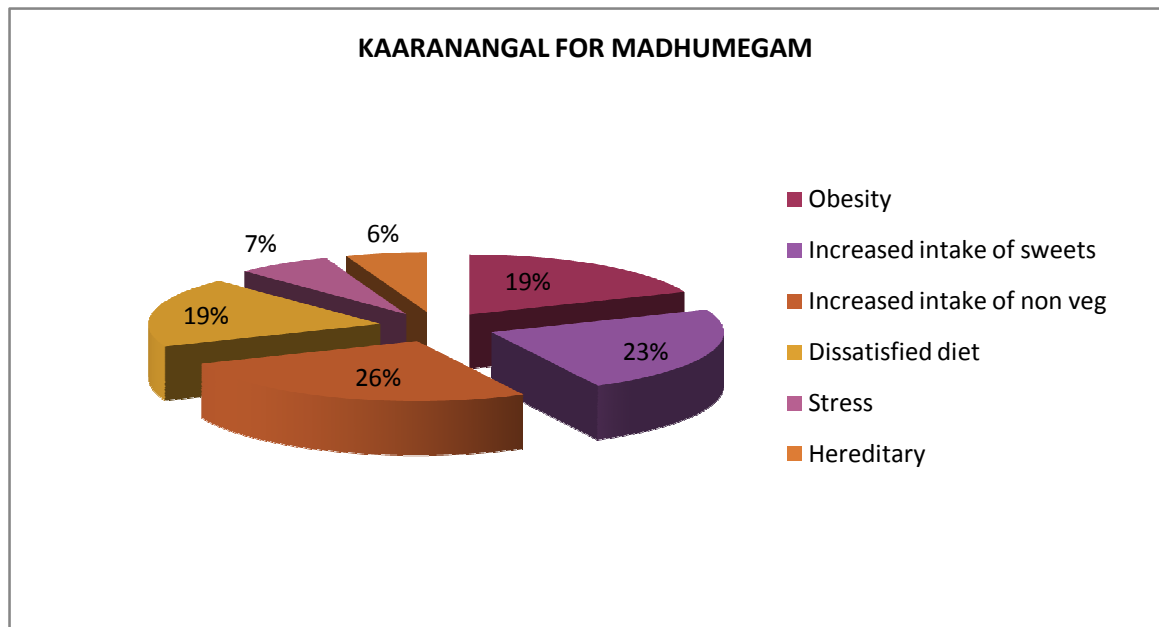


FIGURE-20

OBSERVATION :

In the study, etiological factors recorded that shows 20% of the cases shows hereditary factor, 66% shows having dissatisfactory diet, 93% shows having increased intake of non-vegetarian food, 66% shows obesity, 7% shows stress exposure, 83% shows increased intake of sweets and 36% were smokers.

INFERENCE :

These results reveals hereditary, dissatisfactory diet and stress plays main role in etiology of Meganeer .

TABLE-34 General etiology of Madakku Pilavai

General etiology of Madakku Pilavai	No.Of Patients	Percentage
Poor hygiene	25	83
Diabetes	30	100
A week immune system	30	100
Dermatitis	1	3
Sharing other activities the break the skin	2	7

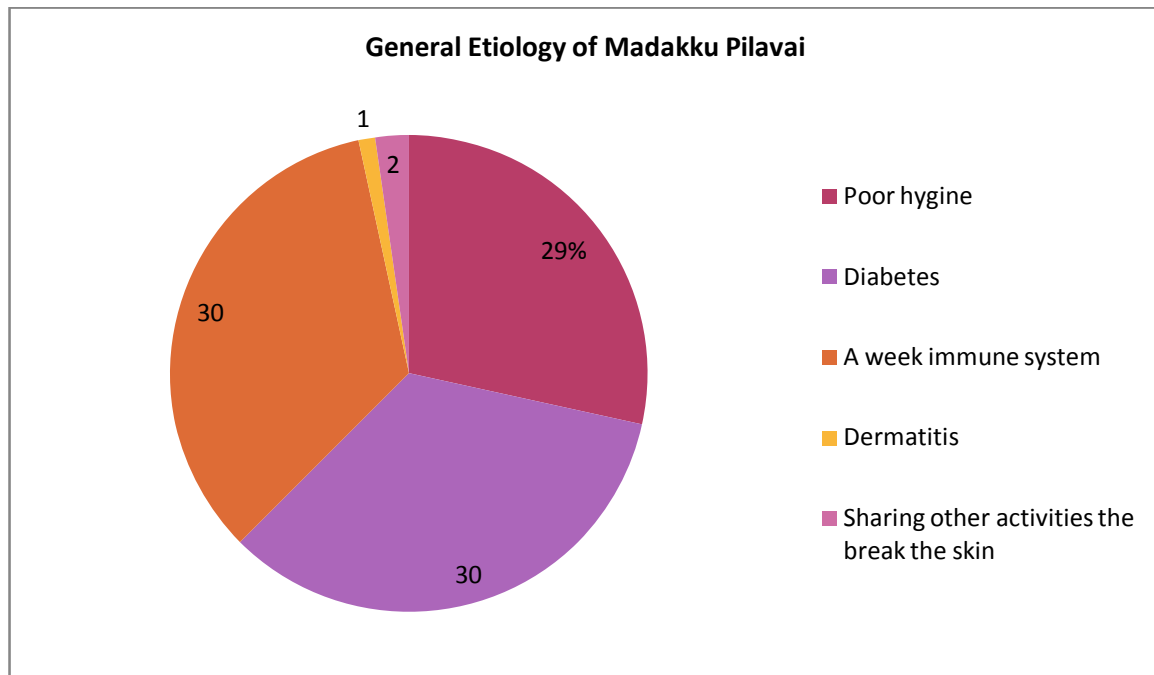


FIGURE-21

OBSERVATION :

In the study, etiological factors recorded that shows 83% of the cases shows poor hygiene, 100% shows having Diabetes, 100% shows having a week immune system, 3% shows Dermatitis, 7% shows sharing other activities the break the skin.

INFERENCE :

These results reveals poor hygiene, Diabetes, a week immune system, plays main role in etiology of Madkku Pilavai

TABLE-35 Clinical Features

S.No	Clinical Features	No.of cases	Percentage
1	Polyurea	25	83
2	Polydypsia	20	67
3	Polyphagia	15	50
4	Tiredness	25	83
5	Foot ucler	0	0
6	Parasthesis over the palms & soles	7	23
7	Dermatits	1	3
8	Gastroparesis	1	3

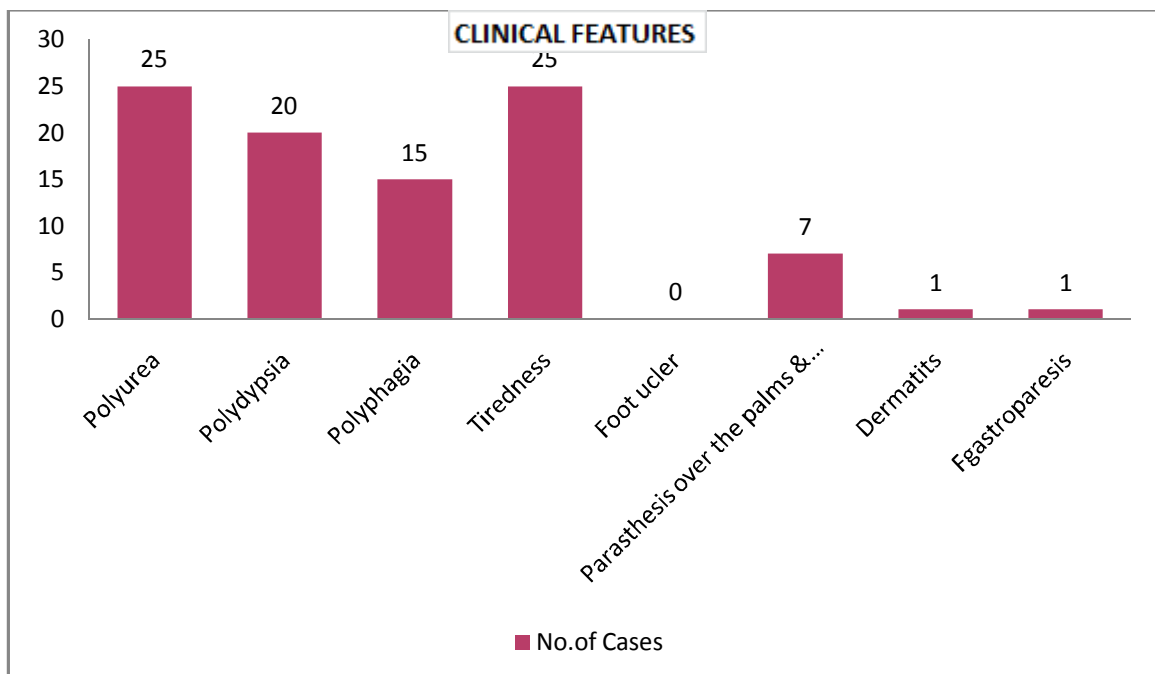


FIGURE-22

OBSERVATION :

Among the 30 cases, 25 cases had polyuria, 20 cases had polydypsia, 15 cases had polyphagia, 25 cases had tiredness, 7 cases had parasthesia over the palms & soles, 2 cases had gastropathy.

INFERENCE :

Above these results shows the classical symptoms of Madakku Pilavai occurs in most of the patients like dryness of the tongue, polyuria, Abscess and lassitude.

TABLE-37 CHRONICITY OF ILLNESS

Duration of DM	No.of Cases	Percentage
0-2 years	1	3
2-4 Years	5	17
5-7 Years	10	33
7-10 years	14	47
Total	30	100

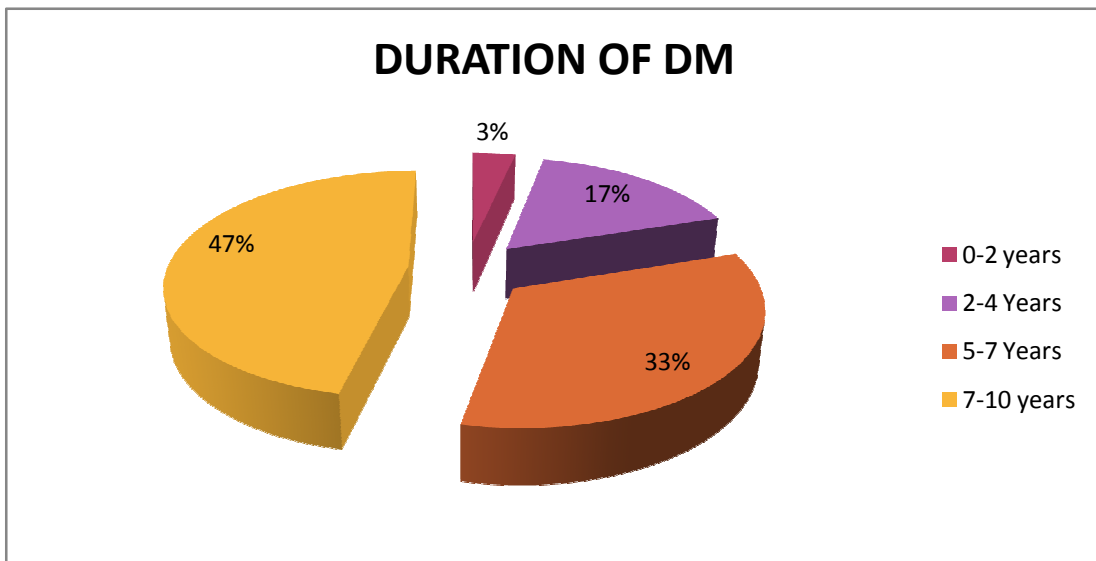


FIGURE-23

OBSERVATION :

Among the 25 cases, the duration of Meganeer was noted. 56% of the cases present in the group of 5-10 years, 32% of the cases present in the group of 3-5 years & 12% of the cases present in the group of 1-3 years of illness.

