A STUDY ON DIAGNOSTIC METHODOLOGY
NEERKKURI NEIKKURI OF
MANTHAARA KAASAM - BRONCHIAL ASTHMA

(DISSertation Subject)

For the partial fulfillment of the requirements to the Degree of

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neerkkuri neikkuri

- Manthaara Kaasam
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INTRODUCTION...

neerkuri neikkuri

- Manthaara Kaasam
Siddha system of medicine is a treasure dedicated to the world by Siddhars. Siddhars are ancient scientists who preached the knowledge about human physiology, pathology, management and prevention of disease in a holistic, encrypted but with keys to decode it. Out of many wings of siddha, pathology stands very essential to deal with disease of the present world. They used certain diagnostic methodology to find the root cause of diseases.

The methodology of diagnosing the diseases in our system is based on ‘En vagai thervu’. Urine examination is one of those ‘En vagai thervugal’

Urine examination has got demonstrable objectivity with clear cut tangible rules laid down by Siddhars which will reduce the variations in examination between one physician and another.

The urine examination consists of macroscopic observation of colour, odour, froth, density and deposits. Apart from this general examination of urine, there is a unique methodology of urine examination originally conceived and crafted by Siddhars in which a drop of gingely oil is instilled over the urine sample surface collected under standard set of conditions. This unique methodology is called as “Neikuri”. The word ‘Nei’ in Tamil means oil or gingely oil to be more precise. ‘Kuri’ refers to sign. The procedure and various patterns in Neikuri are illustrated in the text of Theran, a Siddhar who excelled in propounding urine examination procedures.

Neikkuri is dropping sesame oil drop onto the mid stream urine sample surface collected in a crystal glass bowl during early morning. The mode of spreading nature of oil indicates the prognosis and diagnosis of diseases.

In Siddha system, diseases are defined as alteration in own nature of seven udal thathukkal and Uyir thathukkal in gross material body and also in subtle body. One among such diseases is ‘MANTHAARA KAASAM’
A worldwide rise in the prevalence of asthma is being reported with increase in wheeze at an alarming rate of 5% per year. From 1983 onwards an increase in asthma mortality and morbidity has been noticed worldwide. This condition is developed on the allergic constitutional setting in an individual. This hypersensitive nature can be modulated by various treatments and Siddha system has a major role in this regard. Therefore, a simple and cost effective diagnostic tool needs to be developed which will enable physicians to detect this hypersensitive nature at the time treatment commencement, during the course and even during the symptom free period.

Hence this study explores the possibility of establishing this investigation procedure in diagnosing the ‘MANTHARA KAASAM’ and will be the low economic technique available to common man.
AIM & OBJECTIVE...
AIM AND OBJECTIVES

AIM:

To develop the Neerkkuri, Neikkuri examination in Siddha system as a cost effective, yet powerful tool for diagnose and appropriate prognosis of the condition Manthaara kaasam.

OBJECTIVES:

- To document the diagnostic patterns of Neerkkuri, Neikkuri in Manthaara kaasam/Bronchial asthma.
- To observe for any significant Neerkkuri, Neikkuri pattern which may provide a clue in th diagnosis, prognosis or its complication.
- To establish the review of literature.
- To compare the neikkuri patterns of Manthaara kaasam patients with Modern parameters.
- To elucidate the three shapes of Neerkkuri, Neikkuri on the three consecutive days.
REVIEW OF LITERATURE -
SIDDHA ASPECTS...

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- Manthaara Kaasam
SIDDHA PHYSIOLOGY...

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SIDDHA PATHOLOGY...

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SIDDHA DIAGNOSTIC METHODOLOGY...

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3.A. SIDDHA PHYSIOLOGY

3. A.1. SUGARANA NILAI (PHYSIOLOGICAL STATE) IN SIDDHA MEDICINE:

The five basic elements, namely Aagayam (Space), Kaal (Air), Thee (Fire), Neer (Water), and Mann (Earth) are the building blocks of all the physical and subtle bodies existing in this whole universe. These are called as the ‘Adippadai Boothams’ (Basic Elements) (or) ‘Panchaboothams’.

These five elements together constitute the human body and origin of other material objects are explained as Pancheekaranam (Mutual Intra Inclusion). None of these elements could act independently by themselves. They could act only in co-ordination with other four elements. All the living creatures and the non-living things are made up of these five basic elements. The five basic elements form the connecting link between the Microcosm (Man) and Macrocosm (World). This concept is evident from Siddhar’s lines,

"அடிப்படையிலான பஞ்சராண பிள்ளையம்;
பிள்ளையிலான பஞ்சராண அடிப்படையம்"

Any change in the universe due to natural or unnatural causes will create changes in human systems. For example the natural disorders like cyclone, heavy rain, mist and scorching sun or man created impurities of air and water will create changes both in the atmosphere and in the human body. Hence the change in the elementary conditions of external world has its corresponding change in the human organs.

As per the above lines, the universe and the human body are made of five basic elements.
3. A.2. 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)
   1. Aagayam - Firmament
   2. Vaayu - Flatus(Air)
   3. Thee - Fire
   4. Neer - Fluid(Water)
   5. Mann - Firm Ground( Earth)

2. PORI – 5 (SENSE ORGANS)
   1. Sevi (Ear) - a structural component of ‘Aagayam’ bootham
   2. Thol (Skin) - a structural component of ‘Vaayu’ bootham
   3. Kann (Eye) - a structural component of ‘Thee’ bootham
   4. Naakku (Tongue) - a structural component of ‘Neer’ bootham
   5. Mookku (Nose) - a structural component of ‘Mann’ bootham

3. PULAN – 5 (FUNCTIONS OF SENSE ORGANS)
   1. Kaetal - Hearing, a functional component of Aagayam bootham
   2. Thoduthal - Touch, a functional component of Vaayu bootham
   3. Paarthal - Vision, a functional component of Thee bootham
   4. Suvaithal - Taste, a functional component of Neer bootham
   5. Nugarthal - Smell, a functional component of Mann bootham

4. KANMENTHIRIYAM – 5 (MOTOR ORGANS)
   1. Vaai (Mouth) - Speech is delivered in relation with Space element.
   2. Kaal (Leg) - Walking takes place in concordance with Air element.
   3. Kai (Hands) - Giving/Taking are carried out with the influence of Fire element.
   4. Eruvaai (Rectum) - The excreta is eliminated in association with Water element.
   5. Karuvaai (Sex Organs) - The Sexual acts are carried out in association with the earth element.
5. KARANAM – 4 (INTELLECTUAL FACULTIES)
   1. Manam - Thinking about something
   2. Bhuddhi - Deeply analyzes the same
   3. Agankaaram - Determination to do the same
   4. Siddham - Accomplishment of the determined thing

6. ARIVU – 1 (WISDOM OF SELF REALIZATION)
   To analyze good and bad

7. NAADI – 10 (CHANNELS OF LIFE FORCE RESPONSIBLE FOR THE DYNAMICS OF PRANAN)
   1. Idakalai - Starts from the right big toe, runs criss-cross to end in the left nostril
   2. Pinkalai - Starts from the left big toe, runs criss-cross to end at the right nostril.
   3. Suzhumunai - Starts from moolaathaaram and extends up to centre of head
   4. Siguva - Located at the root of tongue; it helps in the swallowing of food and water
   5. Purudan - Located in right eye.
   7. Atthi - Located in right ear.
   8. Allampudai - Located in left ear.
   9. Sangini - Located in genital organ
   10. Gugu - Located in ano-rectal region

8. VAAYU – 10 (VITAL NERVE FORCE WHICH IS RESPONSIBLE FOR ALL KINDS OF MOVEMENTS)
   1. Uyir kaal (Piraanan)
      This is responsible for the respiration of the tissues, controlling knowledge, mind and five sense organs and digestion of the food taken in.
   2. Keel nokku kaal (Abanan)
      It lies below the umbilicus. It is responsible for the downward expulsion of stools and urine, ejaculation of semen and menstruation.
   3. Paravu kaal (Viyanan)
      This is responsible for the motor and sensory function of the entire body and the distribution of nutrients to various tissues.
   4. Mael nokku kaal (Uthanan)
      It originates at Utharakini. It is responsible for digestion, absorption and distribution of food. It is responsible for all the upward movements.
5. Samaanan (Nadu kaal)
   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.

6. Naagan
   It is a driving force of eye balls responsible for movements.

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

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

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

10. Dhanancheyan
    Expelled three 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. AASAYAM – 5 (VISCERAL CAVITIES)
   1. Amarvasayam (Reservoir Organ) - Stomach. It lodges the ingested food.
   2. Pakirvasayam (Absorption Site)- Small intestine. The digestion and assimilation of food, absorption of saaram from the digested food are done by this asayam.
   3. Malavasayam (Excretory organ for solid waste) -Large Intestine, especially rectum, the place where the expulsion of undigested food parts and flatus takes place.
   5. Sukkilavasyam (Genital organs.) –Site of production and development of spermatazoa and ovum.

10. KOSAM – 5 (FIVE STATUS OF THE HUMAN BODY OR SHEATH)
   1. Annamaya Kosam - Gastro intestinal system
   2. Pranamaya Kosam - Respiratory system
3. Manomaya Kosam - Mental System
4. Vignanamaya Kosam - Nervous system and higher intellect
5. Aananthamaya Kosam - Reproductive system

11. AATHARAM – 6 (STATIONS OF SOUL) “இந்த கோயம் நாய் என்று”

1. Moolatharam
   Situated at the base of spinal column between genital and anal orifice and beneath the perineum. Letter “µõ'' is stationed here.

2. Swathitanam
   Located 2 fingerwidths above the Moolatharam, (i.e.) midway between genital and navel region. Letter “¿" is inherently present here. Earth element is attributed to this region.

3. Manipooragam
   Located 8 fingerwidths above the Swathitanam, (i.e.) at the naval center. Letter “Á" is inherently present here. Element is water.

4. Anakatham
   Located 10 fingerwidths above Manipooragam, (i.e.) location of heart. Letter found is “º¢”. Element is fire.

5. Visuthi
   Located 10 fingerwidths above the Anakatham (i.e.) located in throat. Letter “Å¡" is inherently present. Element is Air.

6. Aakinai
   Situated between the two eyebrows. Letter “ūr" is inherently present here. Element is space.

12. MANDALAM – 3 (REGIONS)

1. Thee Mandalam (fire zone)
   Fire Zone is found 2 finger widths above the Moolathaaram

2. Gnayiru Mandalam (Solar zone)
   Solar zone, located 4 finger widths above the umbilicus.

3. Thingal Mandalam (lunar zone)
   Lunar zone is situated at the center of two eyebrows

13. MALAM – 3 (THREE IMPURITIES OF THE SOUL)

1. Aanavam
This act clouds the clarity of thought, cognitive power of the soul, yielding to the egocentric consciousness like ‘I’ and ‘Mine’ claiming everything to be his own (Greediness).

2. Kanmam

Goes in collaboration with the other two responsible for incurring Paavam (the Sin) and Punniyam (Sanctity / virtuous deed).

3. Mayai

Serves as an obstacle due to the mentality of claiming ownership of the others property and thereby inviting troubles.

14. THODAM- 3 (THREE HUMOURS)

1. Vali (Vatham) - It is the creative force formed by combination of Vaayu and Aakaya bootham

2. Azhal (Pitham) - It is the protective force. Formed by Thee bootham

3. Iyam (Kabam) - It is the destructive force. Formed by Mann and Neer Bootham

15. EADANAI -3 (PHYSICAL BINDINGS)

1. Porul Patru - Materialistic affinity

2. Puthalvar Patru - Sibbling / Familial bonding

3. Ulaga Patru - Worldly affections

16. GUNAM – 3 (THREE COSMIC QUALITIES)

1. Sathuvam (Characters of Renunciations or Ascetic Virtues)

   The grace, control of senses, wisdom, penance, generosity, Excellence, calmness, truthfulness is the 8 qualities attributed to their benevolent trait.

2. Raasatham (Royal character)

   Enthusiasm, wisdom, valour, virtue, penance, offering gift, art of Learning, listening are the 8 traits

3. Thamasam (Carnal / Immoral Character)

   Immorality, lust, anger, murderousness, violation of justice, gluttony, falsehood, forgetfulness, fraudulence, etc.

17. VINAI – 2 (ACT)

1. Nalvinai - Good Acts (Meritorious acts)

2. Theevinai - Bad Acts (Sinful acts)
18. RAGAM – 8 (THE EIGHT PASSIONS)
1. Kaamam - Lust
2. Kurotham - Grudge / Hatred
3. Ulobam - Stingy
4. Moham - Infatuation
5. Matham - Rut (The feeling of high ego towards oneself)
6. Marcharyam - Internal Conflict, Envy
7. Idumbai - Mockery
8. Ahankaram - High Ego

19. AVATHAI – 5 (FIVE STATES OF CONSCIOUSNESS)
1. Ninaivu - State of wakefulness with the 14 karuvikaranathigal in all vibrancy (5 Pulan, 5 Kanmaenthiriyam and 4 Karanam) and is able to experience the pleasures and pains
2. Kanavu – State of dreams. In this 10 karuvikaranathigal
(5 Pulan, 5 Kanmaenthiriyam) except karanam all lies dormant in the neck.
3. Urakkam - State of Sleep after which one cannot recapitulate what is seen or heard.
The respiration lies in the heart.
4. Perurakkam - State of Repose (Tranquil or Peaceful State). The Jeevaathma lies in the naabi, producing the respiration.
5. Uyirpadakkam – Oblivious of the surroundings. The Jeevaathma is deeply immersed in Moolaathaaram resulting in a state of unawareness.

3. A.3. THE UYIR THATHUKKAL

The physiological units of the Human body are,
- Vali (Vatham),
- Azhal (Pitham) and
- Iyyam (Kapham).

They are also formed by the combination of the five basic elements. Accordingly Vali is formed by the combination of Vali (Air) and Aagayam (Space). This is the Creative force. Azhal is formed by Thee (Fire). This is the Force of Preservation. Iyyam is formed by Mann (Earth) and Neer (Water). This is the Destructive Force. These three humors are in the ratio 4:2:1 in equilibrium which is a healthy normal Condition. They are called as the life forces or humours.
The Vali naadi is formed by the combination of Abanan and Idagalai.
The Azhal naadi is formed by the combination of Piranan and Pinkalai.
The Iyya naadi is formed by the combination of Samanan and Suzhumunai.

I. Vali (Vatham)

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

The sites of vali

According to Vaithya Sathakam, Vali dwells in the following places:

"Vaithya Sathakam: Vali dwell in the following places:
- Kuloor: Thir派K环保
- Pandakulam: Thir派Thiruvilai
- Thiruvallur: Thir派Thiruvilai
- Thiruvallur: Thir派Thiruvilai"
According to Sage Thirumoolar and Sage Yugi muni, the location of Vatham is the anus and the sub navel region.

**Properties of Vali**

- To stimulate the respiration
- To activate the body, mind and the intellect.
- To activate the fourteen different types of natural reflexes or urges.
- To activate the seven physical constituents in functional co-ordination.
- To strengthen the five sense organs.

In the above process Vatham plays a vital role in assisting the body functions.

**II. Azhal (Pitham)**

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

**The sites of Azhal**

According to *Vaithiya Sathagam*, the Pingalai, Urinary bladder, Stomach and Heart are the places where Azhal is sustained. In addition to the above places, the umbilicus, epigastric region, stomach, sweat, saliva, blood, essence of food, eyes and skin
are also the places where Azhal sustains. Yugi muni says that, the Azhal resides in urine and in the places below the neck region.

**The character 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.

**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 is let out.
7) Gives yellowish colouration to the skin, eyes, faeces and urine
8) Produce anger, heat, burning sensation, inaction and determination.
9) Gives bitter or sour taste.

**Types of Azhal**

1. Aakkanal – Anila pitham or Prasaka 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
   This fire lies in the stomach and gives red colour to the chyle and produces blood. It improves blood.

3. Aatralanki – Saathaga pitham – The fire of achievement
   It gives energy to do the work.

   It gives colour, complexion and lusture to the skin.

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

**III. Iyyam (Kapam)**

**The nature of Iyyam**

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

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

The natural quality 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.

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 functions of Iyyam. The skin, eyes, faeces and urine are white in colour due to the influence of Iyyam.

Five types of Iyyam

1. Azhal Iyyam – Avalambagam
   Heart is the seat of Avalambagam. It controls all other 4 Iyyams

2. Neerpi iyyam – Kilethagam
   Its location is stomach. It gives moisture and softness to ingested food.

3. Suvai kaan iyyam – pothagam
   Its location is tongue. It is responsible for the sense of taste.

4. Niraivur iyyam – Tharpagam
   It gives coolness to the eyes.

5. Ondri iyyam – Santhigam
   It gives lubrication to the bones particularly in the joints

3.A.4. THE UDAL THATHUKKAL

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

SEVEN PHYSICAL CONSTITUENTS OF THE BODY

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 plasters the skeleton to give the body a plumpy appearance.
4. Kozhuppu -It lubricates the joints and other parts of the body for smooth functioning.
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** - It is responsible for reproduction.

### 3. A.5. UDAL THEE (Four kinds of body fire)

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

1. **Samaakkini**

   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**

   Due to deranged and displaced Samana Vayu, it takes longer time for digestion of normal food. It is responsible for indigestion due to delay in digestive process.

3. **Deeshaakkini**

   The Samana vayu blends up with the Azhal, which leads to increased Anala Pitham, so food is digested rapidly.

4. **Manthaakkini**

   The Samana vayu conjugates with the Iyyam, which leads to increased Kilethaga Kapham. Therefore food is sluggishly digested for a very longer period leading to abdominal pain, distention, heaviness of the body etc.