INFERENCE :

Above the results shows chronic duration of Meganeer .

TABLE-38 CHRONICITY OF ILLNESS IN MADAKKU PILAVAI

CHRONICITY OF ILLNESS IN MADAKKU PILAVAI	No. of Patients	Percentage(%)
0-2 weeks	1	3
2-4 weeks	25	84
4-6 weeks	3	10
Above 1 month	1	3
Total	30	100

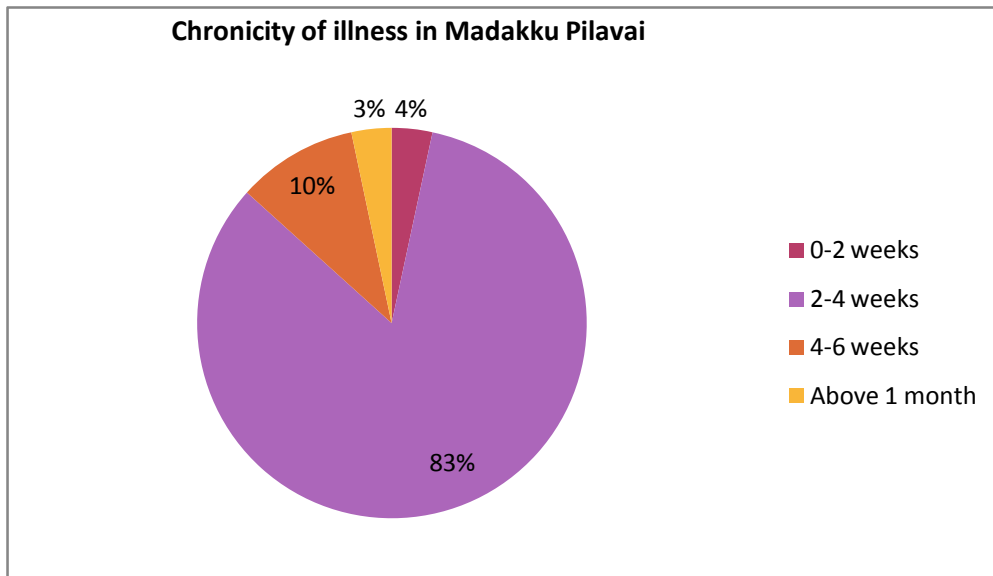


FIGURE-24

OBSERVATION :

Among the 30 cases, the duration of Madakku Pilavai was noted. 3% of the cases present in the group of 0-2 weeks, 84% of the cases present in the group of 2-4 weeks & 10% of the cases present in the group of 4-6 weeks & 3% of the cases above 1 month of illness.

INFERENCE :

Above the results shows chronic duration of meganeer leads to The chronicity is directly proportionate to the incidence of Pilavai.

Showing Laboratory Investigations of Patients

S.No	OP No	Age/Sex	HB(grms %)	TC	DC			ESR		FBS	PPBS	S Cholesterol	LDL	TGL	HDL	BU	SC	HbA1C	Urine				
					P	L	E	M	1/2Hr										1 Hr	F	PP	Alb	Deposit
1	106078	55/F	14.2	6500	50	46	4	0	10	20	145	140	173	97	99	55	22	0.9	9.6	Nil	Nil	1-2 pc,1-2 epi	
2	F010344	42/F	13	9500	65	32	3	0	44	90	231	319	315	180	90	69	19	0.7	10.2	Nil	++	+	2-4 pc,4-5 epc
3	167270	51/M	16.7	10000	50	39	5	1	30	60	302	414	221	121	134	66.9	21.1	1.2	10.7	+	++	Trace	4-6 pc,2-4 epc
4	G74222	56/M	14.4	8600	65	30	3	2	20	40	181	286	162	94	160	61	20	1.1	8.1	Nil	++	Nil	1-2pc,1-2 epc
5	176968	63/M	15.3	6700	55	40	1	1	20	40	172	317	211	129	153	51	29	1.3	11.1	Nil	+	Nil	1-2pc,1-2epc
6	G76587	64/M	15.1	6600	48	46	3	2	5	12	121	229	212	119	100	59	30	1.2	8.2	Nil	+	Nil	2-4pc,2-4epc
7	H10956	46/F	13.5	6300	67	28	1	1	40	82	193	352	230	141	104	77	17	0.7	9.3	Nil	Nil	++	3-5pc,2-4epc
8	G61867	64/F	13.2	7200	70	25	3	2	12	24	225	302	220	130	145	62	22	1.1	7.5	Nil	+	Nil	1-3pc,3-5eepc
9	H03592	56/F	12.1	62000	54	43	2	1	5	12	200	305	200	120	143	60	20	1.2	10	+	++	Nil	1-2pc,1-2epc
10	193402	59/M	14	13900	70	28	2	0	10	20	250	400	220	120	153	67	22	0.8	11.2	++	+++	+	2-4pc,4-6epc
11	192166	53/F	11.8	10,300	64	31	3	2	16	38	88	156	139	80	178	44	15	1	5.8	Nil	Nil	Nil	3-5pc,1-2epc
12	190664	52/F	12.1	6,800	73	22	2	1	30	62	307	412	151	81	140	42	42	1.1	9.4	+	++	Nil	4-5pc,5-6epc
13	H85879	38/F	13.7	6,300	55	37	4	2	6	12	130	211	177	104	161	48	21	0.9	6.8	Nil	Nil	Nil	2-3pc,1-2epc
14	H82904	55/F	13.2	9000	47	49	2	2	12	24	339	563	252	143	225	58	31	1	10.1	+	++	Nil	6-8pc,8-10epc
15	H69771	65/M	12.7	8500	55	40	3	2	6	12	221	364	185	104	195	47	22	1	9.6	+	++	Nil	2-3pc,1-2epc
16	195843	46/M	13.9	15000	75	19	3	3	34	70	243	320	244	157	277	47	22	1.1	10.9	+	++	Nil	2-3pc,1-2epc
17	J11121	60/M	11.2	8000	67	32	1	0	8	16	230	350	155	70	130	50	20	1	8.2	+	++	Trace	2-3pc,3-6epc
18	B65240	44/M	14.9	7500	59	37	2	2	4	8	267	434	136	85	253	43	17	0.9	11.2	++	+++	Nil	1-2pc,1-2epc
19	H069527	61/F	12.1	7500	65	35	0	0	6	12	125	230	220	90	140	60	22	0.9	7.2	Nil	+	Nil	2-3pc,2-4epc
20	H16027	65/M	14.9	8200	58	36	5	1	10	20	105	202	150	70	214	37	18	1.1	6.9	Nil	++	Nil	3-6pc,2-4epc
21	128497	47/M	13.6	12,700	71	22	5	2	26	54	244	407	153	97	120	45	29	1.1	11.5	++	+++	Trace	4-6pc,2-4epc
22	H89071	56/m	15.5	8500	55	38	4	3	4	16	334	448	252	157	143	58	33	0.8	10.7	++	+++	Nil	6-8pc,2-4epc
23	J00395	20/M	14.1	8200	70	30	0	0	8	16	126	118	127	76	64	64	21	0.7	9.6	+	++	Nil	2-3pc,1-2epc
24	195967	23/F	12.6	13600	87	11	2	0	5	12	120	301	154	93	182	53	16	0.9	9.2	Nil	++	Nil	2-4pc,2-4epc
25	187918	62/M	12.3	6500	60	33	4	1	20	42	115	225	155	99	100	37	27	1.1	7.9	Nil	Nil	Nil	2-4pc,1-2epc
26	194416	61/M	11.4	7200	69	25	2	2	12	24	130	358	128	77	91	44	20	1	7.8	Nil	+	Nil	3-5pc,2-4epc
27	F71670	60/F	13.4	7100	50	46	2	2	14	28	267	385	238	156	173	73	26	0.8	11.9	+	++	Nil	4-5pc,1-2epc
28	175922	62/F	9.8	7000	61	33	3	2	24	52	122	244	190	93	140	50	15	0.9	8.3	Nil	+	Nil	4-6pc,3-5epc
29	J11116	65/M	12.1	7200	65	35	0	0	12	24	200	256	136	85	154	52	20	1.2	7.4	Nil	+	Nil	1-2pc,1-2epc
30	J11176	42/M	13.2	6500	70	35	3	2	6	12	155	285	210	90	130	50	22	1.1	8.2	Nil	+	Nil	1-2pc,1-2epc

Showing Laboratory Investigations of Healthy Volunteers

S.NO	OP NO	AGE/SEX	SUGAR		CHOLESTEROL					UREA	CREATININE	URINE	
			F	PP	TOTAL	HDL	LDL	VLDL	TGL			F	PP
1	D19928	25/M	89	112	149	33	76	12	62	27	0.8	NIL	TRACE
2	D19929	60/M	104	120	190	39	92	19	98	27	0.8	NIL	NIL
3	D 30224	30/M	85	135	200	32	80	60	72	20	1.1	NIL	NIL
4	C 86813	27/M	100	92	199	34	153	26	130	14	0.4	NIL	NIL
5	C72223	37/M	80	105	170	36	87	39	198	19	0.8	NIL	+
6	D15789	27/F	80	96	161	35	82	21	107	15	0.5	NIL	NIL
7	D15797	24/F	76	82	120	30	70	12	63	17	0.6	NIL	NIL
8	D13393	26/F	81	100	120	30	70	12	62	14	0.4	NIL	NIL
9	C33345	38/M	89	110	223	30	141	52	259	26	0.7	NIL	+
10	C33793	37/M	72	115	208	42	150	16	78	30	0.8	NIL	NIL
11	I13177	63/M	100	96	195	32	86	18	65	22	0.6	NIL	NIL
12	G74887	57/M	105	120	200	50	80	18	130	26	1	NIL	+
13	E040573	45/M	110	130	210	36	82	39	65	26	0.8	+	NIL
14	I13177	60/M	96	110	195	40	90	40	120	20	1.2	NIL	NIL
15	H67136	45/F	105	120	220	50	62	32	72	23	1.1	+	NIL
16	F012810	36/F	100	110	205	45	85	36	120	22	0.6	NIL	NIL
17	H27506	40/M	96	100	185	42	82	65	116	20	0.8	+	NIL
18	G10582	32/F	86	105	195	50	86	19	67	22	0.8	NIL	NIL
19	G7996	30/F	92	106	200	32	87	19	72	25	1.2	NIL	NIL
20	G74887	31/M	100	135	175	36	82	35	67	20	1.1	NIL	NIL
21	H25251	40/M	110	125	185	30	82	62	110	20	1.1	NIL	NIL
22	H16916	36/F	82	100	145	28	90	40	65	26	1.2	NIL	NIL
23	I20927	46/M	96	140	200	52	76	29	72	20	0.6	+	NIL
24	G74706	30/F	86	130	210	40	72	55	110	16	1.2	NIL	+
25	F95710	40/M	110	140	220	52	86	64	120	18	0.6	NIL	NIL
26	H69816	42/F	100	120	180	50	96	20	114	20	0.8	NIL	NIL
27	G74881	45/M	120	140	165	45	85	36	110	25	1.2	+	NIL
28	H25251	32/M	98	120	200	32	77	29	116	20	0.4	NIL	NIL
29	I48331	48/F	82	100	165	40	85	66	110	18	1.1	NIL	+
30	I13177	46/F	92	100	195	50	90	67	100	14	0.8	NIL	NIL