### 3. A.6. THINAI

*There are five thinai (the land)*

1. Kurinchi - Mountain and associated areas
2. Mullai - Forest and associated areas
3. Marudham - Agricultural land and associated areas
4. Neidhal - The coastal and associated areas
5. Paalai - Desert and associated areas

### 3. A.7. KAALAM

Ancient Tamilians divided a year into six different seasons known as Perumpozhudhu and likewise the day into six segments which are known as Sirupozhudhu
**Perumpozhudhu:**

A year is divided into six seasons. They are as follows

- Kaarkalam – Monsoon season (August 16 – October 15)
- Koothirkalam – Postmonsoon season (October 16 – December 15)
- Munpanikalam – Early winter season (December 16 – February 15)
- Pinpanikalam – Late winter season (February 16 – April 15)
- Illavennilkalam – Early summer season (April 16 – June 15)
- Mudhuvenilkalam – Late summer season (June 16 – August 15)

**Sirupozhuthu**

A day is divided into six yamams. They are,

1. Maalai (Evening),
2. Idaiyammam (Midnight),
3. Vaikarai (Dawn),
4. Kaalai (Morning),
5. Nannpakal (Noon),

Each perumpozhuthu and sirupozhuthu is associated with the three humors naturally.

**3. A.8. 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. Thummal (Sneezing)
3. Siruneer (Micturition)
4. Malam (Defaecation)
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. Kaneer (Tears)
13. Sukilam (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.
3.B.1. KUGARANA NILAI IN SIDDHA MEDICINE

According to Siddha System, human body sustains the state of healthy living via keeping the Three Humours- Vatham, Pitham and Kabam in equilibrium, influenced by dietary habits, daily activities and the environment around. The three humours represent the five basic elements or bhuthas. In case this equilibrium is disturbed, it leads to a condition known as disease. It is basically the derangement of five elements, which in turn alters the Three Humors. There can either be a decrease or increase in the balance.

3.B.2. DISEASE

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

3.B.3. THE CHARACTERISTICS FEATURE OF DISEASE

Diseases are of two kinds:

1. Pertaining to the body
2. Pertaining to the mind according to the variation of the three humors.

1. Causes of Disease

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

"மனிதன் காரணாய்க் கருணையையான காலையை
மாணவன் போன்றவரின் சாலையை"

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. ‘Action’ 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 humours. This shows the following signs as per vitiation of the individual humour.
As per Theraiyar, the cause of disease is vitiated Vatha, Pitha and Kaba, increased appetite, increased thirst, excessive hot, anger, constipation, dysuria polluted water.

2. QUANTITATIVE CHANGES OF UYIR THATHUKKAL

<table>
<thead>
<tr>
<th>HUMOUR</th>
<th>INCREASED</th>
<th>DECREASED</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALI (Vatham)</td>
<td>Wasting, blackish discoloration, affinity to hot foods, tremors, distended abdomen, constipation, weakness, insomnia, weakness in sense organs, giddiness and laziness.</td>
<td>Body pain, feeble voice, and diminished capability of the brain, decreased intellectual quotient, syncope and increased kaba condition.</td>
</tr>
<tr>
<td>AZHAL (Pitham)</td>
<td>Yellowish discoloration is conjunctiva, skin, urine and faeces, polyphagia, polydypsia, dyspepsia, burning sensation all over the body and decreased sleep.</td>
<td>Loss of appetite, cold, pallor and features of increased kabam.</td>
</tr>
</tbody>
</table>
### THATHUKAL

These are the changes produced when Udal thathukkal are affected.

<table>
<thead>
<tr>
<th>UDAL KATTUKKAL</th>
<th>INCREASED FEATURES</th>
<th>DECREASED FEATURES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. SARAM</strong></td>
<td>Loss of appetite, excessive salivation, diminished activity, heaviness, pallor, cold, decreased physical constituents, dyspnoea, flatulence, cough &amp; excessive sleep.</td>
<td>Dryness of skin, tiredness, loss of weight, lassitude and irritability while hearing louder sounds.</td>
</tr>
<tr>
<td><strong>2. SENNEER</strong></td>
<td>Boils in different parts of the body, splenomegaly, tumours, pricking pain, loss of appetite, haematuria, hypertension, reddish eye and skin, leprosy and jaundice.</td>
<td>Affinity to sour and cold food, nervous, debility, dryness and pallor.</td>
</tr>
<tr>
<td><strong>3. OON</strong></td>
<td>Tubercular adenitis, venereal diseases, extra growth around neck, cheeks, abdomen, thigh and genitalia.</td>
<td>Lethargic sense organs, pain in the joints, muscle wasting in mandibular region, gluteal region, penis and thighs.</td>
</tr>
<tr>
<td><strong>4. KOZHUPPU</strong></td>
<td>Identical feature of increased flesh, tiredness, dyspnoea on exertion, extra musculature in gluteal region, external genitalia, chest, abdomen and thighs.</td>
<td>Loins pain, splenomegaly and emaciation.</td>
</tr>
</tbody>
</table>
Change in Elementary conditions of the external world has its corresponding change in the human organs. They are as follows:

<table>
<thead>
<tr>
<th>4. KAALAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in Elementary conditions of the external world has its corresponding change in the human organs. They are as follows:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KALAM</th>
<th>KUTTRAM</th>
<th>STATE OF KUTTRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5. ENBU</strong></td>
<td>Excessive ossification and dentition.</td>
<td>Joint pain, falling of teeth, falling and splitting of hairs and nails.</td>
</tr>
<tr>
<td><strong>6. MOOLOI</strong></td>
<td>Excessive ossification and dentition.</td>
<td>Joint pain, falling of teeth, falling and splitting of hairs and nails.</td>
</tr>
<tr>
<td><strong>7. SUKKILAM</strong></td>
<td>Increased sexual activity, urinary calculi.</td>
<td>Dribbling of sukkilam/ suronitham or senner during coitus, pricking pain in the testis &amp; inflammed and contused external genitalia.</td>
</tr>
</tbody>
</table>

### STATE OF KUTTRAM

| 4. Pinpani Kaalam (Post winter) (Masi – Panguni) (Feb 16 – Apr 15) | Vatham (--) Pitham (--) Kabam ↑ | Restitution Restitution Insitu escalation |
| 5. Elavenir Kaalam (Summer) (Chithirai–Vaikasi) (Apr 16 – Jun 15) | Vatham (--) Pitham (--) Kabam ↑↑ | Restitution Restitution Ectopic escalation |
5. THINAI

<table>
<thead>
<tr>
<th>S. NO</th>
<th>THINAI</th>
<th>LAND</th>
<th>HUMORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Kurinchi</td>
<td>Mountain and its surroundings</td>
<td>Kabam</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hilly terrain</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Mullai</td>
<td>Forest and its surroundings</td>
<td>Pitham</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Forest ranges</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Marutham</td>
<td>Farm land and its surroundings</td>
<td>All three humors are in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cultivable lands</td>
<td>equilibrium</td>
</tr>
<tr>
<td>4.</td>
<td>Neithal</td>
<td>Sea shore and its adjoining</td>
<td>Vatham</td>
</tr>
<tr>
<td></td>
<td></td>
<td>areas, Coastal belt</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Palai</td>
<td>Desert and its surroundings</td>
<td>All three humors are affected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arid zone</td>
<td></td>
</tr>
</tbody>
</table>

6. Alteration in Reflexes (14 Vegangal)

There are 14 natural reflexes involved in the physiology of normal human beings. 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 neuritic 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 (Faeces)

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. If disturbed it 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. **Swaasam (Breathing)**
    
    If it is restrained, there will be cough, abdominal discomfort and Anorexia.
C. DIAGNOSTIC METHODOLOGY

The Diagnostic methodology in Siddha system is unique as it is made purely on the basis of clinical acumen of the physician. The diagnosis is arrived from,

- Poriyal arithal and Pulanal arithal (examination of sense organs)
- Vinaathal (Interrogation)
- Envagai thervu (eight fold examination)
- Manikkadai nool (wrist circumference sign)
- Sothidam (astrology)
- Assessment of deranged three dosham (humours), Udal thathukal and 96 principles.

3.C.1 PORIYAL ARIDHAL

The physician should examine the patient’s porigal by his porigal.

1. Mei - To feel all types of sensation
2. Vaai - For knowing taste
3. Kan - For vision
4. Mooku - For knowing the smell
5. Sevi - For hearing

3.C.2 PULANAL ARITHAL

The physician should examine the patient’s pulangal by his porigal & Pulangal

1. Hearing - Ear
2. Vision - Eye
3. Taste - Tongue
4. Sensation - Skin
5. Smell - Nose

VINAADHAL (INTERROGATION)

The physician should interrogate the patient’s name, age, occupation, native place, Socio – economic status, dietary habits, present complaints, history of present illness, aggravating factors, history of previous illness.
According to Agathiyar Vaithiya Sinthaamani Venba – 4000, the Envagaithervu Includes Naadi (Pulse) Naa (Tongue), Niram (Color), Mozhi (Voice), Vizhi (Eyes), Malam (Faeces), Neer (Urine) and Sparisam (Touch & palpation).

As per Saint Therayar, the eight methods of diagnosis are Naadi (Pulse) Naa (Tongue), Niram (Color), Mozhi (Voice), Vizhi (Eyes), Malam (Faeces), Neer (Urine) and Sparisam (Touch & palpation).

As per Sage Agathiyar, Naadi (pulse), Malam (stools), Salam (urine), Niram (complexion), Gunam (character), MugaKuri (facies), Thegam (constitution), Vayadhu (age), Elamai are the diagnostic tools.
According to literature KannuSaami Paramparai Vaithiyam, Naadi, Naa, Thegam, Thodu
unarvu, Niram, Malam, Salam and Vizhi are the diagnostic tools.

According to Agathiyar Vaithiya Rathina Surukkam, the diagnostic tools are Naadi (Pulse),
Vizhi (Eyes), Kurigunam (Signs), Nalkurippu (Chronology), Maeni (Constitution), Malam (Stools)
And Neer (Urine).

According to the Paripoorana Naadi, the diagnostic parameters are Mugam (Facies), Pal
(Teeth), Vai (Mouth), Naakku (Tongue), Kaayam, Irumalam, Naadi (Pulse).

According to Dhanvantri Vaithiyam, the diagnostic parameters are Naadi (Pulse), Mugam
(Facies), Malam (Stools), Neer (Urine), Udal (Constitution), Vizhi (Eyes), Naa (Tongue), Pal
(Teeth).
According to the above literature, the diagnostic tools are Naadi (Pulse), Kan (Eyes), Sattham (Voice), Thegam (Constitution), Sparisam and Naa (Tongue).

1. TONGUE EXAMINATION

"According to the literature, the diagnostic tools are Naadi (Pulse), Kan (Eyes), Sattham (Voice), Thegam (Constitution), Sparisam and Naa (Tongue)."

As per Agathiyar Vaithiya Sinthaamani Venba – 4000, fissured and black tongue represent vitiated Vatha humor, pallor represents Kabam, green colour represents Pitha humor and mixed appearance of these features resembles Sanni noi.

"As per Agathiyar Vaithiya Sinthaamani Venba – 4000, fissured and black tongue represent vitiated Vatha humor, pallor represents Kabam, green colour represents Pitha humor and mixed appearance of these features resembles Sanni noi."

In Vali derangement, tongue will be cold, rough, furrowed and tastes pungent. In Azhal, it will be red or yellow and kaippu 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.

Examination of tongue also includes the salivary examination. The following stanza describes salivary examination.
2. EXAMINATION OF COMPLEXION

In Vali, Azhal and Iyyam vitiations, the colour of the body will be dark, yellow or red and fair respectively.
3. VOICE EXAMINATION (சுத்தில்தோணிப்)

"பலவர்கள் சுத்தில்தோணிப் பலவியல் பலது
தசத்தோர் சுத்தில்தோணிப் செய்யும் - 4000
பிள்ளையர் சுத்தில்தோணிப் பலவியல் பலது
குறுக்கான தசத்தோர் சுத்தில்தோணிப் பலது

- கசாநாக்கை பக்கவாக் சக்கியை

"பலவியல் சுத்தில்தோணிப் பலவியல் பலவியல் பலது
தசத்தோர் பிள்ளையர் சுத்தில்தோணிப் பலது
தசத்தோர் பிள்ளையர் சுத்தில்தோணிப் பலது

- பலவியல் சுத்தில்தோணிப் பலது

In vitiation of Vali, Azhal and Iyyam, the voice would be normal, high pitched and shrill or low pitched respectively. By the voice, the strength of the body can be assessed.
As per Agathiyar Vaithiya Sinthaamani Venba – 4000, in vitiated Vali eyes turn black and tears shed. In vitiated Azhal humour, mukkutram and in jaundice yellowish discoloration occurs. In vitiated Iyyam, the eyes turn white.
5. FAECES EXAMINATION (அண்ம வெளிப்பு)

"அகத்தாய வயதுறுப்பன கலன்கள் பிறித்த
சிலாற்று வர்மோசொட்ட ர௕ு - விபர்நாரியத்தகை
சிலாற்று தெளீஸ்தம்பிய ர௕ு முக்கிய வந்து
பயன்பட என்றிக குடா.

- அகத்தாய மாற்றிய திகழலிய வெளிப்பு - 4000

As per Agathiyar Vaithiya Sinthaamani Venba – 4000, in vitiated Vali, the stool is hard and black. In vitiated Azhal, it is hot and red. In vitiated Iyyam it is cool and watery.

" குருதிய வாய் வெளிய மாற்றிய பக்கக்கிய
சிலாற்று வர்மோசொட்ட குறித்தகை
சிலாற்று வர்மோசொட்ட புதும் பக்கக்கிய
சிலாற்று வர்மோசொட்ட புதும் செய்யும்
சமாதிட்டு மேல்வேக வர்மோசொட்ட
முதலானவன வெளிப்புச் செய்யும்
முதலானவன வெளிப்புச் செய்யும்
பக்கக்கிய வெளிப்புச் செய்யும்
பக்கக்கிய வெளிப்புச் செய்யும்"

-அகத்தாய பங்குமாற்றிய வெளிப்பு.

In excacerbated Vali, faeces is hard, dry and black in colour. In Azhal vitiation, it is yellow. In Iyyam, disturbance it is pale.

6. URINE EXAMINATION (துண்டு வெளிப்பு)

"அகத்தாய குறித்துருக்களா மாற்றியத்தகை மாற்றப்படு
சிலாற்று வர்மோசொட்ட தர்ந்தாம சிலாற்று வெளிப்பு - விகர்கல
சிலாற்று வர்மோசொட்ட தர்ந்தாம சிலாற்று வெளிப்பு
சிலாற்று வர்மோசொட்ட தர்ந்தாம சிலாற்று வெளிப்பு"

-அகத்தாய மாற்றிய திகழலிய வெளிப்பு - 4000
‘Neer’ refers to Urine ‘Kuri’ refers to Sign. 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. He also emphasised 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. Normal urine is straw coloured and odourless. The time of the day and food taken will have an impact on the colour of the urine.

**COLOUR OF URINE**

- 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

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As per Sikicharathna Theepam,

**COLOUR OF URINE** | **PROGNOSIS**
--- | ---
Ruby red or milky white | Poor
Honey | Slow and take long time
Golden yellow | Good

**NEIKKURI** (நீக்குறி)

"அதிசயம் என்று முன்னால் அவியலாகப் பாதுகாப்பு
அகம் ஆழக் அவன்றுக்குறிக்கொண்டு
நரையும் துணைக் குறிக்குறிக்கொண்டு
அசுரங்கு துணையும் கருத்தைப்
ஞாந்து பச்சைகுறிக்குறிக்கொண்டு
நித்திருள் போன்று நீக்குறிக்கொண்டு கல்லால்"

"அகமம் இணைநுறுவள் மமதே
ஞாந்து பவள் ஆனே பின்பற்றிப்
நித்திருள் நீக்குறிக்கொண்டு கல்லால்"

-அகமான போன்று நீக்குறிக்கொண்டு

The spreading pattern of oil drop is the indicative of Vali, Azhal and Iyyam diseases e.g
1. Aravu (Snake Pattern of spread) indicates Vali disease
2. Mothiram (Ring Pattern of spread) indicates Azhal disease
3. 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.
SPREADING PATTERN OF OIL - INTERVENTION

Lengthening - Vali
Splits - Azhal
Sieve - Iyyam
Stands as a drop - Poor prognosis
Slowly spreads - Good prognosis
Drop immerses into the urine - Incurable disease

6. TOUCH (சுத்தி வழக்கு)

“சித்திய கொழுக்காயத்தில் விற்பனையான வாய்ப்பு குறைவு சித்தியிலியான வேலாவன்- வெள்ளக்கொளின் சன்னதியின் சித்திய வேலாவன் பொல்லால் வாய்ப்பு குறைவு.

-ஆர்த்திநவன் கயச்சனா சித்திய வேலாவன - 4000

“சுத்தி வழக்கில் விற்பனையான வாய்ப்பு குறைவு

சித்தியிலியான வேலாவன் கொழுக்காயத்தில் விற்பனையான வாய்ப்பு

சுத்தி வழக்கில் விற்பனையான வாய்ப்பு

-காலேஸ்வரன் பொண்ணமூலா கயச்சனா
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.

8. NAADI (நாதி)

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 within 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 a good indicator of all ailments.