CARBUNCLE-PICTURES

OP.NO.H16027 65/M-GLUTEAL



OP.NO.J11116 65/M -FACE(FOREHEAD)



OP.NO. I92166 53/F CARBUNCLE-IN BACK (Near Spine)

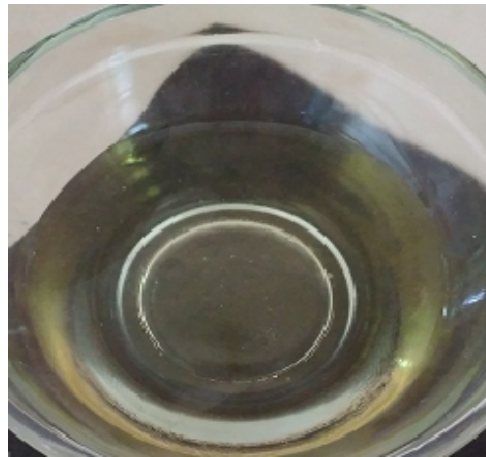


NEERKKURI

OP NO.H03592 56/F –STRAW COLOUR URINE



OP NO. I93402 59/M – PALE YELLOW URINE

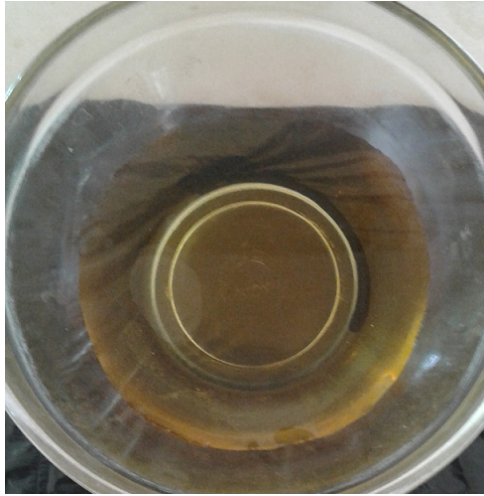


OP NO.G61869 64/F – YELLOW URINE



NEIKKURI

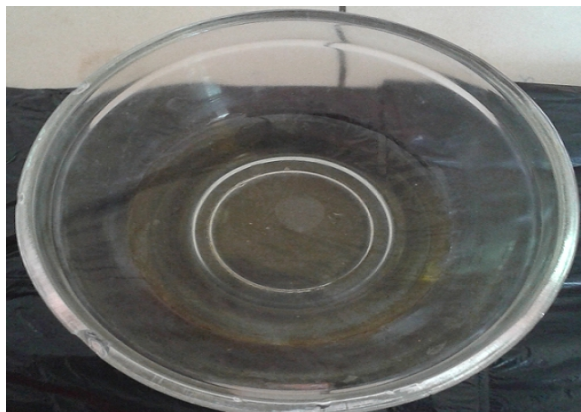
OP NO.H03592 56/F –OVAL SHAPE



OP NO. I93402 59/M – PEARL SHAPE



OP NO.H10956 46/F –ROUND SHAPE



MANIKKADAI NOOL



DISCUSSION

DISCUSSION

The signs and symptoms of Madakku Pilavai which mentioned in Siddha Maruthuvam can be correlated with complications of Diabetes mellitus. In National Institute of Siddha –OPD, the author had screened 100 patients of Diabetes mellitus. Out of 100 cases, 36 patients were having complications of Diabetes mellitus. From the population, 30 cases of both sexes were selected for the study. All necessary investigations were carried out to all the patients.

At the conclusion of the study on Madakku Pilavai, the author discusses on significant facts about the disease with relevant justifications from Siddha and modern literature based on observations and results.

The incidence of Madakku Pilavai with sex, age distribution, food habits, socio economical status, eight fold examination, manikkadai nool, zodiac sign were also studied. As per Siddha Maruthuvam the symptomatology of Madakku Pilavai were studied in patients.

In this study, the duration of Diabetes mellitus is commensurate with the complications of the disease. Out of 30 cases 75% of the people were having Type 2 diabetes for a duration of more than 5 years.

Out of 30 cases, 70% of patients had Carbuncle, 32% patients had diabetic peripheral neuropathy, 16% of patients had dermopathy and remaining are other complications.

Distribution of cases with Age Out of 30 cases, 1-33 years age group were 7% (2 cases), 34-66 age group were 93% (28cases), 67-100age group were 0. Most of the cases came under the age group of 34-66. These results showed increased age factor most prone disease incidence to oxidative stress and lowered immunity level leading to the complications.

Distribution of cases with Kaalam

All the patients were seen throughout all the seasons. The incidence in the three periods of human life namely Vali kaalam, Azhal kaalam and Iyya kaalam is noted. In 30 patients, all were between the ages of 34 to 66years. Majority of the patients reported in Pitha kaalam only, may be the deranged pitha humour leads to the Meganeer.

Distribution of cases with Food habits

Most of the patients were non-vegetarians probably because the general study populations has more non-vegetarians than pure Vegetarian.

".....கொழுத்தம் னீறெச்சி போதை
பாதுவாய் நெய்யும் பாலும் பரிவுட னுண்பீ ராகில்....."

In the above line Agathiar said that Mega neer is caused by increased intake of non vegetarian diet it may derange the pitha humour, which is the foremost cause of Meganeer.

Distribution of cases with Etiology

In the study 80% patient's general etiology was noHereditary. Nowadays the prevalence of diabetes mellitus is increased mostly because of Hereditary and stressful life.

Distribution of cases with Udal Thaathukkal Out of 30 cases, all the cases had deranged all udal thaathukkal.

Distribution of cases with Naadi From the pulse study it is inferred that majority of cases had pitha vatham it means pittham is primarily responsible for initiating the disease process of Meganeer. In healthy volunteers Naadi was observed to be in physiological state in which most of them with respect to body nature, sex and age.

Distribution of cases with Naa

Among 30 cases,64% cases had normal texture in tongue.64% of cases had normal colour tongue, 33% of cases had Sweet taste in their tongue.8% of the cases had tastelessness. Tastelessness can be taken as pitha humour derangement. In the study 23% of cases had decreased Vai neer ooral. In Healthy volunteers, no specific inference could be made out of the study from examination of the tongue.

Distribution of cases with Niram

As most of the Indians are Black in colour, 57% of the patients found to be whitish. No specific inference could be made out in the study from the examination of niram. In healthy volunteers, no specific inference could be made out in this study from the examination of niram, mozhi and sparism.

Distribution of cases with Vizhi

Among 30 cases, 93% of cases had no discoloration in their eyes, 7% of cases had peelai seruthal, 7% of cases had both erichal and kaner vadithal. In healthy volunteers, 100% of subjects had normal eye. No specific inference could be made out in this study from the examination of vizhi.

Distribution of cases with Malam

Among 30 cases, 97% of the cases had brownish yellow or pale yellow colored malam. 27% of the patients had malam sikkal 17% of the patients had Vemmai No specific inference could be made out in this study from the examination of malam.

Distribution of cases with Neerkkuri

Among 30 cases, 83% of cases had colorless of urine, 3% of the cases had fruity odour, and 97% of the cases had ammonical, 67% of the cases had Niramatrathu nurai on observation. 88% of cases had polyuria and 7% of the cases had enjal. 88% of cases had polyuria which is classical sign of Diabetes mellitus, 33% of the cases had cloudy urine and because of pathogenic invasion the urine may be cloudy in nature. All the healthy volunteers had normal urine colour (ila manjal niram) with mild aromatic smell and normal density and normal enjal.

Distribution of cases with Neikkuri

IN Neikkuri findings 50% of patients to have pearl shape, these pattenrs indicating the affecting pitha humors.

Distribution of cases with Dasavayukkal

Among 30 cases, 30% of cases had deranged Abanan and 37% of cases had deranged Samanan, 50% of cases had deranged Viyanan, 7% of cases had deranged Kirukaran. Healthy volunteers among 30 subjects, 27% of the cases had deranged abanan and samanana.

It is inferred that abanan is affected in most of the patients because abanan is operating urogenital and anal region (poluria, glycosuria, spermatorrhoea, gastroparesis). Kirukaran is affected as dryness of the tongue is seen in Mathumegam patients.

Distribution of cases with Pitham

Out of 30 cases, 13% had deranged anal pitham, 83% of cases had deranged saathagam. Anal pitham is affected 60% of patients as polyphagia is one of the common symptoms in Diabetes mellitus. The components of pitham connected with digestion.

Distribution of cases with Kabam

Out of 30 cases, 3% of the cases had deranged Avalambagam. 7% of the cases had deranged pothagam as dryness of the tongue is seen. When pothagam is affected, Avalambagam is also got affected , 40% of cases had deranged Santhigam .

Distribution of cases with Nilam

Out of 30 cases 70% cases were living in Neithal nilam, Most of the cases were from Neithal nilam (70%). The study center is in Neithal nilam, observations can be ascertained only after a multi centric study.

Distribution of cases with Zodiac sign

In Zodiac sign, Among the 30cases, 5 cases were documented under mesham, 2 were simmam, 3 cases were under meenam, 10 cases were found to rishabam and also 2 cases thulaam. Above the results no significant conclusion obtained.

Distribution of cases with Manikkadai nool

Majority of patients had $9\frac{3}{4}$ manikkadai alavu (30%). As per Siddha text Megam is one of the indication for $9\frac{1}{2}$ finger breadth which is the one of the symptoms of Megam.

**SUMMARY
AND
CONCLUSION**

SUMMARY

The author concludes the study on Madakku Pilavai with fruitful results validating the Symptomatology and Siddha diagnostic methodology. Study on Manikkadai Nool threw up a narrow identifiable range (91/2) for Madhumegam and 9 ¾ for Madakku Pilavai. Nearly 60% of the cases were observed results a clinician can diagnose this study clinical entity as Madhumegam with confidence.

Mental stress is said to be an important factor precipitating the Diabetes or Madhumegam. In this study also most of the patients were having mental stress prior to onset of disease. It can be concluded that with the genesis of Madhumegam and subsequently the Madhumegam could be the path of development of the disease. So along with medicines for control the blood glucose levels, yogam and meditation which calm the mind can be advised.