- ஞான பாசத்துக்கு முன்பே

“திருமால் சுருக்கக்குறிக்கும் முகவர்களின் வீடு
சாலாத்தோற்றங்கள் சுருக்கின சுத்தியானை
அரியன் அறிக்குறிய வேதியியல் விளகல்
அப்போது திருத்தக்குறிக்கும் கல்யாணத்தில்
இருமும் சுருக்கத்தில் விளக்கும் அப்போது
சுருக்கும் அம்மன் மிதமுள்ள விளக்குக்கு

பருவமான சுருக்கு ஆமைகுறிய நான்கு
பக்தான் போன்றது குன்றக்குறிய மக்களை
மக்கள் கண்டால் கண்டு போன்றானால் குன்றக்குறிய பிள்ளை
லோகாயசுருக்கு அம்மன் அழடத்தும் மாற்றப்பட்டு
பக்தான்கள் போன்று குறியுடன் பிள்ளை
பாசத்து குறியுடன் குறியுடன் பிள்ளை”

-அக்ராஜியா நாதி100
Naadi is felt by,

Vali - Tip of index finger
Azhal - Tip of middle finger
Iyyam - Tip of ring finger

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

**THE PULSE PLAY**

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

"வாறுமறை கச்ஞா பொருளியல் நூற்றாண்டு கச்ஞா
கச்ஞா மண்டகுள்ள பொருளியல் நூற்றாண்டு பிரத்தியே
பாலில் கள்ள பல்ப் பாலனக் இருந்துகள்"

-வைஸ்நாவர் ராஜா விளாகம் பாசம்

Vali - Movement of Swan and Peacock
Azhal - Movement of Tortoise and Leech
Iyyam - Movement of Frog and Serpent.

"பாலில் கள்ள பல்ப் பாலனக் இருந்துகள்
தோட்டு மண்டகுள்ள பிரத்தியே
-ஏமத்தின் காட்டு கிளைகளி மையங்கண - 4000"

Naadi is examined in right side for men and on the left side for women.

**MANIKADAI NOOL (Wrist circumetric sign)**

*Agathiya soodamanikayaru ..*

"கோல்கள் பச்சிலிக்குமைக் கையுட் கழிவு
மறையில் விலங்கிய போர்மாணகின்"
According to the Pathinen Siddhar Naadinool, Manikadainool is also helpful in diagnosis. This manikkadai nool is a parameter to diagnose the disease by measuring the circumference of the wrist by means of a thread and then dividing the measured circumference with the patient’s fingers. By this measurement the disease can be diagnosed.

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 to 6, it indicates poor prognosis of disease and the severity of the illness will be high and it leads to death.

**MANIKKADAI NOOL - INFERENCE**

| 10 fbs  | Pricking pain in chest and limbs, gastritis and ulcer result. |
| 9 ¾ fb  | Fissure, dryness and cough will be resulted. |
| 9 ½ fbs | Odema, increased body heat, burning sensation of eye, fever, Mega noi and anorexia. |
| 9 ¼ fbs | Dysuria, insomnia, sinusitis and burning sensation of eye. |
| 9 fbs   | Impaired hearing, pain around waist, thigh pain, unable to walk. |
| 8 ¾ fbs | Increased body heat, skin disease due to toxins, abdominal discomfort, cataract, sinusitis. |
| 8 ½ fbs | Leucorrhoea, venereal disorder and Infertility will occur. |
| 8 ¼ fbs | Stout and painful body. Headache. Sinusitis and toxins induced cough. |
| 8 fbs   | Abdominal discomfort, gastritis, anorexia and venereal diseases. |
| 7 ¾ fbs | Piles, burning sensation of limbs, headache, numbness occur. Within 2 years cervical adenitis and epistaxis results. |
| 7 ½ fbs | Osteoporosis, abdominal discomfort, burning sensation of eyes, increased body temperature. Within 6 days all the joints of the limbs presents a swelling. |
7 ¼ fbs - Lumbar pain, increased pitha in head, anemia, eye pain, edema and somnolence

7 fbs - Pitham ascends to head, haemetemesis, phlegm, burning sensation of limbs and constipation.

6 ¾ fbs - Eye ache, dizziness, testis disorder. Within 3 years it causes anuria, pain and burning sensation over limbs, facial sweating results.

6 ½ fbs - Thirst, anorexia, increased body heat and vatham results.

6 ¼ fbs - Diarrhoea, belching, vomiting and mucous dysentery

6 fbs - Reduced weight, phlegm in chest. It results in death within 20 days.

5 ¾ fbs - Delirium, dizziness, loss of consciousness. It results in death even if the patient takes gruel diet

5 ½ fbs - Severity of illness is increased. Toxins spread to the head. Tooth darkens. Patient will die in 10 days.

5 ¼ 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 ¾ fbs - Dryness of tongue and tremor present. Patient will die in 7 days.

4 ½ fbs - Shrunken eyes, edema will present and death results in 9 days.

4 ¼ fbs - Tremor, weakness of limbs and darkening of face occurs. Finally death results in two days.

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

3.A.9. THE ASTROLOGY

Macrocosm and Microcosm

Man is said to be Microcosm, and the Universe is Macrocosm; since what exist in the Universe exists in the human body too. Man is being an integral part of universal nature. The forces prevailing in the microcosm (Human body) are analogous with that of the forces prevailing in the macrocosm (Universe). The natural forces acting in and through various organs of the body
are intimately related to or similar to or correspond to the forces acting in and through the organisms of the world.

This closely follows the Siddhar’s doctrine,

“Astral influences:

All the influences which are radiated from the sun, planets and that of the stars can act upon the human bodies. Moon exercises a very bad impact on the disease in general especially during the period of new moon. For instance, paralysis, brain affections, dropsy, and stimulation of sexual perversions are resulted during the newmoon. Mars causes anemia and lack of nervous vigour. A conjugation of the moon with other planets such as Venus, mars, etc may make its influence still more injurious.

The 8th place forms the laghanam which deals about ones age, chronic diseases, death etc. 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 act abnormally likewise and bring about disease on earth and its atmospheric condition like earthquake, storms etc. The Mars invisibly influences human’s blood constituents. The Venus instigates intersexual love.

The following are the instances in which every sign of the zodiac acts towards some particular parts of the body.

1. According to T.V.S. Dictionary:

- Aries - Neck
- Taurus - Neck and shoulder
- Gemini - Arms and hands
- Cancer - Chest and adjacent parts.
- Leo - The heart and stomach
- Virgo - The intestines, base of stomach and umbilicus
- Libra - Kidney
- Scorpio - Genitals
- Sagittarius - Lips
• Capricorns - Knees
• Aquarius - Legs
• Pisces - Feet

2. According to literature Thiruvalluvar periya sunthara sekaram.

1) Mesham - Head
2) Rishabam - Face
3) Mithunam - Neck
4) Kadagam - Shoulders
5) Simmam - Chest
6) Kanni - Side of body
7) Thulaam - Back, stomach
8) Virutchigam - Testicles
9) Thanusu - Thigh
10) Magaram - Knees
11) Kumbam - Heel
12) Meenam - Foot.

4.A.10. The Impact of the Planets on the Human Organs

According to the literature Siddha Maruthuvanga Surukkam

Each of these planets hold jurisdiction over some parts of the body similar to the signs of the Zodiac. The planets exercise special power over some parts of the body resulting in a disease or diseases in accordance with their impacts on the three basic humors in the system.

1. Sani (Saturn)

It exhibits supremacy over the bones, tooth, cartilages, ear, spleen, bladder and brain and gives rise to fever, leprosy, paralysis, dropsy, cancer, cough, asthma, deafness of the right ear, hernia etc.

2. Guru (Jupiter)

It holds jurisdiction over the blood, liver, pulmonary veins, diaphragm, Muscles of the trunk and sense of touch & smell.

3. Sevvaai (Mars)

It has got power over the bile, gall bladder, left ear, pudendum, kidneys, fever, jaundice, convulsions, hemorrhage, carbuncle, erysipelas, ulcer etc.
4. **Sukkiran (Venus)**

It exercises its impact on the blood and semen, throat, breast, abdomen, uterus, genitalia, taste, smell, pleasurable sensation, gonorrhea, barrenness, Abscesses or even death from sexual passions or from poison.

5. **Pudhan (Mercury)**

It holds jurisdiction over the animal, spirit, also 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.

<table>
<thead>
<tr>
<th>Planets</th>
<th>Organs of impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar force</td>
<td>Heart</td>
</tr>
<tr>
<td>Lunar force</td>
<td>Brain</td>
</tr>
<tr>
<td>Mars</td>
<td>Gall Bladder</td>
</tr>
<tr>
<td>Mercury</td>
<td>Kidney</td>
</tr>
<tr>
<td>Venus</td>
<td>Lungs</td>
</tr>
<tr>
<td>Jupiter</td>
<td>Liver</td>
</tr>
<tr>
<td>Saturn</td>
<td>Spleen</td>
</tr>
</tbody>
</table>

5. 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
8. Raagu - Hands
9. Kedhu - Legs

Each of these rasis and the organs of impact as well as the Girahams are found to be related with the resultant diseases of corresponding organs. Therefore, the human body is impregnated with the vital forces that could be acted upon by the astronomical bodies in the sky. With the augmented spiritual force, a sage is able to get control over the above said planets. All the others are under the influence of the forces exhibited by these asteroids.
REVIEW OF LITERATURE -
NEERKKURI, NEIKKURI...

neerkkuri neikkuri

- Manthaara Kaasam
4. REVIEW OF LITERATURE – NEERKKURI NEIKKURI (OIL ON URINE SIGN) OF MANTHAARA KAASAM

4.A. ரிமுனரி

குறைக்கு மாறக்கூறென

குலில் சிம்புவுள்ளுதல்பானவருமாறிக்

குடொன்பிளும் திருப்பரிக் செட்டுப்பாடை

பிறந்து பெரிய பெயர் செய்யுக

பஞ்சாலா நந்தியறிக்கோள்கொடுக்க

-ஏரத்தில் மலை மாடார் கவலை

Lord Vinayaga who developed from the Pranava manthiram ‘omm’, Lord Muruga, Lord Shiva and Parvathy should be meditated before determining the Neerkkuri and Neikkuri, which was emphasized by Sage Theraiyar in his book of Theraiyar Thylavarka surukkam.

4.A.1. ரிமுனரி

திருக்கூடை வீரிய காயிலை கருவாள் வருக்கா சுருளிதை

மாற்றம் செய்ய வல்லுணரும் முடிக்கு விளையாடு

துறையில் பார்க்கும் மாறாமல் போன்று சிறுத்து இருக்கு

முருகேன் முனிவரின் மகராம் தசயம் மூறைத்த

-அம்பனி பாடல்

In order to shed off the ambiguity in the diagnosis of disease through pulse perception. The exponents have charted out a method called Neerkuri - an incomparable method of diagnosis.

4.A.2. ரிமுனரி பொய்ப்படும் விளக்கக்குறியான இல்லமாக்கல்:

"அருக்குனற்சிலர் அதிர்வேதனம்

அல்லா அருகே அன்றால் என்னுடன்"
On the day before the urine test one should take food, consisting of all the six tastes in an harmonious blend at the regular time based on one’s digestive fire (Appetite), after a sound overnight sleep, Urine should be collected in a crystal bowl and the test should be done before 90 minutes from dawn.

4.A.3. பி.டி.சி. - General features of urine:

"பிள்ளை பி.டி.சி செய்ய மேலும் தீங்கு செய்யும் காற்று முறை பெறுவது மகிழ்வாம்"

The following are the features of urine,

1. Colour (சிவப்பு)
2. Density (சுட்டறை)
3. Froth (துவாக)
4. Odour (மணறை)
4. Deposits (சூழல்)

4.A.4. பி.டி.சி.சிற்றக - Different colours of urine:

4.A.4.1. SUBDIVISIONS IN EACH COLOURS:

"அரிக்கடுமல் அடுக்குகள் நடும
அரிக்கடுமல் அருட்கறிகள் நடும
அரிக்கடுமல் அடுக்குகளை நடும் நீளத்துறவு இளையிலை கடுமின்"

According to the above verse there are six types in yellow, four in red, five in green, four in black and two in white coloured based on different disease conditions.

1. YELLOWISH CHANGES IN URINE:

1.a. Urine indicating states of improper digestion:

"இறைவு மறுவது முழுமுறு திறந்தையா
உணவகாலத்தையா அடிக்கைய திறந்தையா.“

Urine taking the colour of water in which straw is drenched.

1.b. Urine indicating the ongoing digestion

"பார்சு கரிக்கிய மறுவது விளக்கத்தையா
உணவகாலத்தையா திறந்தையா.“

Here the colour of the urine is that of the Thurungi Pazham-Giant lime fruit (citrus medica).
1.c. Urine which shows excessive heat present in the body:

“அதுவரை மருத்துவம் அளஞ்சிய கலந்துள்ள கலன்சொடைநிலை
இனாற்றப்பட்டது விகாராளியானது.”

Yellowish red urine is suggestive of excessive body temperature.

1.d. The colour of the urine in hot nature:

“சர்க்கரை குருத்துவடை நீரில் காணியல்
செயல்காரணத் தேவலியானது.”

If the colour of urine is similar to the wild orange, it indicates the rise in temperature.

1.e. The colour of the very hot urine:

“அதிக்கரையான நீண்டின் இரட்டைக்கட்டைப் பொறுப்பு
அதிக்கரையான பொறுப்பு.”

The flame coloured urine denotes high temperature.

1.f. Very hotter than previously mentioned:

"நீங்கல் குருத்துவடை பெருநீரில் குதிலை
செயல்காரணம் காணியல் தேவலியானது.”

Saffron coloured urine denotes very high temperature in the body.

2. REDDISH CHANGES IN URINE:

“அதுவரை மருத்துவம் அளஞ்சிய கலந்துள்ள
இனாற்றப்பட்டது விகாராளியானது.

“அதிக்கரை குருத்து வியாசமில் காணியல்
பொறுப்புக்காரணம் விகாராளியானது.

“குறுக்காலம் வியாசமில் காணியல் கலந்து
இனாற்றப்பட்டது விகாராளியானது.”

Dark red colour of urine as that of rose flower may be observed in case of heated haematological systems and black and red colours admixed and frank red colours shows even more heated haematological systems.
3. GREENISH CHANGES IN URINE:

3.a. கிளை உறுதிக்கு:

“கற்கையால் காலால் கதர்மகமுள்ளது
யாரைக்கால் காண்போர் நிறம்.”

Black coloured urine with slight greenish tinge in it.

3.b. முற்றுக்கற்ற உறுதிக்கு:

“சிற்றகம் தோந்தியது படகத் பொண்ணியோ
மல்லுநூலிக்கால் நிறம்.”

Urine of sky colour indicates toxic state of the body along with coldness.

3.c. புது உறுதிக்கு:

“குர்திலிக் உடலியவை கன்னவரியோ
திரு குர்திகளை விளக்கு திருத்துக்களோ
முற்று விளக்கு பொண்ணுமிக்குண்டு மடிப்பம்.”

A sort of bluish tinge in urine caused by extreme coldness and also by Vatha dominant diseases occurring in children and elderly people.

3.d. புது உறுதிக்கு:

“அம்ப உறைகளுக்கு சராசரியதுகள் என்மே
முற்றுக் மிகுநவை தகவல்பிள்ளை நிறம்.”

Apart from being bluish tinged if it is also viscous indicating underling derangement of the three humour the urine.

3.e. புது உறுதிக்கு:

“பொழுத்திகைவு பொண்ணுமிக்கு உருவானது
பிள்ளையார் மாநிலமில்லை நிறம் விளைநூறு.”

Urine appears frankly greenish as fresh foliage in diseases where all the humors are utterly deranged.
4. BLACKISH CHANGES IN URINE:

4.a. Kamalai (Pitha disease) condition:

"As a result of the disarray of the physiology of Herman, a dark colour in a yellow background shows the Kamalai (Pitha disease) condition.

4.b. Saffron, block and little red coloured urine:

"Saffron, block and little red coloured urine indicates a blood disorder.

4.c. Greenish in dark coloured urine:

"Greenish in dark coloured urine indicates unhealthy blood.

4.d. Dark and whitish colours in urine:

"Dark and whitish colours in urine indicate upset of Vatha and pitha. Also it indicates chronic body heat disorders and complications of fevers in elderly and associated fainting.

5. WHITISH OR LIGHT COLOURED IN URINE:

5.a. In urine:

"In urine, light coloured urine is:

Dark and whitish colours in urine indicate upset of Vatha and pitha. Also it indicates chronic body heat disorders and complications of fevers in elderly and associated fainting."
Whitish or clear urine is usually because of sheer coldness of the body this condition is not amenable to medical treatment. A patient to get over from this condition is as it were a person having a new lease of life drowned in the raging sea.

5.b. எதிர்காண்பாக்கும் விளக்கம்:

“அறிவியலங்களுடன் குறிக்கப்பட்டுள்ள வண்ணம் விளக்க மற்றும்
மருந்து அது விளக்கப்பட்டுள்ளது.”

In conditions of highly agitated ‘coldness’ of the body the urine is said to be not only highly clear but also little mucoid in appearance.

4.A.4. CHANGES IN THE DENSITY OF URINE:

“அப்படி குற்றுகரன் விளக்கம் பின்னர்
நோக்கு ரீதாம் முடிகும் கதட்டு
கூட்டுத் தின்காலால் காணியேன்று இறை தோன்று.”

If the voided urine is denseless and crystal clear then it is due to excessive cold and to the melting of the kabam

4.A.6. ODOUR:

“குண்டாகருகிறார் லாபுலா விளக்காக நோக்கிய
நூற்றாண் காலம் வருங்காக்கிறான.”

1. எதிர்காண்பாக்கும் விளக்கம்:

“கொண்டை குற்றுகரன் விளக்க வுல்லையை
மருந்துகளை முடிக்கும் போது புணைவிடு
அறிவியலங்களை விளக்க முடிக்கும் நோக்கிலும்
சமைத்து காணும் அழகான வேலையாக.”

An urine sample with atrocious odour indicates ulceration in the urinary tract and bladder.

2. எதிர்காண்பாக்கும் விளக்கம்:

“மருந்து புணைவிடும் மருந்துகளிலிருந்து குண்டை
தொடர்கிற விளக்கப்பட்டுள்ள வண்ணம்
பொட்டலாகும் விளக்கக் காலம்.”
An urine sample with overwhelming odour of the tamarind to disorders of the body due to heat.

3. U smell of the tamarind implies disorder due to heat.

4. Urine descending with a sweet flavour implies an increased haematopoiesis in diseases like leukaemia.

4. Urine with a smell of dark coloured deer is voided in conditions of pitham dominance.

5. Urine with a smell of fresh meat (carnivorous) will be in decreased body adipose tissue.

4.A.7. FROTH ON URINE

When the greasiness of the body is melted, it gets associated with the urine in the gad form to cause froth in it. This greasiness of the body normally adds resilience and resistance to the body. In conditions of impending jaundice the froth appears to be multi coloured with yellow, block and coloured appearance. The quantum of froth gets reduced in conditions of reduced humours of the body.

Similarly, reduced urine output inspite of having normal intake of water throws light on impending anaemic disorders and associated lassitude.
4.B. NEIKKURI

4.B.1. "Jñānābhinivesanam" Smoke

"Jñānābhinivesanam" -Smoke the snuff of the

sandalen tree by the right hand itself to the

four sons of Brahmadeva, the chosen
disciples lets us expound the formula of urine

test us to get at the right clues for disease

conditions without any doubt whatsoever as

performed by our mystically intuited Siddha

practitioners who have the command over the

eight fold tests, without compounding one for

the benefit of world at large.

4.B.2. "Kṣītīyam bhūtakṣetram bhūtakṣetram" Smoke

"Kṣītīyam bhūtakṣetram bhūtakṣetram"

The urine collected should follow the same

procedure like the general examination of

urine. A drop of oil is dropped on centre of

bowl without any shake. It should be ensured

that the sunlight falls on it, but it should not

be disturbed by the wind. A keen observation

with our knowledge on the oil drop suggests

the condition of the patient.

-As.HashMap
4.B.3. GENERAL NATURE OF URINE IN OIL-EXAMINATION:

"அதன்னு தொட்டுக்கண் முதலும்"
"அதன்னு பிற்பருகில் அமைது புதுக்கும்"
"பிற்பிற்கு நிஷ்கந்த மில்லும் குசர்கும்"

If the oil drop takes the shape of a snake, it indicates Vatha disease. If it spreads like a ring it indicates Pitha diseases and if it stands like a pearl it indicates Kapha diseases.

4.B.4. SHAPE OF THE OIL DROP IN COMBINED DERANGEMENT OF HUMOR:

"அயுத்து மிதுக்கை அதுந்தனைக்கும்
அனுபது கை அதுந்தனை முதலும்
காப்பால்கள் போனாக உயர்ந்துபோர்க்கும்"

If there is a combined shape like a ring in a snake or snake in the ring, snake and a pearl or a pearl in the ring, it indicates combined derangement of humors.

4.B.4. SIGNS OF THREE HUMORS:

"அதன்னு உறுக்கு அதுந்தனைக்கும்
சரியானாலைகளைக்காண்ட்கள் மீண்டுசெழந்து
சாதாரந்த வேறு அமைது முயல்பாடும்"

If the oil drop sinks in the urine and if all features of the three humors are seen together in the urine. It suggests derangement of all three humors.

4.B.6. SIGNS OF GOOD PROGNOSIS:

"சுருக்கம் பட்டுச் சுருக்கம் பாரமண்டது
சுருக்கம் பிற்பக்கருகில் முதலுக்கு எண்ணும்
அனுமண்படுவது சுருக்கம் வந்துபாடும்."

If the oil drop in the urine is round in shape and spreads gradually, it indicates good prognosis.

"அமையாத உண்மை அமையாதுகற்காத
அமையாத உண்மையும் மதுக்கில் துறந்துக."
If the oil drop takes the shape like Conch, Throne, Umbrella, Yazh (a string instrument), a lotus flower, Jasmine bud suggests good prognosis.

4.B.7.I SIGNS OF CURABILITY:

“If the drop in the urine spreads like Ritual fire, Human being, Fish, Temple corridors, Elephant it is curable.

4.B.7.II SIGNS OF CURABILITY:

Further, if the oil drop takes the shape like Hill, Umbrella, Tree, A fan made of fur, Lotus flower, the tusk of a wild elephant, Cap, Mirror, Conch Tapestry, Earth, lute and the square shaped house it is curable.

4.B.7.III SIGNS OF CURABILITY:

If the oil drop in the urine spreads like Ritual fire, Human being, Fish, Temple corridors, Elephant it is curable.
If it is in the shape of the leaf of bitter gourd, bee, buds of lotus and throne, the disease is curable.

4.B.8. SIGNS OF INTRACTABILITY:

"If the oil drop takes the shape of a drum, flag, pot, pig, jungle beast and potter’s wheel the cure is slow and with some difficulty.

4.B.9. SIGNS OF INCURABILITY:

If the oil drop takes the shape of an obese man, man with one, three or four legs, a headless body, or as if a person holding a dragger. Three headed spear, iron pestle boe and sword, and snake the prognosis is bad.
Further, if the oil drops takes the shape of a cat, mouse, arrow, crab, bottle gourd, hen, tiger, monkey, lion, horse, betel, creeper, bull and bear the prognosis is bad.

If the oil drop takes the shape of a bird scorpion tortoise or if it it non spreading or spreads very fast by if suggests bad prognosis.

If the gingely oil drop sinks in urine it indicates bad prognosis.

4.B.10. SIGNS OF BAD PROGNOSIS:

If the gingely oil drop sinks in urine it indicates bad prognosis.
If the oil spreads fast or becomes small like a mustard or gets mixed completely with urine or sinks in urine, it suggests bad prognosis. Further if the oil drop takes the shape like Sword, Arrow, Iron pestle, Three headed spear, Pot, Betel leaf indicates bad prognosis.

If the oil drop takes the shape like Lion, Elephant, Tiger, Ram, PigMan, Tortoise, Bird, Fox, Monkey, Ass, Cat, Scorpion indicates bad prognosis.

4.B.11. CURABLE AND INCURABLE STATES OF DISEASES:

If the oil drop takes the shape of a sieve, it suggests Kapha diseases. According to Gowthama, it is incurable but others say it is curable.
REVIEW OF LITERATURE -
MANTHAARA KAASAM...

neerkkuri neikkuri

- Manthaara Kaasam
4.B. INTRODUCTION OF KABAM

According to T.V Sambasivam Pillai, the Kabam is defined as the one of the three humors (life forces), Kaba diseases in common due to excess of heat in the region of the sacral plexus and its distribution, over or communication with the cerebral system. It is marked by diminution of blood, vitiation of semen, collection of phlegm in the chest, cough, fatigue etc.

4.B.1. THE SITES OF KABAM

According to Vaidya Dheepam, Kabam dwells in the following places- Head, Tongue, Eyes, Nose, Throat, Thorax Bone, Bone Morrow, Joints, Blood, Fat, Sperm and Colon.

According to Sage Thirumoolar, Kabam exists in semen

According to Vaithiya Sara Sangiragam, Iyam exists in head
According to Anupoga Vaithiya Prama Ragasiyam, the Kabam exists between the Navel region and head.

4.B.2. கபம் அடைய்க்கும் விகாரம்

"கபம் என்பது எந்த பொருளையோ எந்த வெப்பமையோ எந்த வாய்மையோ எந்த வெளிப்புறமையோ எந்த வைத்திய பொறியையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத் தொகுப்பையோ எந்த பொருளாட்சியையோ எந்த வளாகத்தின் பெயரிட்டதோ எந்த வண்டியையோ எந்த வெளிப்புறப் பொருளையோ எந்த வைத்தியத்

4.B.3. CHARACTERS OF KABAM

<table>
<thead>
<tr>
<th>S No</th>
<th>OWN CHARACTER</th>
<th>OPPOSITE CHARACTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kulirchi (Cold)</td>
<td>Akhini (Hot)</td>
</tr>
<tr>
<td>2</td>
<td>Baluvu (Heavy)</td>
<td>Elasu (Light)</td>
</tr>
<tr>
<td>3</td>
<td>Enippu (Sweet)</td>
<td>Kaaram (Pungent)</td>
</tr>
<tr>
<td>4</td>
<td>Mirudhu (Soft)</td>
<td>Kadinam (Rough)</td>
</tr>
<tr>
<td>5</td>
<td>Pasumai (Unctuous)</td>
<td>Varatchi (Dry)</td>
</tr>
<tr>
<td>6</td>
<td>Vazhavazhappu (viscid)</td>
<td>Karakarappu (Sandy)</td>
</tr>
</tbody>
</table>
4.B.4. PROPERTIES OF KABAM

The following are the natural properties of Kabam:

1. Stability
2. Greasiness
3. Formation of joint
4. The ability to withstand hunger.
5. Thirst.
7. Distress and Temperature are the qualities of Kabam.

According to the Angaathipatham the actions of Kabam are chillness, phlegm in chest.

4.B.5. CAUSES FOR KABA DISEASES

- கபா மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு
- கபா மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு
- கபா மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு மூழ்குறுக்கு
Apart from these, the Siddhar Yugi has discussed about the psychological factors, which may cause Silethuma Noi,

1. Those who speak pretense,
2. Not offering refuge to the unprotected
3. Despising the Holy books
4. Answering the nature’s calls under the broad day light
5. Despising Vaishnavites
6. Despising Saivites

In this poem, the Sage Yugi has discussed about the dietary factors, which may cause Silethuma No1,

1. Excessive intake of sweet taste
2. Excessive intake of sour taste
3. Increased intake of root tubers
4. Excessive intake of cold food
5. Excessive intake of cold water
6. Intake of unfresh food
7. Inhaling fumes from grave yard
8. Having sexual relationship with elder women
According to Agathiyar Kanmani, the causes for Kaba noi are, damp, taking bath in cool water, taking impurified drugs, despising holy persons, intake of impure fluids, exposure to rain, increased sleep, poisons and tiredness.

4.B.6. CHARACTERISTIC FEATURES OF KABAM

4.B.6.I. ACCORDING TO THERAIYAR VAGADAM

"According to Sage Theraiyar, Characteristic features of Kabam are"
1. Excessive sweating,
2. Viscous tongue,
3. Painful micturition.

4.B.6.II. ACCORDING TO AGATHIYAR VATHA KAVIYAM

"¯ïº¾èò¬ô Áò¾¢ý ̽ò¨¾î¦º¡ø§Å¡õ
§¸ûÁ¸§É À¢ò¾ò¾¢ý§Á ÄíÌÄòÐì¸ôÀ¡ø
¸¡ÇôÀ¡ ºÄÁ¢Ì¾¢ ¡ÌõÀ¡Õ
¸ÄóпŠÐÅ¡Ãí¸ §Ç¡ÊÔġŤ
²ÇôÀ¡ ¢¼Âо¡ý Å¢¼×¼¡Áø
þÕìÌÁôÀ¡ ¿ÅòÐšà ¦ÁíÌõ¿¢üÌõ
º¡ÇôÀ¡ ºüÀõ§À¡ø º£Úõº£Úõ
ºÁò¾¡É §ºòÐÁò¾¢ý ̽ó¾¡ýÀ¡§Ã”

-²ÇôÀ¡ ¢¼Âо¡ý 1000 µ¾ø À¾¢ôÒ À.±ñ 60
Increased secretions from the nine openings of body.

4.B.6.III. ACCORDING TO AGATHIYAR AAYUL VEDHAM

“¯ïº¾èò¬ô Áò¾¢ý ̽ò¨¾î¦º¡ø§Å¡õ
§¸ûÁ¸§É À¢ò¾ò¾¢ý§Á ÄíÌÄòÐì¸ôÀ¡ø
¸¡ÇôÀ¡ ºÄÁ¢Ì¾¢ ¡ÌõÀ¡Õ
²ò¾Á¡ÔÁ¢ ¿£åȢ¢ɢòÐ ¿¡ÅØÅØìÌõ
¿¡üÈ ¿£ÃÆ¢óРţØõ¿Äõ ¦ÀæÅÙòЧÁÉ¢
º£üÈÁ¢ì ̽í¸û ¸ñ¼¡ü º¢§ÄòÐÁò¦¾¡Ì¾¢Â¡§Á”

”þÉ¢ôÒ¼ý ¦ÅÙòп¡× ¦ÁÎ즸¡½¡¿¼ì¦¸¡½¡Ð
ÀÉ¢ò¾ñ½£÷ º¢Ú¿£÷À¡Ôõ ÀïͧÀ¡ø ¦ÅÙìÌõ§ÁÉ¢
¦ºÉ¢ôÒ¼ý ̨ÈóÐÅ¡Ê ¦ºÂø À¢ÄÁ¢øÄ¡¾¡§Ä
Ó¨Çò¾¢Îï §ºòÐÁò¾¢ý ܦÈýÚ ÓÉ¢Ô¨Ãò¾¡÷”

-²ÇôÀ¡ ¢¼Âо¡ý 1200 µ¾ø À¾¢ôÒ
Feeling of chillness with sweating, odorous urination, sweetness in tongue, pale tongue, tiredness, increased urination and anaemia.
4.B.6.IV. ACCORDING TO ANGATHI PATHAM

"According to Angathi Patham

Pale tongue, feeling of sweetness in tongue, excessive sweating, cough, hiccough, dyspnoea, hoarseness of voice, excessive salivation, pale motion and urine and frothy urination.

4.B.6.V. ACCORDING TO THIRUMOOLAR

"According to Thirumoolar

Wheezing, Fever, Pain in the coastal region, expectoration, and weight loss.

- Pulavar Patham 1976: 32
- Thirumoolar Patham 1922: 21

- Pulavar Patham 1922: 21
- Thirumoolar Patham 1976: 32
4.B.7. AETIOLOGY

4.B.7.1. ENVIRONMENTAL FACTORS

"The Kaba diseases will be precipitated in the months from Kaarthigai to Maasi (December to Apirl)"

"The Kaba diseases will be precipitated in the month of Thai (Jan-Feb)"

The Kaba diseases will be precipitated in the months from Kaarthigai to Maasi (December to April).

"The Kaba diseases will be precipitated in the month of Thai (Jan-Feb)"
This is considered to be the season of Manmadha; the God of love. The Kabam that has increased in the latter winter worsens with the involvement of Pitham and causes Kaba disease.

4.B.7.II. RASAYAN DIPATI—DIET

Excessive intake of sweet taste foodstuff accumulates fat in the body and increases Kabam and mucous. Further, this will create obesity and may reduce the digestive fire in the body that results in indigestion. This negative tendency of sweetness will lead to diabetes.

4.B.8. FUNCTIONS OF DERANGED KABAM
(ALTERED FUNCTIONS OF KABAM)

- 2006

- 1976 - 67
According to Angaathipatham, the deranged Kabam produces nasal congestion, itching, vomiting, breathlessness, fever, sleep disturbance.

According to Angaathipatham, the deranged Kabam produces vomiting, hiccup, tuberculosis, intestinal tuberculosis, dryness, tiredness, hoarseness of voice, loss of weight, loss of appetite, increased sweating.

According to Theraiyar Vagadam, the deranged Kabam produces itching, chillness, swelling of legs, paleness of face, giddiness, increased sleep, loss of appetite, sweet taste in mouth.
According to Pararasasegaram, the deranged Kabam will produce cough, vomiting, and chillness, and hiccough, dyspnoea, hoarseness of voice, pale motion and urine.

4.B.9. KINDS OF KABAM -5

1. Avalambagam    -   Serum  
2. Kilethagam       -   Saliva  
3. Pothagam          -   Lymph  
4. Tharpagam          -   Cerebrospinal fluid  
5. Santhigam -   Synovial fluid

Eventhough the Kabam seems to be the same; it has got five different forms and actions.
1. AVALAMBAGAM (SERUM)

“இலையையடைந்து கோளுளை பெருந்துறுத்தும்
சுட்டு கைப்பிட்டுவிட்டு கோதுடிப்பும்
சேர்க்கும் பட்டுக் கொள்ளும்பதை
முற்பெரும் ஒழுங்கு துவாரமைத்து
மாற்றம் முற்பெரும் சாதனைத்து
முடிக்கும் விருத்தத்தே ராணுண்மு
பலிந்த பலீனிக் புதுவை”

- கிருஷ்ண மாருந்தவான் கல்வேகப் பதிப்பு-2006

It lies in the lungs and help in respiration. It causes firmness of the limbs. This is vital among all types of Kapham for it controls the other four Kapham and maintains equilibrium.

2. KILETHAGAM (SALIVA)

“அப்பன துக்கியேத் கொண்டங்கள் வாலாற்றென
சேலக்காம் கலாக் கொண்டங்கள் கொண்டங்களின்படி -துவார
தந்திரம் பிளாசுசெமம் ராணுண்மு விளைந்த
தந்திரம் சாதனைத்து சென்றின்

- கிருஷ்ண மாருந்தவான் கல்வேகப் பதிப்பு-2006

It lies in the stomach. It mixes the consumed food and water and promotes the digestive process.

3. POTHAGAM (LYMPH)

“அனைத்தையால் வேலுத்திரு வெளிப்பிட்டு
அதுகளை பிளாசுசெம் விளைந்து
பழகால் காலம் குன்றிக்கிளை
போருமையாள் பிளாசுசெம் விளைந்து
முன்னடை வேலுத்திரு வெளிப்பிட்டு
போருமையாள் பிளாசுசெம் விளைந்து
போருமையாள் பிளாசுசெம் விளைந்து

- கிருஷ்ண மாருந்தவான் கல்வேகப் பதிப்பு-2006

It lies in the tongue and helps to realize the taste of the consuming food.
4. THARPAGAM (CEREBROSPINAL FLUID)

"திர்ப்பு முனைக்குள்ளே கிளை பொருளை
உற்பத்தி திருக்குறுறுப்பு -திர்ப்பு
கலமாக திருக்குறுறுப்பு சாரூன் குழாய்
குறிப்பிட்டு முனைக்குள்ளே கிளை" -திர்பு முனைக்குள்ளே கிளை -2006

Sustaining in the head, this gives refrigerant effect to cool the eyes and other sense organs.