Pitham humour which is the root cause of the disease was found to be elevated which confirms the literary stand point said by Sage Theran. Therefore steps should be taken to keep it under check.

From the study on Neerkkuri, it was found that many cases of Madakku Pilavai had polyuria, cloudy urine and fruity odor in urine. So neerkkuri can be taken as one of the significant diagnostic tool for diagnosing this disease.

From the study on Naadi (pulse), it was found that majority of patients were with vatha pitha naadi. So presence of vatha pitha naadi in Madakku Pilavai patients should be taken as a sign of increased pitha humour which might lead on to madhumegam. If normal patients were found with pitha vatha naadi other than pithakaalam, they should be taken as pathological state and preventive measures should be adopted.

With the study on udal thaathukkal, it was found that all cases (100%) had affected udal thaathukkal (all the seven). So drugs that strengthen the udal thaathukkal should be prescribed.

CONCLUSION

The patients with symptoms of Madakku Pilavai mentioned by Sage Siddha Maruthuvam confirmed to majority symptoms mentioned in the modern literature of complications of Diabetes mellitus . Thus the study validated the symptomatology elucidated by Sage Madakku Pilavai and matched it with complications of Diabetes mellitus.

From the study it is evident that, with naadi, manikkadai nool, neerkkuri, naa, and udal thaathukkal examination, Madakku Pilavai can be diagnosed easily and confidently. The author concludes that these diagnostic parameters can be successfully implemented by a physician at the clinical level in the diagnosis of Madakku Pilavai.

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ANNEXURES



NATIONAL INSTITUTE OF SIDDHA

राष्ट्रीय सिद्ध संस्थान

Department of AYUSH- MINISTRY OF HEALTH & FAMILY WELFARE

आयुष विभाग - स्वास्थ्य एवं परिवार कल्याण मंत्रालय

GOVERNMENT OF INDIA-भारत सरकार

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F.No.NIS/6-20/IEC/15-16

Dt: 05.10.2015

CERTIFICATE

Address of Ethics Committee: National Institute of Siddha, Tambaram Sanatorium, Chennai-600047, Tamil Nadu, India	
Principal Investigator: Dr.M.Rajeshwari, Department of Noi Naadal	
Protocol title: A study on the symptomatology and diagnostic methodology of Madakku pilavai	
Documents filed	1) Protocol, 2) Data Collection forms 3) SAE(Pharmacovigilance)
Clinical trial Protocol (others – Specify)	Yes
Informed consent documents	Yes
Any other documents	-
Date of IEC approval & its number	NIS/IEC/9/2014-15/29 – 26.08.2015

We approve the trial to be conducted in its presented form.

The Institutional Ethics Committee expects to be informed about the progress of the study, any SAE occurring in the course of the study.


Chairman


Member Secretary



The Tamil Nadu Dr. M.G.R. Medical University

69, Anna Salai, Guindy, Chennai - 600 032.

This Certificate is awarded to *Dr/Mr/Mrs.....M....Rajeshwari.....*

for participating as Resource Person / Delegate in the Nineteenth Workshop on

“ RESEARCH METHODOLOGY & BIostatISTICS ”

For AYUSH Post Graduates & Researchers

Organized by the Department of Siddha

The Tamil Nadu Dr. M.G.R. Medical University from 07th to 11th September 2015.


Dr.N.KABILAN, M.D.(Siddha)
READER, DEPT. OF SIDDHA


Prof. **Dr.P.ARUMUGAM**, M.D.,
REGISTRAR I/C


Prof. **Dr.D.SHANTHARAM**, M.D., D.Diab.,
VICE CHANCELLOR

ANNEXURE - I
DEPARTMENT OF NOI NAADAL
NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.
A STUDY ON THE SYMPTOMATOLOGY AND DIAGNOSTIC
METHODOLOGY OF MADAKKU PILAVAI

FORM I - SCREENING AND SELECTION PROFORMA

1. O.P.No _____ 2. I.P No _____ 3. Bed No: _____ 4. S.No: _____

5. Name: _____ 6. Age (years): 7. Gender: M F

8. Occupation: _____ 9. Income: _____

10. Address: _____

11. Contact Nos: _____

12. E-mail : _____

13. Whether taken any other medication for the same disease previously YES NO

If yes,
Name of the medicines :

Duration :

If resorted to Siddha medicine for the treatment of Madakku pilavai YES NO

Reasons for resorting to Siddha medicine :

- (a) Cost effectiveness :
- (b) No side effects in Siddha medicine :
- (c) Dissatisfaction with the previous treatment :

INCLUSION CRITERIA

	YES	NO
Group-I		
1. Age 20-65yrs.	<input type="checkbox"/>	<input type="checkbox"/>
2. Symptoms of Diabetes Mellitus(mega neer noigal)	<input type="checkbox"/>	<input type="checkbox"/>
Group-II		
1.Lumpy swelling presented over the joints and muscle	<input type="checkbox"/>	<input type="checkbox"/>
2. Reddish black discoloration	<input type="checkbox"/>	<input type="checkbox"/>
3. Warmth	<input type="checkbox"/>	<input type="checkbox"/>
4. Pain	<input type="checkbox"/>	<input type="checkbox"/>

Patients who fulfill Group-I and any of the 3 criteria in Group-II will be included in this study

EXCLUSION CRITERIA

	YES	NO
1. Any major Systemic illness except Diabetes Mellitus	<input type="checkbox"/>	<input type="checkbox"/>
2. Signs of septicemia	<input type="checkbox"/>	<input type="checkbox"/>
3.Vulnerable group	<input type="checkbox"/>	<input type="checkbox"/>

Date :

P.G Student

Lecturer

ANNEXURE – I A
DEPARTMENT OF NOI NAADAL
NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.
A STUDY ON THE SYMPTOMATOLOGY AND DIAGNOSTIC
METHODOLOGY OF MADAKKU PILAVAI

FORM I A - HISTORY PROFORMA

1. Sl.No of the case: _____

2. Name: _____ Height: _____ cms Weight: _____ Kg

3. Age (years): _____ DOB
D D M M Y E A R

4. Educational Status:

1) Illiterate 2) Literate 3) Student 4) Graduate/Postgraduate

5. Nature of work:

1) Sedentary work
2) Field work with physical labour
3) Field work Executive

6. Complaints and Duration:

7. History of present illness:

8. History of Past illness:

	1. Yes	2. No
Systemic hypertension	<input type="checkbox"/>	<input type="checkbox"/>
Ischemic heart disease	<input type="checkbox"/>	<input type="checkbox"/>
Dyslipidaemia	<input type="checkbox"/>	<input type="checkbox"/>
Jaundice	<input type="checkbox"/>	<input type="checkbox"/>
Bronchial asthma	<input type="checkbox"/>	<input type="checkbox"/>
Any drug allergy	<input type="checkbox"/>	<input type="checkbox"/>
Any surgeries	<input type="checkbox"/>	<input type="checkbox"/>
Any major illnesses	<input type="checkbox"/>	<input type="checkbox"/>

9. Habits:

	1. Yes	2. No
Smoker	<input type="checkbox"/>	<input type="checkbox"/>
Alcoholic	<input type="checkbox"/>	<input type="checkbox"/>
Drug Addiction	<input type="checkbox"/>	<input type="checkbox"/>
Betel nut chewer:	<input type="checkbox"/>	<input type="checkbox"/>
Tea	<input type="checkbox"/>	<input type="checkbox"/>
Coffee	<input type="checkbox"/>	<input type="checkbox"/>
Milk	<input type="checkbox"/>	<input type="checkbox"/>

DIET HISTORY

Type of diet	V <input type="checkbox"/>	NV <input type="checkbox"/>	M <input type="checkbox"/>
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VEGETARIAN FOODS

	1. Yes	2. No
sweets	<input type="checkbox"/>	<input type="checkbox"/>
Ice creams	<input type="checkbox"/>	<input type="checkbox"/>

Junk foods

NON VEGETARIAN FOODS

Meat

Fish

Crab

DRINKS

Soft drinks

10. Personal history:

Marital status: Married Unmarried

No. of children: Male: _____ Female: _____

Socio economic status:

11. Family history:

History of Diabetic mellitus:

History of Hypertension:

6. Menstrual & Obstetric history

Age at menarche _____ years

Gravidity Parity

Duration of the menstrual cycle:

Constancy of cycle duration: 1.Regular 2.Irregular

7. GENERAL ETIOLOGY FOR “MADAKKU PILAVAI”:

	YES	NO
1. Poor Hygiene	<input type="checkbox"/>	<input type="checkbox"/>
2. Diabetes	<input type="checkbox"/>	<input type="checkbox"/>
3. A weak immune system	<input type="checkbox"/>	<input type="checkbox"/>
4. Kidney disease	<input type="checkbox"/>	<input type="checkbox"/>
5. Liver disease	<input type="checkbox"/>	<input type="checkbox"/>
6. Dermatitis	<input type="checkbox"/>	<input type="checkbox"/>
7. Sharing and other activities that break the skin	<input type="checkbox"/>	<input type="checkbox"/>

8. CLINICAL SYMPTOMS OF “MADAKKU PILAVAI”

1. Lumpy swelling presented over the joints and muscle	<input type="checkbox"/>	<input type="checkbox"/>
2. Reddish black discoloration	<input type="checkbox"/>	<input type="checkbox"/>
3. Warmth	<input type="checkbox"/>	<input type="checkbox"/>
4. Pain	<input type="checkbox"/>	<input type="checkbox"/>

Date :

P.G Student

Lecturer

ANNEXURE - II
DEPARTMENT OF NOI NAADAL
NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.
A STUDY ON THE SYMPTOMATOLOGY AND DIAGNOSTIC
METHODOLOGY OF MADAKKU PILAVAI
FORM II - CLINICAL ASSESSMENT

1. Serial No: _____

2. Name: _____

3. Date of birth:

D	D

M	M

Y	E	A	R

4. Age: _____ years

5. Date: _____

GENERAL EXAMINATION:

1. Height: _____ cms. BMI _____ (Weight Kg/ Height m²)

2. Weight (kg):

3. Temperature (°F):

4. Pulse rate:

5. Heart rate:

6. Respiratory rate:

7. Blood pressure:

8. Pallor:

9. Jaundice:

10. Cyanosis:

11. Lymphadenopathy:

12. Pedal edema:

- 13. Clubbing:
- 14. Jugular vein pulsation

EXAMINATION

- 1. Inspection
- 2. palpation
- 3. Percussion
- 4. auscultation

VITAL ORGANS EXAMINATION

	1. Normal	2. Affected	
1. Heart	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. Lungs	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. Brain	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. Liver	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. Kidney	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. Spleen	<input type="checkbox"/>	<input type="checkbox"/>	_____
7. Stomach	<input type="checkbox"/>	<input type="checkbox"/>	_____

SYSTEMIC EXAMINATION:

- 1. Cardio Vascular System _____
- 2. Respiratory System _____
- 3. Gastrointestinal System _____
- 4. Central Nervous System _____
- 5. Uro genital system _____
- 6. Endocrine System _____

SIDDHA SYSTEM OF EXAMINATION
DETERMINATION OF PRAKRITI /UDALIYAL (Body Constitution)

1. PHYSIOLOGICAL STATUS (PHS)		
1.01 Status of Appetite: (AD)		
A.	Good appetite	
B.	Stable appetite with usually moderate desire to eat	
C.	Variable appetite	
1.02 Dietary/Eating habits (DH)		
A.	Enjoys eating, ready to eat mostly & hates to miss food	
B.	Regular food habits, but can spend hours without food	
C.	Desirous to take food, eats less at a time, needs mid-meals	
1.03 Bowel Habits (BH)		
A.	Regular, once-a-day, stool well formed, if constipated it is mild	
B.	(Respond to medium strength laxative)	
C.	Regular & frequent, stool semisolid or loose, rarely constipated.	
1.04 Sleeping Pattern (SH)		
A.	Sleeps easily but light	
B.	Sleeps easily and sound (heavily)	
C.	Trouble to get sleep, light sleep / Variable sleep pattern	
1.05 Morning feelings, after leaving the bed (MF)		
A.	Don't feel fresh	
B.	Feel fresh. Feel well even with less sleep.	
C.	Feel fresh but not good when less hours of sleep have.	
1.06 Dreams (DM)		
A.	Cool and peaceful dreams, not bothers to remember	
B.	Passionate dreams, sees heat, light & remembers well	
C.	Plenty of dreams, mostly related to motion, usually forgets	
1.07 Physical working capacity/physical strength		
A.	Starts with speed & gets exhausted easily	
B.	Loves hard work, has moderate capacity	
C.	Good stamina but slow and not interested for physical work	
1.08 Performance of activities		
A.	Quickly with a lot of initiative	
B.	Moderately with medium initiative	
C.	Slow, steady and balance activities	
1.09 Talking		
A.	Very fast missing words	
B.	Sharp, provocative and clear-cut	
C.	Slow, clear and stable	
1.10 Walking		
A.	Very quick with swift movement	
B.	Normal and rhythm	
C.	Slow and steady	
1.11 Associated movements of body while working		
A.	Excessive and frequent, difficult to tolerate	
B.	Less thirst, easy to tolerate	

C.	Moderate perspiration, consistent to climate, with pleasant smell.	
1.12 Nature of Thirst (TN)		
A.	Excessive and frequent, difficult to tolerate	
B.	Less thirst, easy to tolerate	
C.	Moderate and variable thirst	
1.13 Status of Perspiration (SP)		
A.	Scanty even in hot climate but odourless	
B.	Profuse with strong odour	
C.	Moderate perspiration, consistent to climate, with pleasant smell.	
1.14 Sexual qualities (SQ)		
A.	Variable, strong desire, overindulgence, & gets exhausted	
B.	Moderate with dominating behavior	
C.	Usually low and steady desire, with good stamina	
1.15 Quantity of seminal discharge		
A.	Scanty and comparatively thin in consistency	
B.	Moderate and normal	
C.	Plenty and thick	
1.16 Fertility or productivity		
A.	Comparatively lesser	
B.	Less	
C.	Capable of producing good no. of off springs	
1.17 Longevity or average age		
A.	Short life span	
B.	Moderate life span	
C.	Long life span	
1.18 Resistance to diseases (RD)		
A.	Usually poor. Frequently fall ill.	
B.	Medium	
C.	Good. Able to tolerate seasonal variation, food etc. well	
1.19 Climatic Preferences (CP)		
A.	Prefers warm, avoids cold climate	
B.	Likes cold, but intolerant to warm/hot	
C.	Likes normal climate & prefers warm in comparison to cold	
2. MENTAL/PSYCHOLOGICAL STATUS		
2.01 Mental Reactions (MR)/Personality Traits		
A.	Very sensitive, reacts quickly	
B.	Gets Irritated easily & sustains it.	
C.	Cool, calm, avoids confrontations	
2.02 Memory Status (MS)		
A.	Remembers easily & tends to forget easily	
B.	Takes time to grasp, but retains for long	
C.	Remembers easily and tends to retain	
2.03 Leadership quality (LQ)		
A.	Don't like to lead and happy as a follower.	
B.	Requires commanding status.	
C.	Avoid leading.	
2.04 Decision making capacity (DMC)		
A.	Takes immediate decision without thinking much.	
B.	Takes decision after properly analyzing the facts.	

C.	Avoid taking decision. Usually keeps them pending.	
2.05 Concentration Power (CP)		
A.	Very easy to concentrate on a work, but not for long duration	
B.	Difficult to concentrate on a work	
C.	Retains concentration for a long period	
2.06 Attitude towards problems or difficulties		
A.	Lot of worrying, instability in reaction	
B.	Angry, over awed, easily provoked and highly irritable	
C.	Peaceful, slow, steady and balance	
2.07 Nature		
A.	Easily irritable, irritating to others, exaggerating, anxious materialistic liking	
B.	Polite but hot-tempered, proudy, brave, bold, less but good friendship	
C.	Polite, decent, not greedy, appreciating, have good and long lasting friendship	
2.08 Liking about taste (TL)		
A.	Sweet, salt & sour	
B.	Sweet, bitter & astringent	
C.	Pungent, astringent & bitter	
3. PHYSICAL FEATURES: (PF)		
3.01 Body frame (BF)		
A.	Thin body frame, unusually long/short	
B.	Medium frame	
C.	Broad, Large frame	
3.02 Body weight (BW)		
A.	Moderate/Average weight	
B.	Underweight or Tendency of fluctuation	
C.	Overweight or with a tendency to gain weight	
3.03 Distribution of body fat (DBF)		
A.	Unequal/on specific areas	
B.	Evenly distribution	
C.	Scanty deposition of body fat.	
3.04 Nature/Texture of skin		
A.	Delicate, Irritable skin, gets wrinkles easily	
B.	Dry, rough, cracked, or having a tendency of cracking	
C.	Smooth, firm, soft, clear with good lusture, not prone to disorders	

3.05 Complexion/skin color (SC)

A.	Extremely fair / pinkish	
B.	Fair, reddish, burns easily	
C.	Comparatively dull or darkish, tans easily	
3.06 Body Hair (BH)		
A.	Dry, rough, coarse, lustureless & curly	
B.	Soft, scanty, straight, fine textured	
C.	Thick, shiny, moderate	
3.07 Forehead (FH)		
A.	Large	
B.	Medium	

C.	Small	
3.08 Eyes (EF)		
A.	Rolling, restless, small, dull & lusterless	
B.	Sharp, medium sized with sclera of reddish tinge	
C.	Large calm stable eyes with milky white sclera	
3.09 Teeth (TE)		
A.	Teeth are of average size, yellowish, prone to cavities	
B.	Dry, cracked, irregular dull white	
C.	Large, even, gleaming white	
3.10 Tongue (TO)		
A.	Thin tongue, with blackish spots, often coated with thin adherent coating	
B.	Medium, Reddish, occasionally coated with yellow or red coating	
C.	Thick usually clear, rarely coated, coating is usually thick white	
3.11 Lips (LP)		
A.	Soft, moist & reddish	
B.	Dry, thin & blackish	
C.	Thick & glossy	
3.12 Blood Vessels (BV)		
A.	Prominent	
B.	Less prominent	
C.	Not visible	
3.13 Scalp Hair (SH)		
A.	Dark in Shade, coarse, rough, easily prone to dandruff and split ends.	
B.	Thin, delicate, straight, light coloured, turn grey at an early age	
C.	Strong, thick, dark, slightly wavy with good lusture, oiliness is usually one of the chief complaints	

3.14 Joints (JT)		
A.	Crackling joints, hyper mobile in nature	
B.	Comparatively normal but have soft and loose ligaments	
C.	Well lubricated, strongly built joints which are well organized, well covered	
3.15 Voice (VR)		
A.	Rough, unclear voice, which turns hoarse or cracks on strain	
B.	Concise, sharp voice, intense in nature & high pitched	
C.	Deep, pleasant, resonant voice which is melodious, resonating, but lower in pitch and intensity	
3.16 Nail (NL)		

A.	Hard, brittle, rough & differ in size from one another, bluish/grayish in contour	
B.	Soft, Strong, well formed, Lustrous, pink in colour	
C.	Strong, large, thick symmetrical & somewhat pale in colour	
3.17 Body temperature		
A.	Feels slightly cold on touch	
B.	Feels slightly warm on touch	
C.	Normal	
3.18 Shape of Palms and feet		
A.	Short and broad	
B.	Medium and slim	
C.	Long and broad	
3.19 Face		
A.	Small and broad with uneven features	
B.	Medium & oval with sharply defined features	
C.	Round, babbly and attractive with balance features	
4. Social or economical status		
4.01 Economy		
A.	Getting less outcome with hard work	
B.	Getting good outcome with moderate efforts	
C.	Enjoys lavishly and royal life	

SCORE SHEET FOR DETERMINATION OF PRAKRITI /UDALIYAL

Sl. No. of the subject _____

S.No	Observation code	OPTIONS			Identified Area (V/P/K)
		A	B	C	
1.	1.01	P	K	V	
2.	1.02	P	K	V	
3.	1.03	K	P	V	
4.	1.04	P	K	V	
5.	1.05	V	P	K	
6.	1.06	K	P	V	
7.	1.07	V	P	K	
8.	1.08	V	P	K	
9.	1.09	V	P	K	
10.	1.10	V	P	K	
11.	1.11	V	P	K	

12.	1.12	P	K	V	
13.	1.13	V	P	K	
14.	1.14	V	P	K	
15.	1.15	V	P	K	
16.	1.16	V	P	K	
17.	1.17	V	P	K	
18.	1.18	V	P	K	
19.	1.19	V	P	K	
20.	2.01	V	P	K	
21.	2.02	V	K	P	
22.	2.03	K	P	V	
23.	2.04	V	P	K	
24.	2.05	P	V	K	
25.	2.06	V	P	K	
26.	2.07	V	P	K	
27.	2.08	V	P	K	
28.	3.01	V	P	K	
29.	3.02	P	V	K	
30.	3.03	K	P	V	
31.	3.04	P	V	K	
32.	3.05	K	P	V	
33.	3.06	V	P	K	
34.	3.07	K	P	V	
35.	3.08	V	P	K	
36.	3.09	P	V	K	
37.	3.10	V	P	K	
38.	3.11	P	V	K	
39.	3.12	V	P	K	
40.	3.13	V	P	K	
41.	3.14	V	P	K	
42.	3.15	V	P	K	
43.	3.16	V	P	K	
44.	3.17	V	P	K	
45.	3.18	V	P	K	
46.	3.19	V	P	K	
47.	3.12	V	P	K	
48.	4.01	V	P	K	
Individual Score of V P K		V	P	K	
Percentage of V P K		V	P	K	
Type of Prakriti /Udaliyal					

[1] ENVAGAI THERVU [EIGHT-FOLD EXAMINATION]

I. NAADI (KAI KURI) (RADIAL PULSE READING)

(a) Naadi Nithanam (Pulse Appraisal)