5. SANTHIGAM (SYNOVIAL FLUID)

"சாந்தி முனைக்குள்ளே உற்பத்தி சாரூன் குழாய்
வாழ்ந்த முனைக்குள்ளே உற்பத்தி -சாந்தி குழாய்
சாந்திக்காக வாழ்ந்த முனைக்குள்ளே உற்பத்தி
சாந்திக்காக வாழ்ந்த முனை" -திர்பு முனைக்குள்ளே கிளை -2006

Sustaining in the joints this makes them move freely and easily

4.B.10. TYPES OF KABAM

4.B.10.I. ACCORDING TO YUGI VAITHYA SINTHAMANI

1. முனைக்குள்ளே குழாய்
2. குறிப்பிட்டு குழாய்
3. கூறியல்குழாய்
4. திருக்குறுறுப்பு
5. முனைக்குள்ளே குழாய்
6. வாழ்ந்து குழாய்
7. பிள்ளைக்குழாய்
8. நிர்வாகக்குழாய்
9. கூறியல்குழாய்

1. குறிப்பிட்டு குழாய்
2. அதிருக்குழாய்
3. முனைக்குள்ளே குழாய்
4. B.10.II. ACCORDING TO DHANVANTHRI VAITHIYAM- I PART

1. பிளங்கரிசைக்குமசம்
2. மாள்கிருஷ்ணசம்
3. புதுக்கிருஷ்ணசம்
4. பக்தவரிசைக்குமசம்
5. அயனகைசங்குமசம்
6. திருநாதசம்
7. சனஸ்ருஷ்ணசம்
8. காந்திசைக்குமசம்
9. மால்கிருஷ்ணசம்
10. கம்ஸ்ருஷ்ணசம்
11. திருமப்பைசங்குமசம்
12. மாளையுமசம்
13. காமஸ்ருஷ்ணசம்
14. அயனைசங்குமசம்
15. காவல்சம்
16. பிளங்பைசங்குமசம்
17. புதுகைசங்குமசம்
18. அயனைசங்குமசம்
19. மாலையுமசம்
20. பிளங்கைசங்குமசம்
4.B.10.III. ACCORDING TO ROGA NIRNAYA SAARAM

1. துணைச்சந்தை
2. கிளைச்சந்தை
3. மட்டக்கணினை
4. கான்சந்தை
5. கோலநந்தை
6. மசைனந்தை
7. காண்டை
8. தசாநந்தை
9. நாளானந்தை
10. தீர்ச்சந்தை
11. திருத்தவை
12. இருநந்தை
13. சந்தை
14. சந்தை
15. கந்தை
16. கந்தை
17. பிவிரை
18. பஞ்சநந்தை
19. பந்தை
20. நந்தை

4.B.10.IV. ACCORDING TO AGASTHIYAR VAITHIYA SINTHAMANI-4000-1st PART

1. பந்தை
2. பிவிரை
3. சிக்கநந்தை
4. பஞ்சநந்தை
5. இருநந்தை
6. சந்தை
7. கந்தை
8. கந்தை
4.B.10.V. TYPES OF KABAM ACCORDING TO ANUBHAVA VAIDHYA DEVA
RAGASIAHM

1.  
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RAGASIAHM

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19.  

RAGASIAHM
4.B.10.VI. TYPES OF KABAM ACCORDING TO AGATHIYAR 2000,

“கொய்மாகோ தியா தொட்டிகளவைப்பது வேண்டும்
சட்டமில்லை கொய்மாகோ தொட்டிகளவைப்பது வேண்டும்
பசூனா சுற்றம் நோதிக் பசூனா சுற்றம்
கொய்மாகோ தொட்டிகளவைப்பது வேண்டும் வேண்டும்”

- அகதியார் 2000 புதிப்பு ஆண்டு 1989-பக்கம்:45

The diseases due to Kabam are 1483 in number. They are mainly due to chillness.

4.B.10.VII. TYPES OF KABAM ACCORDING TO PATHINEN SIDDHAR

“கொய்மாகோகள் மாறாதுகளின் பல்வேறு கன்றுகளும்
கொய்மாகோ தொட்டிகளவைப்பது பசூனா சுற்றம்
பசூனா சுற்றம் பசூனா சுற்றம்
கொய்மாகோ தொட்டிகளவைப்பது வேண்டும் வேண்டும்
கொய்மாகோ தொட்டிகளவைப்பது வேண்டும்”

-பதினியார் கிளியா- ஒற்றியின்சிக அர்வ கத்திகம் 2ம் புதிப்பு-376

According to Pathinen Siddhar, the diseases due to Kabam are 96 in number.

4.B.11. CLASSIFICATIONS OF KABAM

<table>
<thead>
<tr>
<th>S No</th>
<th>Names of the Books</th>
<th>Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Yugi Vaithiya Sinathamani</td>
<td>21</td>
</tr>
<tr>
<td>2.</td>
<td>Dhanvanthiri Vaithiyam- I part</td>
<td>20</td>
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<tr>
<td>3.</td>
<td>Roga Nirama Saaram,</td>
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<td>4.</td>
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<td>Anubhava vaidhya deva ragasium</td>
<td>19</td>
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<tr>
<td>6.</td>
<td>Agasthiyar 2000</td>
<td>1483</td>
</tr>
<tr>
<td>7.</td>
<td>Pathinen siththar- Aaviyalikkum Amudha murai churukkam</td>
<td>96</td>
</tr>
</tbody>
</table>
If the urine is white and scanty, it denotes Kapham. It may be due to cold or derangement of blood.

The physic of the Iyyam had redness, bulky, sweating, husky voice, responsible character and eagerness for sweet taste.

4.C. KAASAM

Other names:
- Irumal
- Eelai

4.C.1. DEFINITION

According to siddha maruthuvam, noi naadal noi mudhal thirattu part – ii
Makes noise similar tapping pot shed over bronze vessel. This sound is created because, to bring out the phlegm formed due to kabam formation in throat and chest.
4.C.2. Aetiology

மாறுநாளுக்கு பதினையுடன் விளக்கம்

முற்றங்களில் இல்லாதுறுது

திறந்து சோற்றெய மருத்துவத்திற்கு

வீதியாக பல்வேறு வகைகள்

சாறுண்டை செய்யவும் காரணம்

சிப்புபாடலும் பண்புபோன்

சுட்டாகம் பல்லாலும் காரணம்

(காலப்குல பிள்ளி)

செய்திகள் பயிரிலாமல் புகழ்பெற்றுன்றது

பிற்கேற்கும் பருவத்தையும் விளக்கத்தையும்

பருவத்திலையும் பானாக்கிலின் விளக்கத்தை பாற்றும்

பாதுகாப்பு பருவமாக்கின் விளக்கத்தை பாற்றும்

சாறுண்டை செய்யவும் காரணம்

சிப்புபாடலும் பண்பொருளும் விளக்கத்தை

சிப்புபாடலும் பண்பொருளும் காரணம்

பருவத்தையும் பாதுகாப்புகளும் காற்றிலும்

சிப்புபாடலும் பண்பொருளும் காரணம்

சிப்புபாடலும் பண்பொருளும் காரணம்

சுற்றாரை விளக்கத்தை பாற்றும் காரணம்

சுற்றாரை விளக்கத்தை பாற்றும் காரணம்

சுற்றாரை விளக்கத்தை பாற்றும் காரணம்

சுற்றாரை விளக்கத்தை பாற்றும் காரணம்

சுற்றாரை விளக்கத்தை பாற்றும் காரணம்

சுற்றாரை விளக்கத்தை பாற்றும் காரணம்

(புலி கின்னாவால் கி.ம.)
Kaasam is caused by

- Exposure to cold air.
- Excessive intake of cold foods and very hot foods.
- Speaking and singing loudly.
- Inhalation of dust, fumes, smoke, spicy foods, bad smell.
- Obstruction in the respiratory pathway.
- Increased intake of non-veg foods.
- Obesity.
- Stoling god’s things.
- Telling lies.
- Intake of allergic or infected foods.
- Unemployed.
- Intake of unlike foods.
- During fasting.
- Increased sleep.
- Misbehaving to their spouse.
- Cheating.
- Quarelling.
- Sleeping in mist.

4.C.3. மன்றார கசம்

4.C.3.I. According to kaieluthu pirathi:

“மன்றார கசம் முற்பும்பு மாக்கம் நீட்டக்க, குடுக்க விளை கலிவலனாக கத்தித்மை, குழம்பு அவள் எந்திரி என்ற குனிஙற்ப் பொறையுடன் பொறையிலிதர் கைத்து பர்கு”

(கிகே. கபர்சௌகன் பிரிக)  

The symptoms of manthaara kasam includes cold, cough, sneezing, rhinitis, wheezing.
4.C.3.II. According to Yugi Vaidya Chinthamani:

"தன்னால தாழ்ந்த நால்கிகண்டில்
எழுந்தும் கோளிப்பதைத் தாம் குறித்தே.
சக்தியாள யால் ஒருவர் கோளக்குறியாக
அண்மையான பத்துப்பிற்பந்து இறந்து வந்தவள.
சக்தியாள கூழியைத் துள்ளமா களியா
அள்ளும் கிளகத்தில் நிற்கும் பாறை.
சன்னா வில்கோடியை வைக்கும் கனவல்
சிவப்புக் குடும்பக் காக மைசு."

(புதிய கிளகத்தை)

கிளப்ப- "மன்னர்" சாகற்று மேலால் பிணாமைகளில் இரு விளக்கங்கள் உள்ளன உருவமீதைப்போனை கொண்டு காணப்படுகின்றன.

The symptoms of manthaara kasam includes, Sneezing,rhinitis,wheezing,chest tightness,increased perspiration,Cough with mild expectoration.

- மன்னாங்கம் - Rainy season or cloudy season - pg no 697, Vol : I
- காவல் - Asthma (It is an attack of with great difficulty in breathing and is of spasmodic character) - pg no 1310 , Vol : I
- நேர் - nose pg no 1638, Vol : IV
- குளிர் - water pg no 1939, Vol : III
- புதியம் - sneezing pg no 1201 , Vol : IV
- கொடுாடியம் - chest pg no 1920 , Vol : IV
- வேள் - breath pg no 876, Vol : I
- முது - மேம் pg no 1017, Vol. I
- கிளம் - hiss of serpent through anger pg no 126 , Vol: IV
- கனவல் - neck pg no 1026 , Vol : I
- ப்ரேம் - face pg no 817 , Vol : I
- காலு - ear pg no 1346 , Vol : I
4.C.4. TYPES OF KAASAM:

Kaasam (Erumal) is of 12 types
1. Manthara kaasam
2. Pakka manthara kaasam
3. Sudar erumal
4. Ratha kaasam
5. Swasa erumal
6. Vali erumal
7. Thee erumal
8. Iya erumal
9. Vali azhal erumal
10. Azhal iya erumal
11. Mukutra erumal
12. Peenisa erumal

4.C.5 According to Muni Vaidya Chinthamani:

"நிலினர்காசு விடுத்து வேட்டான மக்கள்
நோய்க் குறிப்பிட்டு வெய்வுக்குச் செய்ய மக்கள்
நிலினர்காசு விடுத்து நேர்ந்தத் தீர்மன்
தாவரக் குறிப்பிட்டு தருதிக் குற்றான
நிலினர்காசு விடுத்து வேட்டாக்கின்
உருகி குறிப்பிட்டு வேட்டு வேட்டாக்கின்
நிலினர்காசு விடுத்து வேட்டாக்கின்
அளித்தூடு நேர்ந்தத் குற்றான
நிலினர்காசு விடுத்து வேட்டாக்கின்
உருகி குறிப்பிட்டு வேட்டாக்கின்
நிலினர்காசு விடுத்து வேட்டாக்கின்"
Kaasam is classified as five types

1. மகாசிரியில்
2. குமார குழுவ
3. மலர் குழுவ
4. வர குழுவ
5. பூம் குழுவ

4.C.6. Signs and Symptoms:

1. Throat pain
2. Soar throat
3. Rhinitis
4. Chest pain due to recurrent cough
5. Thriving for hot food
6. Low back ache
7. Vomiting
8. Loss of appetite
9. Expectoration with black, red, yellow, blue and green

4.C.7.Naadi:

Kaasam has the following Naadi.
1. Vaatha Kapham
2. Increased Kapham
3. Pitha Kapham
4. Kapha Pitham
5. Kapha Vaatham
6. Increased Pitham
REVIEW OF LITERATURE - MODERN ASPECTS...

neerkuri neikkuri

- Manthaara Kaasam
REVIEW OF LITERATURE - URINE...

neerkuri neikkuri

- Manthaara Kaasam
REVIEW OF LITERATURE - BRONCHIAL ASTHMA...

-neerkkuri neikkuri

- Manthaara Kaasam
MODERN ASPECTS

5.A.1. URINE FORMATION: ANATOMY AND PHYSIOLOGY

5.A.1. INTRODUCTION

Kidney excretes the unwanted substances including metabolic end products and those substances, which are present in excessive quantities in the body, through urine.

Normally, about 1-1.5 litres of urine is formed every day. The mechanism of urine formation includes various processes. First, when blood passes through glomerular capillaries, the plasma is filtered into the Bowman’s capsule. When this filtrate passes through the tubular portion of the nephron, it undergoes various changes both in quality and in quantity. Many wanted substances like glucose, amino acids, water and electrolytes are reabsorbed from the tubules. This process is called tubular reabsorption and some unwanted substances are secreted into the tubule from peri tubular blood vessels. This process is called tubular secretion or excretion.

Thus, the urine formation includes the following three processes:
1. Glomerular filtration
2. Tubular reabsorption
3. Tubular secretion

Filtration is the function of the glomerulus or renal corpuscle of nephron and, reabsorption and secretion are the functions of tubular portion of the nephron.

1. GLOMERULAR FILTRATION:

When the blood passes through the glomerular capillaries, the plasma is filtered into the Bowman’s capsule. All the substances of the plasma are filtered except the plasma proteins. The filtered fluid is called glomerular filtrate. During filtration, the substances pass through three layers of structures namely:

1. The endothelium of glomerular capillary membrane
2. Basement membrane
3. Spaces between pedicles (fenestra) of epithelial cells of visceral layer of Bowman’s capsule.
The glomerular filtration is called ultra filtration because; even the minute particles are filtered. But, the plasma proteins are not filtered due to their large molecular size. The protein molecules are larger than the slit pores present in the endothelium of capillaries. Thus, the composition of the glomerular filtrate is similar to that of plasma except in the absence of plasma proteins.

2. TUBULAR REABSORPTION:

When the glomerular filtrate passes through the tubular portion of nephron, both quantitative and qualitative changes occur. Large quantity of water (more than 99%), electrolytes and other substances are reabsorbed by the tubular epithelial cells. The substances, which are reabsorbed, pass into the interstitial fluid of renal medulla. And, from here, the substances move into the blood in peri tubular capillaries. As the substances are taken back into the blood, the entire process is called tubular reabsorption.

- **SELECTIVE REABSORPTION:**

  The tubular cells of kidney selectively reabsorb the substances present in the glomerular filtrate, according to the needs of the body. So, the tubular reabsorption is called the selective reabsorption. Depending upon the degree of reabsorption, the various substances are classified into 3 categories.

  1. High threshold substances:
      The substances like glucose, amino acids, acetoacetate ions and vitamins are completely reabsorbed and do not appear in urine under normal conditions.
  2. Low threshold substances:
      Urea, uric acid and phosphate are reabsorbed to a lesser extent.
  3. Non threshold substances:
      The metabolic end products like Creatinine are not at all reabsorbed and are excreted in urine irrespective of their level.
3. TUBULAR SECRETION:

In the process urine formation, some substances are also secreted into the lumen from the peritubular capillaries through the tubular epithelial cells. This is known as tubular secretion or tubular excretion.

Substances secreted in different segments of renal tubules

1. Potassium is secreted actively by sodium-potassium pump in distal convoluted tubule and collecting duct.
2. Ammonia is secreted in the proximal convoluted tubule.
3. Hydrogen ions are secreted in the proximal and distal convoluted tubules. Maximum hydrogen ion secretion occurs in proximal tubule.

Thus, by the processes of glomerular filtration, selective reabsorption and tubular secretion urine is formed in the nephron. It is also concentrated by counter current mechanism and ADH. Finally, it passes through ureter into the urinary bladder and, is stored there until is voided out.
5.A.2. COLLECTION OF URINE SAMPLE

5.A.2.I. TYPES OF COLLECTION:

Laboratory urine specimens are classified by the type of collection conducted or by the collection procedure used to obtain the specimen.

5.A.2.II. RANDOM SPECIMEN:

• Specimen most commonly sent to the laboratory for analysis,

• Usually submitted for urinalysis and microscopic analysis,

• Pediatric specimens are generally of this type.

• Can be collected at any time.

5.A.2.III. FIRST MORNING SPECIMEN:

• Also called an 8-hour specimen.

• The first morning specimen is collected when the patient first wakes up in the morning, having emptied the bladder before going to sleep.

• Since the urine can be collected over any eight-hour period, collection is practical for patients who have atypical work/sleep schedules.
5.A.2.IV. MIDSTREAM CLEAN CATCH SPECIMEN:

- This is the preferred type of specimen for culture and sensitivity testing.
- Because of the reduced incidence of cellular and microbial contamination.
- Patients are required to first cleanse the urethral area with a castile soap towel.
- The patient should then void the first portion of the urine stream into the toilet.
- These first steps significantly reduce the opportunities for contaminants to enter into the urine stream.
- The urine midstream is then collected into a clean container.
- This method of collection can be conducted at any time of day or night.

5.A.2.V. TIMED COLLECTION SPECIMEN:

- 24 hour specimen
- Among the most commonly performed tests requiring timed specimens
- Measuring Creatinine, urine urea nitrogen, glucose, sodium, potassium, or analytes such as catecholamine and 17-hydroxysteroids that are affected by diurnal variations

5.A.2.VI. CATHETER COLLECTION SPECIMEN:

- when a patient is bedridden
- Insert a Foley catheter into the bladder through the urethra to collect the urine specimen.
- Collected directly from a Foley into an evacuated tube or transferred from a syringe into a tube or cup.