1. Kaalam (Pulse reading season)

- | | | | |
|-------------------------------------|--------------------------|--------------------------------------|--------------------------|
| 1. Kaarkaalam
(Rainy season) | <input type="checkbox"/> | 2. Koothirkaalam
(Autumn) | <input type="checkbox"/> |
| 3. Munpanikaalam
(Early winter) | <input type="checkbox"/> | 4. Pinpanikaalam
(Late winter) | <input type="checkbox"/> |
| 5. Ilavenirkaalam
(Early summer) | <input type="checkbox"/> | 6. Muthuvenirkaalam
(Late summer) | <input type="checkbox"/> |

2. Desam (Climate of the patient's habitat)

- | | | | |
|-------------------------|--------------------------|--------------------|--------------------------|
| 1. Kulir
(Temperate) | <input type="checkbox"/> | 2. Veppam
(Hot) | <input type="checkbox"/> |
|-------------------------|--------------------------|--------------------|--------------------------|

3. Vayathu (Age)
- | | | | | | |
|------------|--------------------------|-------------|--------------------------|-----------|--------------------------|
| 1. 1-33yrs | <input type="checkbox"/> | 2. 34-66yrs | <input type="checkbox"/> | 3. 67-100 | <input type="checkbox"/> |
|------------|--------------------------|-------------|--------------------------|-----------|--------------------------|

4. Udal Vanmai (General body condition)

- | | | | | | |
|------------------------------|--------------------------|-----------------------|--------------------------|---------------------|--------------------------|
| 1. Iyyalbu
(Normal built) | <input type="checkbox"/> | 3. Valivu
(Robust) | <input type="checkbox"/> | 4. Melivu
(Lean) | <input type="checkbox"/> |
|------------------------------|--------------------------|-----------------------|--------------------------|---------------------|--------------------------|

5. Vanmai (Expansile Nature)

- | | | | |
|-----------|--------------------------|-----------|--------------------------|
| 1. Vanmai | <input type="checkbox"/> | 2. Menmai | <input type="checkbox"/> |
|-----------|--------------------------|-----------|--------------------------|

6. Panbu (Habit)

- | | | | | | |
|------------------------------|--------------------------|-------------------------------|--------------------------|----------------------------|--------------------------|
| 1. Thannadai
(Playing in) | <input type="checkbox"/> | 2. Puranadai
(Playing out) | <input type="checkbox"/> | 3. Illaitthal
(Feeble) | <input type="checkbox"/> |
| 4. Kathithal
(Swelling) | <input type="checkbox"/> | 5. Kuthithal
(Jumping) | <input type="checkbox"/> | 6. Thullal
(Frisking) | <input type="checkbox"/> |
| 7. Azhutthal
(Ducking) | <input type="checkbox"/> | 8. Padutthal
(Lying) | <input type="checkbox"/> | 9. Kalatthal
(Blending) | <input type="checkbox"/> |

10. Munnokku (Advancing) 11. Pinnokku (Flinching) 12. Suzhalal (Revolving)
13. Pakkamnokku (Swerving)

(b) Naadi nadai (Pulse Play)

1. Vali 2. Azhal 3. Iyyam
4. Vali Azhal 5. Azhal Vali 6. Iyya Vali
7. Vali Iyyam 8. Azhal Iyyam 9. Iyya Azhal

II.NAA (TONGUE)

1. Maa Padinthiruthal (Coatedness) 1. Present 2. Absent
2. Niram (Colour) 1.Karuppu (Dark) 2. Manjal (Yellow) 3. Veluppu (Pale)
3. Suvai (Taste sensation) 1.Pulippu (Sour) 2. Kaippu (Bitter) 3. Inippu (Sweet)
4. Vedippu (Fissure) 1. Absent 2. Present
5. Vai neer ooral (Salivation) 1.Normal 2. Increased 3.Reduced

III.NIRAM (COMPLEXION)

1. Karuppu (Dark) 2.Manjal (Yellowish) 3.Velluppu (Fair)

IV. MOZHI (VOICE)

1. Sama oli (Medium pitched) 2 Urattha oli (High pitched) 3.Thazhantha oli (Low pitched)

V. VIZHI (EYES)

1. Niram (Venvizhi) (Discolouration)

- | | | | | |
|--|----------------------|--------------------------|------------------------|--------------------------|
| | 1. Karuppu
(Dark) | | 2. Manjal
(Yellow) | |
| | 3. Sivappu
(Red) | <input type="checkbox"/> | 4. Velluppu
(White) | <input type="checkbox"/> |
| | 5. No Discoloration | <input type="checkbox"/> | | |
| 2. Kanneer
(Tears) | 1. Normal | <input type="checkbox"/> | 2. Increased | <input type="checkbox"/> |
| | | | 3. Reduced | <input type="checkbox"/> |
| 3. Erichchal
(Burning sensation) | 1. Present | <input type="checkbox"/> | 2. Absent | <input type="checkbox"/> |
| 4. Peelai seruthal
(Mucus excrements) | 1. Present | <input type="checkbox"/> | 2. Absent | <input type="checkbox"/> |

VI. MEI KURI (PHYSICAL SIGNS)

- | | | | | | | |
|-------------------------------|---------------------|--------------------------|-----------------------|--------------------------|---------------------|--------------------------|
| 1. Veppam
(Warmth) | 1. Mitham
(Mild) | <input type="checkbox"/> | 2. Migu
(Moderate) | <input type="checkbox"/> | 3. Thatpam
(Low) | <input type="checkbox"/> |
| 2. Viyarvai
(Sweat) | 1. Increased | <input type="checkbox"/> | 2. Normal | <input type="checkbox"/> | 3. Reduced | <input type="checkbox"/> |
| 3. Thodu vali
(Tenderness) | 1. Absent | <input type="checkbox"/> | 2. Present | <input type="checkbox"/> | | |

VII. MALAM (STOOLS)

- | | | | | |
|--|-------------------------|--------------------------|--------------------------|--------------------------|
| 1. Niram
(Color) | 1. Karuppu
(Dark) | <input type="checkbox"/> | 2. Manjal
(Yellowish) | <input type="checkbox"/> |
| | 3. Sivappu
(Reddish) | <input type="checkbox"/> | 4. Velluppu
(Pale) | <input type="checkbox"/> |
| 2. Sikkal
(Constipation) | 1. Present | <input type="checkbox"/> | 2. Absent | <input type="checkbox"/> |
| 3. Sirutthal
(Poorly formed stools) | 1. Present | <input type="checkbox"/> | 2. Absent | <input type="checkbox"/> |
| 4. Kalichchal
(Loose watery stools) | 1. Present | <input type="checkbox"/> | 2. Absent | <input type="checkbox"/> |
| 5. Seetham | 1. Present | <input type="checkbox"/> | 2. Absent | <input type="checkbox"/> |

(Watery and mucoid excrements)

6. Vemmai (Warmth) 1. Present 2. Absent
7. History of habitual constipation 1. Present 2. Absent
8. Passing of a) Mucous 1. Yes 2. No
- b) Blood 1. Yes 2. No

VIII. MOOTHIRAM (URINE)

(a) NEER KURI (PHYSICAL CHARACTERISTICS)

1. Niram (colour)

- Colourless Milky purulent orange
- Red Greenish dark brown
- Bright red Black Brown red or yellow

2. Manam (odour)

- | | Yes | No |
|-----------|--------------------------|--------------------------|
| Ammonical | <input type="checkbox"/> | <input type="checkbox"/> |
| Fruity | <input type="checkbox"/> | <input type="checkbox"/> |
| Others | : _____ | |

3. Edai (Specific gravity)

- | | Yes | No |
|---|--------------------------|--------------------------|
| Normal (1.010-1.025) | <input type="checkbox"/> | <input type="checkbox"/> |
| High Specific gravity (>1.025) | <input type="checkbox"/> | <input type="checkbox"/> |
| Low Specific gravity (<1.010) | <input type="checkbox"/> | <input type="checkbox"/> |
| Low and fixed Specific gravity (1.010-1.012): | <input type="checkbox"/> | <input type="checkbox"/> |

4. Alavu(volume)

Yes

No

Normal (1.2-1.5 lt/day)

:

Polyuria (>2lt/day)

:

Oliguria (<500ml/day)

:

5. Nurai(froth)

Yes

No

Clear

:

Cloudy

:

Yes

No

6. Enjal (deposits)

:

(b) NEI KURI (oil spreading sign)1. Aravam
(Serpentine fashion)2. Aali
(Mothiram)3. Muthu
(Pearl beaded appear)4. Aravil Mothiram
(Serpentine in ring fashion)5. Aravil Muthu
(Serpentine and Pearl patterns)6. Mothirathil Muthu
(Ring in pearl fashion)7. Mothirathil Aravam
(Ring in Serpentine fashion)8. Muthil Aravam
(Pearl in Serpentine fashion)9. Muthil Mothiram
(Pearl in ring fashion)10. Asathiyam
(Incurable)11. Mellena paraval
(Slow spreading)

12. others: _____

[2]. **MANIKADAI NOOL** (Wrist circummetric sign) : _____ fbs

[3]. **IYMPORIGAL /IYMPULANGAL**

(Penta sensors and its modalities)

	1. Normal	2. Affected
1. Mei (skin)	<input type="checkbox"/>	<input type="checkbox"/>
2. Vaai (Mouth/ Tongue)	<input type="checkbox"/>	<input type="checkbox"/>
3. Kan (Eyes)	<input type="checkbox"/>	<input type="checkbox"/>
4. Mookku (Nose)	<input type="checkbox"/>	<input type="checkbox"/>
5. Sevi (Ears)	<input type="checkbox"/>	<input type="checkbox"/>

[4]. **KANMENTHIRIYANGAL /KANMAVIDAYANGAL**
(Motor machinery and its execution)

	1. Normal	2. Affected
1. Kai (Hands)	<input type="checkbox"/>	<input type="checkbox"/>
2. Kaal (Legs)	<input type="checkbox"/>	<input type="checkbox"/>
3. Vaai (Mouth)	<input type="checkbox"/>	<input type="checkbox"/>
4. Eruvai (Analepy)	<input type="checkbox"/>	<input type="checkbox"/>
5. Karuvaai (Birth canal)	<input type="checkbox"/>	<input type="checkbox"/>

[5]. **YAKKAI (SOMATIC TYPES)**

Vatha constitution	Pitha constitution	Kaba constitution
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Lean and lanky built	<input type="checkbox"/>	Thin covering of bones and joints by soft tissue	<input type="checkbox"/>	Plumpy joints and limbs	<input type="checkbox"/>
Hefty proximities of limbs	<input type="checkbox"/>	Always found with warmth, sweating and offensive body odour	<input type="checkbox"/>	Broad forehead and chest	<input type="checkbox"/>
Cracking sound of joints on walking	<input type="checkbox"/>	Wrinkles in the skin	<input type="checkbox"/>	Sparkling eyes with clear sight	<input type="checkbox"/>
Dark and thicker eye lashes	<input type="checkbox"/>	Red and yellow admixed complexion	<input type="checkbox"/>	Lolling walk	<input type="checkbox"/>
Dark and light admixed complexion	<input type="checkbox"/>	Easily suffusing eyes due to heat and alcohol	<input type="checkbox"/>	Immense strength despite poor eating	<input type="checkbox"/>
Split hair	<input type="checkbox"/>	Sparse hair with greying	<input type="checkbox"/>	High tolerance to hunger, thirst and fear	<input type="checkbox"/>
Clear words	<input type="checkbox"/>	Intolerance to hunger, thirst and heat	<input type="checkbox"/>	Exemplary character with good memory power	<input type="checkbox"/>
Scant appetite for cold food items	<input type="checkbox"/>	Inclination towards perfumes like sandal	<input type="checkbox"/>	More liking for sweet taste	<input type="checkbox"/>
Poor strength despite much eating	<input type="checkbox"/>	Slender eye lashes	<input type="checkbox"/>	Husky voice	<input type="checkbox"/>
Loss of libido	<input type="checkbox"/>	Pimples and moles are plenty	<input type="checkbox"/>		
In generosity	<input type="checkbox"/>				
Sleeping with eyes half closed	<input type="checkbox"/>				