5.A.2.VII. SUPRAPUBIC ASPIRATION SPECIMEN:

- When a bedridden patient cannot be catheterized or a sterile specimen is required.
- The urine specimen is collected by needle aspiration through the abdominal wall into the bladder.
5.A.2.VIII. PEDIATRIC SPECIMEN:
- For infants and small children,
  - A special urine collection bag is adhered to the skin surrounding the urethral area.
  - The urine is poured into a collection cup or transferred directly into an evacuated tube with a transfer straw.
  - Urine collected from a diaper is not recommended

5.A.3. URINE COLLECTION PRODUCTS:

5.A.3.I. URINE COLLECTION CONTAINERS:
- Variety of shapes and sizes with lids.
- To protect healthcare personnel from exposure to the specimen
- Protect the specimen from exposure to contaminants,
- Leak-resistant cups should be utilized.
- Some urine transport cup closures have special access ports that allow closed-system transfer of urine directly from the collection device to the tube.

5.A.3.II. PRESERVATIVES:
- Should be added to the collection container before the urine collection begins
- Warning labels should be placed on the container.
- The least hazardous one should be selected.
- Some common 24-hour preservatives are hydrochloric acid, boric acid, acetic acid and toluene.

5.A.4. VOLUME:
- Adults normally 700-2500ml (1200ml) of urine is passed in 24 hours.
- Infants-300ml
5.A.4.I. POLYURIA:
When excess of urine is passed in 24 hours (>2500ml).

*Causes of transient polyuria:*
- Excessive intake of fluids
- Anxiety
- During convalescence esp., after fever
- Recovery from oedema
- Diuretics
- Diabetes mellitus
- Diabetes insipidus
- Chronic nephritis
- Arteriosclerosis.

5.A.4.II. OLIGURIA
When less than 500ml of urine is passed in 24 hours.

*Causes:*
- Acute and sub acute nephritis
- Diarrhoea/vomiting
- Fever
- Hypotension
- Congestive cardiac failure
- Obstruction to the urinary passage.
- Acute renal failure.

5.A.4.III. ANURIA:
When there is almost complete suppression of urine (<150ml) in 24 hours.

*Pre Renal Causes:*
- Non obstructive type
- Hypotension

*Renal Causes:*
- Obstructive type
- Acute nephritis
• TB of both the kidneys
• Polycystic kidney.
• pyelonephritis
• Black water fever
• Incompatible blood transfusion
• Intravascular haemolysis
• Poisoning by turpentine, cantharides.

Post Renal Causes:
• Calculi in the urinary passage
• Carcinoma of ureteral orifice
• Carcinoma of uterus infiltrating both the ureters
• Pelvic or abdominal tumours.

5.A.4.IV. NOCTURIA:
When excess of urine is passed during night time (>500ml).

5.A.5. COLOUR:
Normally urine is clear, pale or straw coloured.
5.A.5.I. COLOURLESS URINE:
- Diabetes mellitus
- Diabetes insipidus
- Excess intake of water.

5.A.5.II. ORANGE COLOUR URINE:
- Increased urobilinogen.
- Concentrated urine.
- Jaundice.

5.A.5.III. RED COLOUR URINE:
- Haematuria
- Haemoglobinuria
5.A.5.IV. GREEN COLOUR URINE:

- Putrified sample.
- Phenol poisoning.
- Administration of carbolic acid.

5.A.5.V. BLUE COLOUR URINE:

Administration Of Methylene
5.A.5.VI. MILKY URINE:
- Pus
- Fat
- UTI infection

5.A.5. ODOR OF URINE:
- Normally urine has faint aromatic odour.

OTHER ODOR OF URINE:
1. PUNGENT
   It due to ammonia produced by bacterial contamination.

2. PUTRID:
   It due to UTI.

3. FRUITY:
   It due to ketoacidosis.

5.A.7. REACTION/PH:
   It reflects ability of the kidney to maintain h+ ions concentration in extra cellular fluid and plasma. It can be measured by PH indicator paper or by electronic PH meter.
   Normal PH range 4.5-7 (average-5.0).
   - Much of the variation is due to diet.
   - High protein diets - more acidic urine.
   - vegetarian diets - more alkaline urine
     (Both within the typical range 4.5 - 8).
1. DIGITAL PH METER:

![Digital pH Meter Image]

2. LITMUS PAPER METHOD:

4% Alcoholic solution of methyl red + 5ml of urine.

- Red colour - acidic
- Orange - neutral
- Yellow - alkaline.

![Litmus Paper Method Image]

5.A.8. SPECIFIC GRAVITY

This is the ratio of 1 ml volume of urine to that of weight of 1ml of distilled water. It depends upon the concentration of various particles/solutes in the urine. Specific gravity is used to measure the concentrating and diluting power of the kidney.

- Normal specific gravity 1.003-1.030
- Neo nates-1.012
It can be used be measured by

Urinometer
Refractometer
Reagent strips.

1. Low Specific gravity
   - Diabetes insipidus
   - Chronic renal diseases
   - Acute tubular necrosis
   - Interstitial nephritis

2. High specific gravity:
   - Fever
   - Dehydration
   - Albuminuria
• Hematuria
• CCF
• Acute nephritis
• Diabetes mellitus

5.A.9. COMPOSITION OF URINE:
• Approx. 95% of the volume of normal urine is due to water.
• The other 5% consists of solutes

1. ORGANIC MOLECULES:
• Urea
• Creatinine
• Uric acid
• Ammonia
• Purine bodies

2. INORGANIC MOLECULES:
• Sodium
• Potassium
• Chloride
• Magnesium
• Calcium
• Ammonium
• Phosphates

3. UREA EXCRETION INCREASED IN:
• High intake of protein diet
• Fever
• Diabetes mellitus
• Convalescence
• Poisoning like phosphorus and arsenic

4. UREA EXCRETION DIMINISHED IN:
• Starvation
• Chronic kidney diseases
• Liver cirrhosis
5. URIC ACID EXCRETION INCREASED IN:
   • Myeloid leukaemia
   • Acute fever
   • Pneumonia
   • Liver diseases

5. URIC ACID EXCRETION DECREASED IN:
   • Quinine administration

7. CREATININE EXCRETION INCREASED IN:
   • Pneumonia
   • Typhoid
   • Tetanus

8. CREATININE EXCRETION DECREASED IN:
   • Anaemia
   • Leukemia
   • Thyrotoxicosis
   • Advanced degeneration of kidney and liver
   • Muscular atrophy

9. AMMONIA EXCRETION INCREASED IN:
   • Ketosis
   • Delayed chloroform poisoning
   • Severe vomiting of pregnancy
   • Liver cirrhosis.

10. CHEMICAL EXAMINATION:
   Routine chemical examination of urine
   • Protein
   • Sugar
   • Ketone bodies
   • Occult blood
• Bile pigment
• Bile salt
• Urobilinogen

I. Test for Protein:
• Heat coagulation test
• Sulphosalicylic acid test
• Heller’s test

II. Test for Sugar:
• Fehling’s test
• Benedict’s test

III. Test for Ketone Bodies:
• Rothera’s test

IV. Test for Occult Blood:
• Guaiacum test
• Haematrix test

V. Test for Bile Pigments:
• Fouchet’s test
• Gmelin’s test

5.A.10. HAEMATURIA:
• Appearance of blood in urine
• Renal causes
• Nephritis
• Tuberculosis of kidney
• Hydronephrosis
• Malignancy
• Calculus
5.A.11. SESAME OIL:

Sesame oil (also known as gingelly oil or tir oil) is an edible vegetable oil derived from sesame seeds.

The oil from the nutrient rich seed is popular in alternative medicine—from traditional massages and treatments to modern day fads. Ancient Indian medical system perceives sesame oil to pacify stress related symptoms and on-going research indicates that the rich presence of anti-oxidants and poly-unsaturated fats in sesame oil could help in controlling blood pressure.

History:

Sesame seeds were one of the first crops processed for oil as well as one of the earliest condiments. In fact, the word ‘ennai’ that means oil in Tamil language has its roots in the Tamil words EL and NEI which mean sesame and fat.

1. ORGANIC SESAME OIL PROFILE:

Botanical Name - Sesame indicum
Origin - Mexico
Extraction – Expeller Pressed/Unrefined
Shelf life- 1 year

Specifications:

Colour - Golden brown
Odour - Nutty
Free fatty acids – 0.79%
Peroxide value- 1.26
Moisture-0.01%
Iodine value-109.8
Specific gravity-0.98
P^H – 4.26
2. FATTY ACIDS:
   Linoleic – 44.91%
   Oleic – 41.45%
   Stearic-4.06%
   Palmitic -7.83%

<table>
<thead>
<tr>
<th>Nutritional value per 100 g (3.5 oz)</th>
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<tbody>
<tr>
<td>Energy</td>
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<tr>
<td>Carbohydrate</td>
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<td>Fat</td>
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<td>Protein</td>
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<td>Vitamin K</td>
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<td>Calcium</td>
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<td>Iron</td>
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<td>Sodium</td>
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5.B. BRONCHIAL ASTHMA

Asthma (in Greek ‘panting’) is a common chronic inflammatory disease of the airways characterized by variable and recurring symptoms, reversible airflow obstruction, and bronchospasm.

Common symptoms include

- wheezing,
- coughing,
- chest tightness, and
- shortness of breath.

It is clinically classified according to the frequency of symptoms, forced expiratory volume in one second (FEV1), and peak expiratory flow rate. Asthma may also be classified as atopic (extrinsic) or non-atopic (intrinsic). Symptoms can be prevented by avoiding triggers, such as allergens and irritants, and by the use of inhaled corticosteroids. The prevalence of asthma has increased significantly since the 1970s. As of 2010, 300 million people were affected worldwide. In 2009 asthma caused 250,000 deaths globally. Asthma is characterized by recurrent episodes of wheezing, shortness of breath, chest tightness, and coughing. Symptoms are often worse at night and in the early morning or in response to exercise or cold air. Some people with asthma only rarely experience symptoms, usually in response to triggers, whereas others may have marked and persistent symptoms.

5.B.1. ASSOCIATED CONDITIONS

A number of other health conditions occur more frequently in those with asthma including: gastro-esophageal reflux disease (GERD), rhinosinusitis, and obstructive sleep apnea. Psychological disorders are also more common.

5.B.2 CAUSES

Asthma is caused by a combination of environmental and genetic factors. These factors influence both its severity and how responsive it is to treatment. It is believed that the recent increased rates of asthma are due to a combination of these environmental and epigenetic changes.
I. ENVIRONMENTAL

Many environmental factors have been associated with asthma's development and exacerbation including: allergens, air pollution, and other environmental chemicals. There is a relationship between exposure to air pollutants and the development of asthma. Smoking during pregnancy and after delivery is associated with a greater risk of asthma-like symptoms. Low air quality, from traffic pollution or high ozone levels, has been associated with both asthma development and increase asthma severity. Exposure to indoor volatile organic compounds may be a trigger for asthma; formaldehyde exposure, for example, has a positive association. Also, phthalates in PVC are associated with asthma in children and adults as are high levels of endotoxin exposure. Asthma is associated with exposure to indoor allergens. Common indoor allergens dust mites, cockroaches, animal dander, and mold. Efforts to decrease dust mites have been found to be ineffective. Certain viral respiratory infections may increase the risk of developing asthma when acquired as a young children including: respiratory syncytial virus and rhinovirus.

Certain other infections however may decrease the risk.

HYGIENE HYPOTHESIS

The hygiene hypothesis is a theory which attempts to explain the increase rates of asthma worldwide—increased rates of asthma are a direct and unintended result of reduced exposure, during childhood, to non infectious bacteria and viruses in modern societies.

It's been proposed that the reduced exposure to bacteria and viruses is due, in part, to increased cleanliness and decreased family

II. GENETIC

CD14-endotoxin interaction based on CD14 SNP C-159T

<table>
<thead>
<tr>
<th>Endotoxin levels</th>
<th>CC genotype</th>
<th>TT genotype</th>
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<tbody>
<tr>
<td>High exposure</td>
<td>Low risk</td>
<td>High risk</td>
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<tr>
<td>Low exposure</td>
<td>High risk</td>
<td>Low risk</td>
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Family history is a risk factor for asthma with many different genes being implicated. If one identical twin is affected, the probability of the other having the disease is ~25%.
By the end of 2005, 25 genes had been associated with asthma in six or more separate populations including: GSTM1, IL10, CTLA-4, SPINK5, LTC4S, IL4R and ADAM33 among others. Many of these genes are related to the immune system or to modulating inflammation. Even among this list of genes supported by highly replicated studies, results have not been consistent among all populations tested. In 2006 over 100 genes where associated with asthma in one genetic association study alone; more continue to be found. Some genetic variants may only cause asthma when they are combined with specific environmental exposures. The genetic trait CD14 single nucleotide polymorphism (SNP) C-159T and exposure to endotoxin (a bacterial product) is an example. Endotoxin exposure can come from several environmental sources including tobacco smoke, dogs, and farms. Risk for asthma, then, is determined by both a persons genotype and the level of endotoxin exposure.

5.B.3.MEDICAL CONDITIONS

A triad of atopic eczema, allergic rhinitis, and asthma is called atopy. The strongest risk factor for developing asthma is a history of atopic disease with asthma occurring at a much greater rate in those who have either eczema or hay fever. Asthma has been associated with the autoimmune disease vasculitis, Churg–Strauss syndrome. Individuals with certain types of urticaria may also experience symptoms of asthma. There is a correlation between obesity and the risk of asthma with both having increased in recent years. Several factors may be at play including decreased respiratory function due to a buildup of fat and the fact that adipose tissue leads to a pro-inflammatory state. Beta blocker medications such as propranolol may trigger asthma in those who are susceptible. Cardioselective beta-blockers, however, appear safe in those with mild or moderate disease. Other medications that can cause problems include: ASA, NSAIDs, and angiotensin-converting enzyme inhibitors.

5.B.4.EXACERBATION

Some individuals will have stable asthma for weeks or months and then suddenly develop an episode of acute asthma. Different individuals react differently to various factors. Most individuals can develop severe exacerbation from a number of triggering agents. Home factors that can lead to exacerbation of asthma include dust, animal dander (especially cat and dog hair), cockroach allergens and mold.
Perfumes are a common cause of acute attacks in women and children. Both virus and bacterial infections of the upper respiratory tract infection can worsen the disease. Psychological stress may worsen symptoms—it's thought that stress alters the immune system and thus increases the airway inflammatory response to allergens and irritants.

5.B.5.PATHOPHYSIOLOGY

Obstruction of the lumen of a bronchiole by mucoid exudate, goblet cell metaplasia, and epithelial basement membrane thickening in a person with asthma.

Asthma is the result of chronic inflammation of the airways which subsequently results in increased contractability of the surrounding smooth muscles. This among other factors leads to bouts of narrowing of the airway and the classic symptoms of wheezing. The narrowing is typically reversible with or without treatment. Occasionally the airways themselves change. The typical changes in the airway include an increase in eosinophils and thickening of the lamina reticularis. Chronically airway smooth muscle may increase in size along with an increase in the numbers of mucous glands in the airways. Other cell types involved include: T lymphocytes, macrophages, and neutrophils. There may also be involvement of other components of the immune system including: cytokines, chemokines, histamine, and leukotrienes among others.

5.B.6.DIAGNOSIS

There is currently no precise test for asthma with the diagnosis typically made based on the pattern of symptoms and response to therapy over time. A diagnosis of asthma should be suspected if there is a history of: recurrent wheezing, coughing or difficulty breathing and these symptoms occur or worsen due to exercise, viral infections, allergens or air pollution. Spirometry is than used to confirm the diagnosis. In children under the age of six the diagnosis is more difficult as they are too young for spirometry.

5.B.7.SPIROMETRY

Spirometry is recommended to aid in diagnosis and management. It is the single best test for asthma. If the FEV1 measured by this technique improves more than 12% following administration of a bronchodilator such as salbutamol this is supportive of the diagnosis. It however may be normal in those with a history of mild asthma, not currently acting up.
Single-breath diffusing capacity can help differentiate asthma from COPD. It is reasonable to perform spirometry every 1 or 2 years to follow how well a person's asthma is controlled.

**OTHER**

The methacholine challenge involves the inhalation of increasing concentrations of a substance that causes airway narrowing in those predisposed. If negative it means that a person does not have asthma; if positive, however, it is not specific for the disease.

Other supportive evidence includes: a $\geq 20\%$ difference in peak expiratory flow rate on at least three days in a week for at least two weeks, a $\geq 20\%$ improvement of peak flow following treatment with either salbutamol, inhaled corticosteroids or prednisone, or a $\geq 20\%$ decrease in peak flow following exposure to a trigger. Testing peak expiratory flow is more variable than spirometry, however, and thus not recommended for routine diagnosis. It may be useful for daily self-monitoring in those with moderate to severe disease and for checking the effectiveness of new medications. It may also be helpful in guiding treatment in those with acute exacerbations.

**I. Exercise-induced**

Exercise can trigger bronchoconstriction in both people with and without asthma. It occurs in most people with asthma and up to 20% of people without asthma. In athletes it occurs more common in elite athletes with rates varying from 3% for bobsled racer to 50% for cycling and 60% for cross-country skiing. Inhaled beta2-agonists do not appear to improve athletic performance among those without asthma however oral doses may improve endurance and strength.

**II. Occupational**

Asthma as a result of (or worsened by) workplace exposures is a commonly reported occupational disease. Many cases however are not reported or recognized as such. It is estimated that 5–25% of asthma cases in adults are work related. A few hundred different agents have been implicated with the most common being: isocyanates, grain and wood dust, colophony, soldering flux, latex, animals, and aldehydes. The employment associated with the highest risk of problems include: those who spray paint, bakers and those who process food,
nurses, chemical workers, those who work with animals, welders, hairdressers and timber workers.

5.B.8. Differential diagnosis

Many other conditions can cause symptoms similar to those of asthma.

In children other upper airway diseases such as allergic rhinitis and sinusitis should be considered as well as other causes of airway obstruction including: foreign body aspiration, tracheal stenosis or laryngotracheomalacia, vascular rings, enlarged lymph nodes or neck masses. In adults, COPD, congestive heart failure, airway masses, as well as drug induced coughing due to ACE inhibitors should be considered. In both populations vocal cord dysfunction may present similarly.

Chronic obstructive pulmonary disease can coexist with asthma and can occur as a complication of chronic asthma. After the age of 65 most people with obstructive airway disease will have asthma and COPD. In this setting, COPD can be differentiated by increased airway neutrophils, abnormally increased wall thickness, and increased smooth muscle in the bronchi. However, this level of investigation is not performed due to COPD and asthma sharing similar principles of management: corticosteroids, long acting beta agonists, and smoking cessation. It closely resembles asthma in symptoms, is correlated with more exposure to cigarette smoke, an older age, less symptom reversibility after bronchodilator administration, and decreased likelihood of family history of atopy.

5.B.9. Pulmonary Function Tests:

- **TLC** Total lung capacity: the volume in the lungs at maximal inflation
- **TV** Tidal volume: that volume of air moved into or out of the lungs during quiet breathing
- (VT indicates a subdivision of the lung; when tidal volume is precisely measured, as in gas exchange calculation, the symbol VT or $V_T$ is used.)
- **RV** Residual volume: the volume of air remaining in the lungs after a maximal exhalation
- **ERV** Expiratory reserve volume: the maximal volume of air that can be exhaled from the end-expiratory position
• **IRV** Inspiratory reserve volume: the maximal volume that can be inhaled from the end-inspiratory level

• **IC** Inspiratory capacity: the sum of IRV and TV

• **IVC** Inspiratory vital capacity: the maximum volume of air inhaled from the point of maximum expiration

• **VC** Vital capacity: the volume equal to TLC – RV

• **VT** Tidal volume: that volume of air moved into or out of the lungs during quiet breathing (VT indicates a subdivision of the lung; when tidal volume is precisely measured, as in gas exchange calculation, the symbol VT or Vₜ is used.)

• **FRC** Functional residual capacity: the volume in the lungs at the end-expiratory position RV/TLC% Residual volume expressed as percent of TLC

• **VA** Alveolar gas volume

• **V L** Actual volume of the lung including the volume of the conducting airway.

• **FVC** Forced vital capacity: the determination of the vital capacity from a maximally forced expiratory effort

• **FEVₜ** Forced expiratory volume (time): a generic term indicating the volume of air exhaled under forced conditions in the first t seconds

• **FEV₁** Volume that has been exhaled at the end of the first second of forced expiration

5.B.10.Peak expiratory flow

*Diagnostics*

A peak flow meter issued in the UK.

The **peak expiratory flow** (PEF), also called **peak expiratory flow rate** (PEFR) is a person's maximum speed of expiration, as measured with a **peak flow meter**, a small, hand-held device used to monitor a person's ability to breathe out air. It measures the airflow through the **bronchi** and thus the degree of obstruction in the airways.
I. Function

Peak flow readings are higher when patients are well, and lower when the airways are constricted. From changes in recorded values, patients and doctors may determine lung functionality, severity of asthma symptoms, and treatment options. First measure of precaution would be to check patient for signs and symptoms of asthmatic hypervolemia. This would indicate whether or not to even continue with the Peak Flow Meter procedure. Measurement of PEFR requires training to correctly use a meter and the normal expected value depends on a patient's sex, age and height. It is classically reduced in obstructive lung disorders such as asthma. Due to the wide range of 'normal' values and high degree of variability, peak flow is not the recommended test to identify asthma. However, it can be useful in some circumstances. A small proportion of people with asthma may benefit from regular peak flow monitoring. When monitoring is recommended, it is usually done in addition to reviewing asthma symptoms and frequency of reliever medication use. When peak flow is being monitored regularly, the results may be recorded on a peak flow chart. It is important to use the same peak flow meter every time.

II. Scale

This peak flow meter uses the EU scale. There are a number of non-equivalent scales used in the measurement of Peak Flow.

Zone Reading Description

- **Green Zone**: 80 to 100 percent of the usual or normal peak flow readings are clear. A peak flow reading in the green zone indicates that the asthma is under good control.
- **Yellow Zone**: 50 to 79 percent of the usual or normal peak flow readings. Indicates caution. It may mean respiratory airways are narrowing and additional medication may be required.
- **Red Zone**: Less than 50 percent of the usual or normal peak flow readings. Indicates a medical emergency. Severe airway narrowing may be occurring and immediate action needs to be taken.

This would usually involve contacting a doctor or hospital. Zone Reading Description
Green Zone 80 to 100 percent of the usual or normal peak flow readings are clear. A peak flow reading in the green zone indicates that the asthma is under good control.

Yellow Zone 50 to 79 percent of the usual or normal peak flow readings Indicates caution. It may mean respiratory airways are narrowing and additional medication may be required.

Red Zone Less than 50 percent of the usual or normal peak flow readings Indicates a medical emergency. Severe airway narrowing may be occurring and immediate action needs to be taken. This would usually involve contacting a doctor or hospital.
MATERIAL AND METHODS...

neerkkuri neikkuri

- Manthaara Kaasam
“A STUDY ON NEERKKURI NEIKKURI DIAGNOSTIC METHODOLOGY IN MANTHAARA KAASAM – BRONCHIAL ASTHMA” would be carried out in the Out patients and In Patients NoiNaadal Department of Ayothidoss Pandithar Hospital of the National Institute of Siddha, Tambaram Sanatorium, and Chennai 47.

6.1. POPULATION SAMPLE:

Out of the 80 cases screened, 40 diagnosed cases will be selected from the outpatient department and 20 normal subjects screened, 10 normal subjects will be selected. The study would be followed under the supervision of the HOD and Lecturers of the Noi Naadal Department.

6.2. SAMPLE SIZE:

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>50</td>
</tr>
<tr>
<td>Normal Healthy Volunteers</td>
<td>10</td>
</tr>
<tr>
<td>Manthaara kaasam patients</td>
<td>40</td>
</tr>
</tbody>
</table>

6.3. SELECTION OF CASES:

Selection of cases is based on the screening of patient population as per the inclusion and exclusion criteria listed out in the Screening Proforma.

The patient population consists of patients attending the OPD/IPD of Ayothidoss Pandithar Hospital of National Institute of Siddha, Chennai.

6.4. STUDY PERIOD : one year
6.5. INCLUSION CRITERIA:

- Age -18 to 60 years
- Difficulty in breathing
- Wheezing
- Cough with mild expectoration
- Increased perspiration.

6.6. EXCLUSION CRITERIA:

- Lung carcinoma
- Tuberculosis
- Major systemic illness (DM, HT)
- Any vulnerable groups (Pregnancy, Lactation)
6.7. METHODOLOGY

METHODOLOGY

HEALTHY VOLUNTEERS

PATIENT SCREENED (INCLUSION & EXCLUSION CRITERIA)

INVESTIGATIONS

SATISFIED

NOT SATISFIED

INFORMED ABOUT THE STUDY (INFORMATION SHEET)

EXCLUDED FROM THE STUDY

GETTING CONSENT (CONSENT FORM)

NORMAL OPD TREATMENT GIVEN

REGISTRATION CARD GIVEN AND SUBJECTED TO

HISTORY TAKEN

CLINICAL ASSESSMENT

LABORATORY INVESTIGATIONS

NEERKKURI NEIKURI
During examination, the cases were subjected to careful enquiry, which involved history taking and evaluate the siddha parameters and modern parameters.

6.9. SIDDHA PARAMETERS:

The seven body components (Udal thathukal)
Trihumoural theory (Mukkutram)
The eight-fold examination (Ennvagai thervu)
Naa
Niram
Mozhi
Vizhi
Malam
Moothiram (Neerkkuri and neikkuri)
Sparisam
Naadi
Wrist circummetric sign (Manikadai Nool),
Habitat (Nilam),
Season (Kaalam)
Astrology (Sothidam) of the patient would be assessed.

6.9.1 NEERKKURI NEIKKURI PROCEDURE

6.9.1.A. PREPARATION OF THE PATIENT:

DIET PATTERN:

Quality- Balanced type of food with appropriate proportion of all six tastes and humors.
Quantity- Upto the level of his appetite

SLEEP PATTERN

Sound sleep
6.9.1.B. METHOD OF URINE COLLECTION:

The mid stream urine should be collected in a sterilized container and it should be closed air tight.

6.9.1.C. NEERKKURI PROCEDURE:

In Neerkkuri, five physical properties of the urine should be noted. They are

1. **Colour:**
   The colour of the urine should be noted with naked eye and the photos of the colour are documented.

2. **Odour:**
   The odour of the urine should be noted.

3. **Froth:**
   The patient should be enquired whether the froth present are not in the urine, immediately after collecting the mid stream urine.

4. **Density:**
   Density of the urine should be measured by using urino meter

5. **Deposits and volume:**
   **Volume:**
   24 hours urine should be collected in the urinary container and the volume of the urine is noted.

6.9.1.D. **pH OF THE URINE:**

The pH of urine is measured by using the digital ph meter
6.9.1.E NEIKKURI PROCEDURE:

**I. SOURCE OF OIL:**

Oil will be procured from mill as freshly ground gingely seeds in mill stone (chekku) without any additives being added to avoid variations in the investigations. Because the presently marketed Gingely oils are treated with additives for which the reason I have chosen the above method of additive free preparation.

**II. SELECTION OF BOWL:**

I have selected a glass bowl of 200 ml quantity with wide neck.

**III. SELECTION OF STICK:**

Coconut leaf mid rib.

**IV. METHOD OF OIL INSTILLING:**

Distance between the bowl & the oil stick is 3-4 cm. below 3cm, the stick may touch the bowl. Above 5cm, the oil may be dispersed due to air or it may cause ripples over the surface of the urine sample interfering with the results of the examination.

A drop of oil is dripped on centre of bowl without any shake. It should be ensured that the sunlight should fall on it, but it should not be disturbed by the wind.

The above Neikkuri procedure is repeated (except physical and chemical urine analysis) for the next two consecutive days.

**V. OBSERVATION AND DOCUMENTATION OF NEIKKURI:**

A keen observation with our knowledge on the oil drop suggests the condition of the patient and photos will be documented with standard Digital imaging.

5 slides of picture will be taken

1. 1 minute after dropping of oil.
2. After 3 minutes.
3. After 5 minutes.
4. After 7 minutes.
5. After 10 minutes.
6.10. MODERN PARAMETERS:

1. BLOOD:
   - Haemogram
   - Hb
   - ESR
   - RBC
   - TC
   - DC
   - Platelet count
   - Blood sugar
   - Urea
   - Creatinine
   - Cholesterol
   - HDL
   - LDL
   - VLDL
   - Alkaline phosphatase
   - Triglycerides
   - SGOT
   - SGPT
   - Total Bilirubin
   - Direct Bilirubin
   - Indirect Bilirubin.

2. URINE:
   - Albumin
   - Sugar
   - Acetone
   - Bile salt
   - Bile pigment
   - Urobilinogen
   - Occult blood
   - Urine deposits (Pus cells, Epithelial cells, RBC, Crystals).
   - pH
   - Specific gravity
3. MOTION TEST:
   Ova
   Cyst
   Occult blood

4. OTHERS:
   Chest x-ray
   Absolute Eosinophil Count
   Peak Exspiratory Flow Rate
   Sputum AFB.

6.11. DATA MANAGEMENT
   • After enrolling the patient in the study, a separate file for each patient were beopened and all forms were filed in the file. Patient No. were 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 were taken and necessary recordings were made at the case record form or other suitable form.
   • The Data recordings were monitored for completion and compliance of patients by HOD.
   • Any missed data found in during the study, it were collected from the patient, but the time related data were not be recorded retrospectively.
   • All collected data were entered using MS access/ excel software onto computer. Investigators were trained to enter the patient data and cross checked by SRO.

6.12. STATISTICAL ANALYSIS
   All collected data were entered into computer using MS Access / MS Excel Software by the investigator. The data were analysed using STATA Software under the guidance of SRO (stat), NIS. The level of significance were be 0.05. Descriptive analysis were made and necessary tables / graphs generated to understand the profile of patients included in the study. The Statistical analysis for significance of different diagnostic Neerkuri–Neikkuri were done. Student ‘t’ test and chi-square test, are proposed to be performed for quantitative and qualitative data.
6.13. ETHICAL 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 collected from the patient will be kept confidentially. The patient will be explained about 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 the necessary investigations (mentioned in the protocol) and no other investigation would be done.

6. Patients will be subjected to X-ray investigation which has minimal risk of radiation at free of cost in NIS.

7. Normal treatment procedure followed in NIS will be prescribed to the study patients and the treatment will be provided at free of cost.

8. There will be no infringement on the rights of patient.
OBSERVATION AND RESULTS...

neerkkuri neikkuri

- Manthaara Kaasam
OBSERVATION AND RESULTS - MANTHAARA KAASAM PATIENTS...

neerkkuri neikkuri

- Manthaara Kaasam
7.A. MANTHAARA KASAM PATIENTS:

7.A.1. AGE DISTRIBUTION OF STUDY SAMPLE:

<table>
<thead>
<tr>
<th>Age</th>
<th>No of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-20 Yrs</td>
<td>4</td>
<td>10%</td>
</tr>
<tr>
<td>21-30 Yrs</td>
<td>10</td>
<td>25%</td>
</tr>
<tr>
<td>31-40 Yrs</td>
<td>10</td>
<td>25%</td>
</tr>
<tr>
<td>41-50 Yrs</td>
<td>12</td>
<td>30%</td>
</tr>
<tr>
<td>51-60 Yrs</td>
<td>4</td>
<td>10%</td>
</tr>
</tbody>
</table>

Total: 40 cases, 100%

Observation:

Among 40 cases, 10% of cases came under 11-20 yrs, 25% of cases came under 21-30 yrs, 25% of cases came under 31-40 yrs, 30% of cases came under 41-50 yrs, and 10% of cases came under 51-60 yrs.

Inference:

Majority of diseased cases (30%) in the study were of 41-50 yrs.
7.A.2. DISTRIBUTION OF GENDER:

<table>
<thead>
<tr>
<th>Gender</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Female</td>
<td>23</td>
</tr>
<tr>
<td>Male</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
</tr>
</tbody>
</table>

Observation:

Among 40 cases, 57.5% of cases were female, 42.5% of cases were male.

Inference:

In the study, females are marginally more affected than males.
7.A.3. KAALAM DISTRIBUTION:

<table>
<thead>
<tr>
<th>Kaalam</th>
<th>Patients</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No of cases</td>
<td>Percentage</td>
<td></td>
</tr>
<tr>
<td>Vaatha kaalam (0-33 yrs)</td>
<td>20</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Pitha kaalam (34-66 yrs)</td>
<td>20</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Kaba kaalam (67-100 yrs)</td>
<td>0</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Observation:

Among 40 cases, 50% of cases came under Vaatha kaalam i.e. 0-33yrs and 50% of cases fall under Pitha kaalam 34-66yrs.

Inference:

In the study, patients observed fell equally under Vaatha kaalam and Kaba kaalam.
8.4. NAADI (PULSE) :

<table>
<thead>
<tr>
<th>Naadi</th>
<th>No of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pithakapham</td>
<td>12</td>
<td>30%</td>
</tr>
<tr>
<td>Kabhavatham</td>
<td>11</td>
<td>27.5%</td>
</tr>
<tr>
<td>Vaathakapham</td>
<td>18</td>
<td>45%</td>
</tr>
<tr>
<td>Kabhapitham</td>
<td>9</td>
<td>22.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Observation:**

Among 40 cases, 45% of cases had Vaathakapham, 30% of cases had the naadinadai of Pithakapham, 27.5% cases had Kabha vatham, and 22.5% of cases had Kabhapitham.

**Inference:**

Most of the cases had Vaathakapha Naadi. Manthaara kaasam disease is said to be associated with Vaathakapha Naadi.
7.A.5. COLOUR OF URINE:

<table>
<thead>
<tr>
<th>COLOUR OF URINE</th>
<th>DAY 1</th>
<th></th>
<th>DAY 2</th>
<th></th>
<th>DAY 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
</tr>
<tr>
<td>PALE YELLOW</td>
<td>20</td>
<td>50%</td>
<td>20</td>
<td>50%</td>
<td>20</td>
<td>50%</td>
</tr>
<tr>
<td>DARK YELLOW</td>
<td>12</td>
<td>30%</td>
<td>12</td>
<td>30%</td>
<td>12</td>
<td>30%</td>
</tr>
<tr>
<td>COLOURLESS</td>
<td>8</td>
<td>7.5%</td>
<td>8</td>
<td>20%</td>
<td>8</td>
<td>20%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>40</td>
<td>100%</td>
<td>40</td>
<td>100%</td>
<td>40</td>
<td>100%</td>
</tr>
</tbody>
</table>

Observation:

**FIRST DAY:**

Among 40 cases, the colours of the urine were 50% Pale yellow urine, 30% Dark yellow colour urine and 20% colourless urine.
SECOND DAY:

Among 40 cases, the colours of the urine were 50% Pale yellow urine, 30% Dark yellow colour urine and 20% colourless urine.

THIRD DAY:

Among 40 cases, the colours of the urine were 50% Pale yellow urine, 30% Dark yellow colour urine and 20% colourless urine.