RESULTANT SOMATIC TYPE: _____

[6] GUNAM

1. Sathuva Gunam

2. Rajo Gunam

3. Thamo Gunam

[7] UYIR THATHUKKAL

A. VALI

	1. Normal	2. Affected
1. Praanan (Heart centre)	<input type="checkbox"/>	<input type="checkbox"/>
2. Abaanan (Medial of muladhar centre)	<input type="checkbox"/>	<input type="checkbox"/>
3. Samaanan (Navel centre)	<input type="checkbox"/>	<input type="checkbox"/>
4. Udhaanan (Forehead centre)	<input type="checkbox"/>	<input type="checkbox"/>
5. Viyaanan (Throat centre)	<input type="checkbox"/>	<input type="checkbox"/>
6. Naahan (Higher intellectual function)	<input type="checkbox"/>	<input type="checkbox"/>
7. Koorman (Air of yawning)	<input type="checkbox"/>	<input type="checkbox"/>
8. Kirukaran (Air of salivation)	<input type="checkbox"/>	<input type="checkbox"/>
9. Devathathan (Air of laziness)	<input type="checkbox"/>	<input type="checkbox"/>
10. Dhananjeyan (Air that acts on death)	<input type="checkbox"/>	<input type="checkbox"/>

B. AZHAL

	1. Normal	2. Affected
1. Anala pittham (Gastric juice)	<input type="checkbox"/>	<input type="checkbox"/>
2. Ranjaka pittham (Haemoglobin)	<input type="checkbox"/>	<input type="checkbox"/>
3. Saathaka pittham (Life energy)	<input type="checkbox"/>	<input type="checkbox"/>
4. Aalosaka pittham	<input type="checkbox"/>	<input type="checkbox"/>

(Aqueous Humour)

5. Prasaka pittham
(Bile)

C. IYYAM

	1. Normal	2. Affected
1. Avalambagam (Serum)	<input type="checkbox"/>	<input type="checkbox"/>
2. Kilethagam (saliva)	<input type="checkbox"/>	<input type="checkbox"/>
3. Pothagam (lymph)	<input type="checkbox"/>	<input type="checkbox"/>
4. Tharpagam (cerebrospinal fluid)	<input type="checkbox"/>	<input type="checkbox"/>
5. Santhigam (Synovial fluid)	<input type="checkbox"/>	<input type="checkbox"/>

[8] UDAL THATHUKKAL

INCREASED SAARAM (CHYLE)	DECREASED SAARAM(CHYLE)
Loss of appetite <input type="checkbox"/>	Loss weight <input type="checkbox"/>
Excessive salivation <input type="checkbox"/>	Tiredness <input type="checkbox"/>
Loss of perseverance <input type="checkbox"/>	Dryness of the skin <input type="checkbox"/>
Excessive heaviness <input type="checkbox"/>	Diminished activity of the sense organs <input type="checkbox"/>
White musculature <input type="checkbox"/>	
Cough, dyspnea, excessive sleep <input type="checkbox"/>	
Weakness in all joints of the body <input type="checkbox"/>	

A. SAARAM: INCREASED DECREASED

INCREASED CENNEER(BLOOD)	DECREASED CENNEER(BLOOD)
Boils in different parts of the body <input type="checkbox"/>	Anemia <input type="checkbox"/>
Anorexia <input type="checkbox"/>	Tiredness <input type="checkbox"/>
Mental disorder <input type="checkbox"/>	Neuritis <input type="checkbox"/>
Splenomegaly <input type="checkbox"/>	Lassitude <input type="checkbox"/>
Colic pain <input type="checkbox"/>	Pallor of the body <input type="checkbox"/>
Increased pressure <input type="checkbox"/>	
Reddish eye and skin <input type="checkbox"/>	
Jaundice <input type="checkbox"/>	
Haematuria <input type="checkbox"/>	

B. CENNEER: INCREASED DECREASED

INCREASED OON (MUSCLE)	DECREASED OON (MUSCLE)
Cervical lymphadenitis <input type="checkbox"/>	Impairment of sense organs <input type="checkbox"/>
Vernical ulcer <input type="checkbox"/>	Joint pain <input type="checkbox"/>
Tumour in face ,abdomen, thigh, genitalia <input type="checkbox"/>	Jaw, thigh and genitalia gets shortened <input type="checkbox"/>
Hyper muscular in the cervical region <input type="checkbox"/>	

C. OON: INCREASED DECREASED

INCREASED KOZHUPPU (ADIPOSE TISSUE)	DECREASED KOZHUPPU (ADIPOSE TISSUE)
Cervical lymph adenitis <input type="checkbox"/>	Pain in the hip region <input type="checkbox"/>
Vernical ulcer <input type="checkbox"/>	Disease of the spleen <input type="checkbox"/>
Tumour in face, abdomen, thigh, genitalia <input type="checkbox"/>	
Hyper muscular in the cervical region <input type="checkbox"/>	
Dyspnoea <input type="checkbox"/>	
Loss of activity <input type="checkbox"/>	

D. KOZHUPPU: INCREASED DECREASED

INCREASED ENBU (BONE)	DECREASED ENBU (BONE)
Growth in bones and teeth <input type="checkbox"/>	Bones diseases <input type="checkbox"/>
	Loosening of teeth <input type="checkbox"/>
	Nails splitting <input type="checkbox"/>
	Falling of hair <input type="checkbox"/>

E. ENBU: INCREASED DECREASED

INCREASED MOOLAI (BONE MARROW)	DECREASED MOOLAI (BONE MARROW)
Heaviness of the body <input type="checkbox"/>	Osteoporosis <input type="checkbox"/>
Swollen eyes <input type="checkbox"/>	Sunken eyes <input type="checkbox"/>
Swollen phalanges <input type="checkbox"/>	
chubby fingers <input type="checkbox"/>	
Oliguria <input type="checkbox"/>	
Non healing ulcer <input type="checkbox"/>	

F. MOOLAI: INCREASED DECREASED

INCREASED SUKKILAM/SURONITHAM (SPERM OR OVUM)	DECREASED SUKKILAM/SURONITHAM (SPERM OR OVUM)
Infatuation and lust towards women / men <input type="checkbox"/>	Failure in reproduction <input type="checkbox"/>
Urinary calculi <input type="checkbox"/>	Pain in the genitalia <input type="checkbox"/>

G. SUKKILAM/SURONITHAM: INCREASED DECREASED

[9] MUKKUTRA MIGU GUNAM

I. Vali Migu Gunam	1. Present	2. Absent
1. Emaciation	<input type="checkbox"/>	<input type="checkbox"/>
2. Complexion – blackish	<input type="checkbox"/>	<input type="checkbox"/>
3. Desire to take hot food	<input type="checkbox"/>	<input type="checkbox"/>
4. Shivering of body	<input type="checkbox"/>	<input type="checkbox"/>
5. Abdominal distension	<input type="checkbox"/>	<input type="checkbox"/>
6. Constipation	<input type="checkbox"/>	<input type="checkbox"/>
7. Insomnia	<input type="checkbox"/>	<input type="checkbox"/>
8. Weakness	<input type="checkbox"/>	<input type="checkbox"/>
9. Defect of sense organs	<input type="checkbox"/>	<input type="checkbox"/>
10. Giddiness	<input type="checkbox"/>	<input type="checkbox"/>
11. Lake of interest	<input type="checkbox"/>	<input type="checkbox"/>

II. Pitham Migu Gunam	1. Present	2. Absent
1. Yellowish discolouration of skin	<input type="checkbox"/>	<input type="checkbox"/>
2. Yellowish discolouration of the eye	<input type="checkbox"/>	<input type="checkbox"/>
3. Yellow coloured urine	<input type="checkbox"/>	<input type="checkbox"/>
4. Yellowishness of faeces	<input type="checkbox"/>	<input type="checkbox"/>
5. Increased appetite	<input type="checkbox"/>	<input type="checkbox"/>
6. Increased thirst	<input type="checkbox"/>	<input type="checkbox"/>
7. Burning sensation over the body	<input type="checkbox"/>	<input type="checkbox"/>
8. Sleep disturbance	<input type="checkbox"/>	<input type="checkbox"/>

III. Kapham migu gunam	1. Present	2. Absent
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- | | | |
|----------------------------------|--------------------------|--------------------------|
| 1. Increased salivary secretion | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Reduced activeness | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Heaviness of the body | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Body colour – fair complexion | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Chillness of the body | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Reduced appetitie | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Eraippu | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Increased sleep | <input type="checkbox"/> | <input type="checkbox"/> |

[10]. **NOIUTRA KALAM**

- | | | | |
|-------------------------------------|--------------------------|--------------------------------------|--------------------------|
| 1. Kaarkaalam
(Aug15-Oct14) | <input type="checkbox"/> | 2.Koothirkaalam
(Oct15-Dec14) | <input type="checkbox"/> |
| 3. Munpanikaalam
(Dec15-Feb14) | <input type="checkbox"/> | 4.Pinpanikaalam
(Feb15-Apr14) | <input type="checkbox"/> |
| 5. Ilavanirkaalam
(Apr15-June14) | <input type="checkbox"/> | 6.Muthuvenirkaalam
(June15-Aug14) | <input type="checkbox"/> |

[11]. **NOI UTRA NILAM**

- | | | | | | |
|-------------------------------|--------------------------|-----------------------------|--------------------------|-------------------------|--------------------------|
| 1. Kurunji
(Hilly terrain) | <input type="checkbox"/> | 2. Mullai
(Forest range) | <input type="checkbox"/> | 3. Marutham
(Plains) | <input type="checkbox"/> |
| 4. Neithal
(Coastal belt) | <input type="checkbox"/> | 5. Paalai
(Desert) | <input type="checkbox"/> | | |

[12]. Date of Birth

[13]. Time of Birth AM PM

[14]. Place of Birth: _____

[15]. **Rasi (Zodiac Sign)**

- | | | | | | |
|-------------|--------------------------|---------------|--------------------------|-------------|--------------------------|
| 1. Mesam | <input type="checkbox"/> | 2. Rishabam | <input type="checkbox"/> | 3. Midhunam | <input type="checkbox"/> |
| 4. Katakam | <input type="checkbox"/> | 5. Simmam | <input type="checkbox"/> | 6. Kanni | <input type="checkbox"/> |
| 7. Thulam | <input type="checkbox"/> | 8. Viruchiham | <input type="checkbox"/> | 9. Dhanusu | <input type="checkbox"/> |
| 10. Maharam | <input type="checkbox"/> | 11. Kumbam | <input type="checkbox"/> | 12. Meenam | <input type="checkbox"/> |

[16]. Natchathiram(birth stars):

- | | | | | | |
|-----------------|--------------------------|-------------------|--------------------------|------------------|--------------------------|
| 1. Aswini | <input type="checkbox"/> | 2. Barani | <input type="checkbox"/> | 3. Karthikai | <input type="checkbox"/> |
| 4. Rohini | <input type="checkbox"/> | 5. Mirugaseeradam | <input type="checkbox"/> | 6. Thiruvathirai | <input type="checkbox"/> |
| 7. Punarpoosam | <input type="checkbox"/> | 8. Poosam | <input type="checkbox"/> | 9. Ayilyam | <input type="checkbox"/> |
| 10. Makam | <input type="checkbox"/> | 11. Pooram | <input type="checkbox"/> | 12. Utthiram | <input type="checkbox"/> |
| 13. Astham | <input type="checkbox"/> | 14. Chithirai | <input type="checkbox"/> | 15. Swathi | <input type="checkbox"/> |
| 16. Visakam | <input type="checkbox"/> | 17. Anusam | <input type="checkbox"/> | 18. Kettai | <input type="checkbox"/> |
| 19. Moolam | <input type="checkbox"/> | 20. Pooradam | <input type="checkbox"/> | 21. Uthiradam | <input type="checkbox"/> |
| 22. Thiruvonam | <input type="checkbox"/> | 23. Avittam | <input type="checkbox"/> | 24. Sadayam | <input type="checkbox"/> |
| 25. Poorattathi | <input type="checkbox"/> | 26. Uthirattathi | <input type="checkbox"/> | 27. 28. Not | <input type="checkbox"/> |

. CLINICAL SYMPTOMS OF “Madakku Pilavai”

	YES	NO
Lumpy swelling presented over the joints and muscles	<input type="checkbox"/>	<input type="checkbox"/>
Reddish black discolouration	<input type="checkbox"/>	<input type="checkbox"/>
Pain	<input type="checkbox"/>	<input type="checkbox"/>
warmth	<input type="checkbox"/>	<input type="checkbox"/>

Date :

P.G Student

Lecture

**ANNEXURE-III
DEPARTMENT OF NOI NAADAL**

**NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.
A STUDY ON THE SYMPTOMATOLOGY AND DIAGNOSTIC
METHODOLOGY OF MADAKKU PILAVAI**

FORM-III-LABORATORY INVESTIGATIONS

1. O.P No: _____ Lab.No _____ Serial No _____

2. Name: _____

3. Date of birth :

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D D M M Y E A R

4. Age : _____ years

5. Date of assessment: _____

BLOOD

1. TC _____ Cells/cu mm

2. DC
P _____% L _____% E _____% M _____% B _____%

3. Hb _____ gms%

4. ESR At 30 minutes _____ mm At 60 minutes _____ mm

5. Blood Sugar-F _____ mgs%

6. Blood Sugar-PP _____ mg%

7. Serum Cholesterol _____ mgs %

8. HDL _____ mgs%

9. LDL _____ mgs%

10. Triglycerides _____ mgs%

11. Blood Urea _____ mgs%

12. Serum Creatinine _____ mgs%

URINE

1. Neerkuri _____
2. Neikuri _____
3. Sugar F&PP _____
4. Albumin _____
5. Deposits _____

MOTION

1. Ova
2. Cyst
3. Occult blood

Date :
SSSSSSSSSS

P.G Student

Lecturer

ANNEXURE - IV
DEPARTMENT OF NOI NAADAL
NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.
A STUDY ON THE SYMPTOMATOLOGY AND DIAGNOSTIC
METHODOLOGY OF MADAKKU PILAVAI

FORM IV - INFORMED WRITTEN CONSENT FORM

Iexercising my free power of choice, hereby give my consent to be included as a subject in the diagnostic trial entitled “ A study on “MADAKKU PILAVAI”. I may be asked to give urine and blood samples during the study.

I have been informed about the study to my satisfaction by the attending investigator about the purpose of this trial, the nature of study and the laboratory investigations. I also give my consent to publish my study results in scientific conferences and reputed scientific journals for the betterment of clinical research.

I am also 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.

Signature /thumb impression of the patient :

Date :

Name of the patient :

Signature of the investigator :

Date :

Head of the Department :

தேசிய சித்த மருத்துவ நிறுவனம், சென்னை-47.

நோய் நாடல் துறை

“மடக்குப் பிளவை நோய் கணிப்பு முறை மற்றும் குறிகுணங்களை பற்றிய ஓர் ஆய்வு”

ஒப்புதல் படிவம்

ஆய்வாளரால் சான்றளிக்கப்பட்டது

நான் இந்த ஆய்வை குறித்த அனைத்து விபரங்களையும் நோயாளிக்கு புரியும் வகையில் எடுத்துரைத்தேன் என உறுதியளிக்கிறேன்.

தேதி :

கையொப்பம் :

இடம்:

பெயர் :

நோயாளியின் ஒப்புதல்

நான், என்னுடைய சுதந்திரமாக தேர்வு செய்யும் உரிமையைக் கொண்டு இங்கு தலைப்பிடப்பட்ட “மடக்குப் பிளவை நோயை கணிப்பதற்கான மருத்துவ ஆய்விற்கு என்னை உட்படுத்த ஒப்புதல் அளிக்கிறேன்.

என்னிடம் இந்தமருத்துவ ஆய்வின் காரணத்தையும், மருத்துவ ஆய்வுக்கூட பரிசோதனைகள் பற்றி திருப்தி அளிக்கும் வகையில் ஆய்வு மருத்துவரால் விளக்கிக் கூறப்பட்டது.

இந்த ஆய்வின் போது எடுக்கப்படும் புகைபடங்கள் மருத்துவ அறிவியலின் முன்னேற்றத்திற்காக மட்டும் பயன்படுத்தப்படும்

தேதி:

கையொப்பம் :

இடம்:

பெயர் :

தேதி

சாட்சிக்காரர் பெயர்

உறவுமுறை :

ANNEXURE – IV – A

DEPARTMENT OF NOI NAADAL

NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.

A STUDY ON THE SYMPTOMATOLOGY AND DIAGNOSTIC MEDHODOLOGY OF MADAKKU PILAVAI

FORM IV- A - PATIENT INFORMATION SHEET

PURPOSE OF RESEARCH AND BENEFITS:

The diagnostic research study in which your participation is proposed to assess the diagnostic methods in Siddha methodology in MADAKKU PILAVAI patients. Knowledge gained from this study would be of benefit to patients suffering from such conditions for the diagnosis and prognosis.

STUDY PROCEDURE:

You will be interviewed and examined as OP and IP patients at the study centre. At the first visit the physician will conduct a brief physical examination and assess the condition followed by Envagai thervu and routine blood and urine analysis. After matching the inclusion criteria you will be included in this study and you will be examined on the basis of Envagai thervu.

POSSIBLE RISK:

During this study there may be a minimum pain to you while drawing blood sample.

CONFIDENTIALITY:

Your medical records will be treated with confidentiality and will be revealed only to other doctors / scientists. The results of this study may be published in a scientific journal, but you will not be identified by your name.

YOUR PARTICIPATION AND YOUR RIGHTS:

Your participation in this study is voluntary and you may be withdrawn from this study anytime without having to give reasons for the same. You will be informed about the findings that occur during the study. If you do agree to take part in this study, your health record will need to be made available to the investigators. If you don't wish to participate at any stage, the level of care you receive will in no way be affected.

The Ethics committee cleared the study for undertaking at OPD and IPD, NIS. Should any question arise with regards to this study you contact following person

P.G student:

Dr. M.Rajeshwari 1st Year
Department of Noi Naadal
National Institute of Siddha
Chennai-600 047.

தேசிய சித்த மருத்துவ நிறுவனம், சென்னை-47.

நோய் நாடல் துறை

மடக்குப் பிளவைநோய் கணிப்பு முறை மற்றும் குறிகுணங்களை பற்றிய ஓர் ஆய்வு”

நோயாளியின் தகவல் படிவம்

ஆய்வின் நோக்கமும் பயனும்:

தாங்கள் பங்கேற்கும் இவ்வாய்வு “மடக்குப் பிளவை நோய் கணிப்பு முறை மற்றும் குறிகுணங்களை பற்றிய ஓர் ஆய்வு” சித்த மருத்துவ முறையில் நோயை கணிப்பதற்கான ஓர் ஆய்வுமுறை. இவ்வாய்வு தங்களின் நோய்கணிப்பை பற்றியும் நோயின் போக்கை பற்றியும் அறிய உதவும்.

ஆய்வு முறை:

தாங்கள் நேர்காணல் மற்றும் பரிசோதனைகளின் மூலம் உள்நோயாளி, வெளிநோயாளி பிரிவில் ஆய்வு செய்யப்படுவீர்கள். முதல் நேர்காணலின்போது ஆய்வாளரால் உடல் பரிசோதனை, நீர், இரத்தம், மற்றும் மலம் பரிசோதனை செய்து குறிப்பிட்ட குறிகுணங்கள் இருக்கின்றனவா என ஆய்விற்கு உட்படுத்தப்படுவீர்கள்.

நேரும் உபாதைகள்:

இவ்வாய்வில் இரத்த பரிசோதனைக்காக இரத்தம் எடுக்கும்போது சிறிதளவு வலி ஏற்படலாம்.

மந்தணம் :

தங்களின் மருத்துவ ஆவணங்கள் அனைத்தும் மருத்துவர், ஆய்வாளர் அல்லாத பிறரிடம் தெரிவிக்கப்படமாட்டாது.

நோயாளியின் பங்களிப்பும் உரிமைகளும்:

இவ்வாய்வில் தங்களின் பங்கேற்பு தன்னிச்சையானது. இவ்வாய்வில் தாங்கள் ஒத்துழைக்க இயலவில்லையெனில் எப்பொழுது வேண்டுமானாலும் காரணம் எதுவும் கூறாமல் விலகிக்கொள்ளலாம். இவ்வாய்வின்போது அறியப்படும் தகவல்கள் தங்களுக்கு தெரிவிக்கப்படும். நோயாளியின் ஒப்புதலுக்கிணங்க நோய்கணிப்பு விவரங்களை ஆய்வாளர்

பயன்படுத்திக்கொள்வார். நோயாளி ஆய்வினிடையே ஒத்துழைக்க மறுத்தாலும் எந்த நிலையிலும் நோயாளியை கவனிக்கும் விதம் பாதிக்கப்பட மாட்டாது. நிறுவன நெறிமுறை குழுமம் (Institutional Ethical committee) மேற்கண்ட ஆய்வினை மேற்கொள்ள ஒப்புதல் அளித்துள்ளது.

ஆய்வு குறித்த சந்தேகங்கள் இருப்பின் கீழ்க்கண்ட நபரை தொடர்பு கொள்ளவும்.

பட்டமேற்படிப்பாளர் :

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நோய் நாடல் துறை

தேசிய சித்த மருத்துவ நிறுவனம்,

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