Inference:

In many of the cases, the colour of the urine was observed as pale yellow colour.
7.A.6. ODOR OF URINE:

<table>
<thead>
<tr>
<th>ODOUR</th>
<th>DAY 1</th>
<th></th>
<th>DAY 2</th>
<th></th>
<th>DAY 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
</tr>
<tr>
<td>AMMONICAL</td>
<td>13</td>
<td>32.5%</td>
<td>12</td>
<td>30%</td>
<td>13</td>
<td>32.5%</td>
</tr>
<tr>
<td>AROMATIC</td>
<td>25</td>
<td>62.5%</td>
<td>26</td>
<td>65%</td>
<td>25</td>
<td>62.5%</td>
</tr>
<tr>
<td>PUTRID</td>
<td>2</td>
<td>5%</td>
<td>2</td>
<td>5%</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>40</td>
<td>100%</td>
<td>40</td>
<td>100%</td>
<td>40</td>
<td>100%</td>
</tr>
</tbody>
</table>

![Bar chart showing percentages for ammonical, aromatic, and putrid odours over three days.]
Observation:

Day 1:
Among 40 cases, 62.5% of cases had Aromatic odour, 32.5% of cases had Ammonical odour in urine, and remaining 5% had Putrid Odour.

Day 2:
Among 40 cases, 65% of cases had Aromatic odour, 30% of cases had Ammonical odour in urine, and remaining 5% had Putrid Odour.

Day 3:
Among 40 cases, 62.5% of cases had Aromatic odour, 32.5% of cases had Ammonical odour in urine, and remaining 5% had Putrid Odour.

Inference:
In many of the cases, the odour of the urine observed were aromatic odour in three days. The odour obtained was normal.
7.A.7. SPECIFIC GRAVITY:

<table>
<thead>
<tr>
<th></th>
<th>DAY 1</th>
<th></th>
<th>DAY 2</th>
<th></th>
<th>DAY 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
</tr>
<tr>
<td>1.001-1.010</td>
<td>5</td>
<td>12.5%</td>
<td>5</td>
<td>12.5%</td>
<td>5</td>
<td>12.5%</td>
</tr>
<tr>
<td>1.011-1.015</td>
<td>9</td>
<td>22.5%</td>
<td>8</td>
<td>20%</td>
<td>9</td>
<td>22.5%</td>
</tr>
<tr>
<td>1.016-1.020</td>
<td>20</td>
<td>50%</td>
<td>20</td>
<td>50%</td>
<td>20</td>
<td>50%</td>
</tr>
<tr>
<td>1.021-1.030</td>
<td>6</td>
<td>15%</td>
<td>7</td>
<td>17.5%</td>
<td>6</td>
<td>15%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>40</td>
<td>100%</td>
<td>40</td>
<td>100%</td>
<td>40</td>
<td>100%</td>
</tr>
</tbody>
</table>

Observation:

Day 1

Among 40 cases, 12.5% of cases had specific gravity between 1.001-1.010, 22.5% of cases had specific gravity between 1.011-1.015, 50% of cases had specific gravity between 1.016-1.020 and 15% of cases had specific gravity between 1.021-1.030.
Day 2

Among 40 cases, 12.5% of cases had specific gravity between 1.001-1.010, 20% of cases had specific gravity between 1.011-1.015, 50% of cases had specific gravity between 1.016-1.020 and 17.5% of cases had specific gravity between 1.021-1.030.

Day 3

Among 40 cases, 12.5% of cases had specific gravity between 1.001-1.010, 22.5% of cases had specific gravity between 1.011-1.015, 50% of cases had specific gravity between 1.016-1.020 and 15% of cases had specific gravity.

Inference:

In many of the cases, the specific gravity of the urine observed was 1.016 – 1.020 in three days. The result obtained was normal.
7.A.8. FROTH:

<table>
<thead>
<tr>
<th>FROTH</th>
<th>DAY 1</th>
<th></th>
<th>DAY 2</th>
<th></th>
<th>DAY 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
</tr>
<tr>
<td>CLEAR</td>
<td>35</td>
<td>87.5%</td>
<td>35</td>
<td>87.5%</td>
<td>35</td>
<td>87.5%</td>
</tr>
<tr>
<td>FROTH</td>
<td>5</td>
<td>12.5%</td>
<td>5</td>
<td>12.5%</td>
<td>5</td>
<td>12.5%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>40</td>
<td>100%</td>
<td>40</td>
<td>100%</td>
<td>40</td>
<td>100%</td>
</tr>
</tbody>
</table>

Observation:

**DAY 1**

Among 40 cases the froth of the urine is absent in 87.5% and remaining 12.5% of urine had froth.

**DAY 2**

Among 40 cases the froth of the urine is absent in 87.5% and remaining 12.5% of urine had froth.

**DAY 3**

Among 40 cases the froth of the urine is absent in 87.5% and remaining 12.5% of urine had froth.

Inference:

In most of the cases, the froth is absent in the urine. The result obtained was normal.
7.A.9. VOLUME OF URINE:

<table>
<thead>
<tr>
<th>VOLUME OF URINE</th>
<th>DAY 1</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
</tr>
<tr>
<td>500ML-1000ML</td>
<td>1</td>
<td>2.5%</td>
<td>1</td>
<td>2.5%</td>
<td>1</td>
</tr>
<tr>
<td>1100ML-1500ML</td>
<td>39</td>
<td>97.5%</td>
<td>39</td>
<td>97.5%</td>
<td>39</td>
</tr>
<tr>
<td>1600ML-2000ML</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>40</td>
<td>100%</td>
<td>40</td>
<td>100%</td>
<td>40</td>
</tr>
</tbody>
</table>

Observation:

Day 1:

Among 40 cases 97.5% of cases passed 1100ml -1500ml per day and remaining 5% of cases passed 500ml- 1000ml per day.
Day 2:
Among 40 cases 97.5% of cases passed 1100ml - 1500ml per day and remaining 5% of cases passed 500ml - 1000ml per day

Day 3:
Among 40 cases 97.5% of cases passed 1100ml - 1500ml per day and remaining 5% of cases passed 500ml - 1000ml per day

Inference:
In most of the cases, the volume of the urine passed per day was 1100ml - 1500ml. The result which is obtained was normal.

7.A.10. DIFFERENT RANGE OF pH:

<table>
<thead>
<tr>
<th>pH</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-6</td>
<td>37</td>
<td>92.5%</td>
</tr>
<tr>
<td>6.1-7</td>
<td>3</td>
<td>7.5%</td>
</tr>
<tr>
<td>Above 7</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
</tr>
</tbody>
</table>
Observation:
Among 40 cases, 92.5% of cases had $P^H$ between 5.1 and 6, 7.5% of cases had $P^H$ between 6.1 and 7, and none had $P^H$ above 7.

Inference:
In most of the cases, the $P^H$ value of the urine observed were between 5.1 – 6. The results obtained were normal.

### 7.A.11. DIFFERENT PATTERNS OF NEIKKURI: FIRST DAY

<table>
<thead>
<tr>
<th>NEIKKURI PICTURE</th>
<th>1 MINUTE</th>
<th>3 MINUTES</th>
<th>7 MINUTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NUMBER</td>
<td>PERCENTAGE</td>
<td>NUMBER</td>
</tr>
<tr>
<td>COIN</td>
<td>25</td>
<td>62.5%</td>
<td>16</td>
</tr>
<tr>
<td>PEARL</td>
<td>16</td>
<td>40%</td>
<td>16</td>
</tr>
<tr>
<td>CIRCULAR</td>
<td>1</td>
<td>2.5%</td>
<td>2</td>
</tr>
<tr>
<td>DISC</td>
<td>7</td>
<td>17.5%</td>
<td>6</td>
</tr>
<tr>
<td>OVAL</td>
<td>1</td>
<td>2.5%</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
<td>40</td>
</tr>
</tbody>
</table>
Observation:

Among the shapes of the Neikkuri observed in 40 cases, in one minute, 62.5% of cases had coin shape, 40 % of cases had pearl shape, 2.5% of cases had circular shape, 17.5% of cases had disc shape, 2.5% of cases had oval shape.

In three minutes, 40% of cases had coin shape, 40 % of cases had pearl shape, 2% of cases had circular shape, 6% of cases had disc shape.

In seven minutes, 37.5% of cases had coin shape, 35% of cases had pearl shape, 7.5% of cases had circular shape, 17.5% of cases had disc shape, 2.5% of cases had oval shape.

Inference:

In most of the cases, the shape of the Neikkuri observed in one minute, three minutes and seven minutes were of coin and pearl shapes.
7.A.12 DIFFERENT PATTERNS OF NEIKKURI: SECOND DAY

<table>
<thead>
<tr>
<th>NEIKKURI PICTURE</th>
<th>1 MINUTE</th>
<th></th>
<th>3 MINUTES</th>
<th></th>
<th>7 MINUTES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NUMBER</td>
<td>PERCENTAGE</td>
<td>NUMBER</td>
<td>PERCENTAGE</td>
<td>NUMBER</td>
<td>PERCENTAGE</td>
</tr>
<tr>
<td>COIN</td>
<td>16</td>
<td>40%</td>
<td>15</td>
<td>37.5%</td>
<td>14</td>
<td>35%</td>
</tr>
<tr>
<td>PEARL</td>
<td>9</td>
<td>22.5%</td>
<td>8</td>
<td>20%</td>
<td>8</td>
<td>20%</td>
</tr>
<tr>
<td>DISC</td>
<td>3</td>
<td>7.5%</td>
<td>4</td>
<td>10%</td>
<td>5</td>
<td>12.5%</td>
</tr>
<tr>
<td>CIRCULAR</td>
<td>10</td>
<td>25%</td>
<td>11</td>
<td>27.5%</td>
<td>11</td>
<td>27.5%</td>
</tr>
<tr>
<td>OVAL</td>
<td>2</td>
<td>5%</td>
<td>2</td>
<td>5%</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>40</td>
<td>100%</td>
<td>40</td>
<td>100%</td>
<td>40</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Observation:**

Among the shapes of the Neikkuri observed in 40 cases, in one minute, 40% of cases had coin shape, 22.5% of cases had pearl shape, 7.5% of cases had disc shapes, 25% of cases had circular shape, 5% of cases had oval shape.

In three minutes, 37.5% of cases had coin shape, 20% of cases had pearl shape, 10% of cases had circular shape, 27.5% of cases had disc shape, 5% of cases had oval shape.

In seven minutes, 35% of cases had coin shape, 20% of cases had coin and disc shape, 12.5% of cases had disc shape, 27.5% of cases had circular shape, 5% of cases had oval shape.
Inference:
In most of the cases, the shape of the Neikkuri observed in one minute, three minutes and seven minutes were of coin and circular shapes.

7.A.13.DIFFERENT PATTERNS OF NEIKKURI: THIRD DAY

<table>
<thead>
<tr>
<th>NEIKKURI PICTURE</th>
<th>1 MINUTE</th>
<th>3 MINUTES</th>
<th>7 MINUTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NUMBER</td>
<td>PERCENTAGE</td>
<td>NUMBER</td>
</tr>
<tr>
<td>COIN</td>
<td>15</td>
<td>37.5%</td>
<td>15</td>
</tr>
<tr>
<td>PEARL</td>
<td>12</td>
<td>30%</td>
<td>12</td>
</tr>
<tr>
<td>CIRCULAR</td>
<td>3</td>
<td>7.5%</td>
<td>3</td>
</tr>
<tr>
<td>DISC</td>
<td>7</td>
<td>17.5%</td>
<td>7</td>
</tr>
<tr>
<td>KIDNEY</td>
<td>1</td>
<td>2.5%</td>
<td>1</td>
</tr>
<tr>
<td>OVAL</td>
<td>2</td>
<td>5%</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>100%</strong></td>
<td><strong>40</strong></td>
</tr>
</tbody>
</table>

Observation:
Among the shapes of the Neikkuri observed in 40 cases, in one minute, 37.5% of cases had coin shape, 30% of cases had pearl shape, 7.5% of cases had circular shape, 17.5% of cases had disc, 2.5% of cases had kidney shape, 5% of cases had oval shape.
In three minutes, 37.5% of cases had coin shape, 30% of cases had pearl shape, 7.5% of cases had circular shape, 17.5% of cases had disc, 2.5% of cases had kidney shape, 5% of cases had oval shape.

In seven minutes, 37.5% of cases had coin shape, 30% of cases had pearl shape, 7.5% of cases had circular shape, 17.5% of cases had disc, 2.5% of cases had kidney shape, 5% of cases had oval shape.

Inference:

In most of the cases, the shape of the Neikkuri observed in one minute, three minutes and seven minutes were of coin and pearl shapes.

7.A.14. DISSEMINATION DYNAMICS OF OIL DROP:

| SPREADING | FIRST DAY | | SECOND DAY | | THIRD DAY | |
|-----------|-----------|-----------|-----------|-----------|-----------|
|           | NO OF CASES | PERCENTAGE | NO OF CASES | PERCENTAGE | NO OF CASES | PERCENTAGE |
| SLOW      | 39         | 97.5%      | 39         | 97.5%      | 39         | 97.5%      |
| FAST      | 1          | 2.5%       | 1          | 2.5%       | 1          | 2.5%       |
| TOTAL     | 40         | 100%       | 40         | 100%       | 40         | 100%       |
Observation:
Among 40 cases, the spreading nature of the urine in the first day, 97.5% had slow spreading and 2.5% had fast spreading. In the second day, 97.5% had slow spreading, and 2.5% had fast spreading. In the third day, 97.5% had slow spreading, and 2.5% had fast spreading.

Inference:
In most of the cases the dissemination dynamics of oil drop observed were slowly spreading. It indicates good prognosis.
7.A.15. PEAK EXPIRATORY FLOW RATE:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>PEFR (L/min)</th>
<th>No of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>0 - 50</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2.</td>
<td>51 - 100</td>
<td>3</td>
<td>7.5%</td>
</tr>
<tr>
<td>3.</td>
<td>101 - 150</td>
<td>13</td>
<td>32.5%</td>
</tr>
<tr>
<td>4.</td>
<td>151 – 240</td>
<td>7</td>
<td>17.5%</td>
</tr>
<tr>
<td>5.</td>
<td>241 - 300</td>
<td>17</td>
<td>42.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>40</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Observation:

Among 40 cases, the peak expiratory flow rate of 42.5% of cases are 201-250L/minute, 32.5% of cases had 101-150 L/minute, 17.5% of the cases had 151-200 and 7.5% of cases had 51-100 L/minute.

Inference

The peak expiratory flow rate of majority of diseased cases (42.5%) in the study had 201-250L/minute.
7.A.16. REFERENCE PEAK EXPIRATORY FLOW RATE:

Reference value as per EU Scale

For Male : 450 L/min
For Female : 400 L/min

PEFR observed in healthy volunteers for female : 300L/min*
PEFR observed in healthy volunteers for male : 350L/min*

*The above values are the average PEFR values observed in healthy volunteers.

Female:

<table>
<thead>
<tr>
<th>S .No</th>
<th>Zones of BA</th>
<th>Reference PEFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Green</td>
<td>240 – 300 L/min</td>
</tr>
<tr>
<td>2.</td>
<td>Yellow</td>
<td>150 – 240 L/min</td>
</tr>
<tr>
<td>3.</td>
<td>Red</td>
<td>Below 150 L/min</td>
</tr>
</tbody>
</table>

Male:

<table>
<thead>
<tr>
<th>S .No</th>
<th>Zones of BA</th>
<th>Reference PEFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Green</td>
<td>280 – 350 L/min</td>
</tr>
<tr>
<td>2.</td>
<td>Yellow</td>
<td>175 – 20 L/min</td>
</tr>
<tr>
<td>3.</td>
<td>Red</td>
<td>Below 175 L/min</td>
</tr>
</tbody>
</table>
7.A.17. PEAK EXPIRATORY FLOW RATES FOR FEMALE CASES:

<table>
<thead>
<tr>
<th>S.No</th>
<th>PEFR (L/min)</th>
<th>No of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>51-100</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>2.</td>
<td>101-150</td>
<td>7</td>
<td>30.5%</td>
</tr>
<tr>
<td>3.</td>
<td>151-240</td>
<td>3</td>
<td>13.5%</td>
</tr>
<tr>
<td>4.</td>
<td>241-300</td>
<td>12</td>
<td>52.5%</td>
</tr>
<tr>
<td>5.</td>
<td>Total</td>
<td>23</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Observation:**
Among 23 cases, the Peak expiratory flow rate is between 201-250 for 52.5% of cases, 101-150 for 30.5%, 151-200 for 13.5%, 51-100 for 4% of cases.

**Inference:**
In many of the cases (52.5%), the Peak expiratory flow rate is 201-250 L/minute
7.A.18. ZONE OF BRONCHIAL ASTHMA FOR FEMALE CASES:

Observation:
Among 23 cases, the zone of BA was green for 52.2% of cases, red for 34.8%, and yellow for 13% of cases.

Inference:
In most of the cases (52.2%), the zone of BA was green.
7.A.19. PEAK EXPIRATORY FLOW RATES FOR MALE CASES:

<table>
<thead>
<tr>
<th>S.No</th>
<th>PEFR (L/min)</th>
<th>No of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>51-100</td>
<td>2</td>
<td>11.5%</td>
</tr>
<tr>
<td>2.</td>
<td>101-150</td>
<td>6</td>
<td>35.5%</td>
</tr>
<tr>
<td>3.</td>
<td>151-175</td>
<td>4</td>
<td>23.5%</td>
</tr>
<tr>
<td>4.</td>
<td>176-250</td>
<td>5</td>
<td>29.5%</td>
</tr>
<tr>
<td>5.</td>
<td>Total</td>
<td>17</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Obervation:**
Among 17 cases, the PEFR is between 201-250 for 29.5% of cases, 101-150 for 35.5%, 151-200 for 23.5%, 51-100 for 12% of cases.

**Inference:**
In most of the cases (35.5%), the PEFR is 101-150 L/minute.
7.A.20. ZONE OF BRONCHIAL ASTHMA FOR MALE CASES:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Zones of BA</th>
<th>No of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Green</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2.</td>
<td>Red</td>
<td>12</td>
<td>70.5%</td>
</tr>
<tr>
<td>3.</td>
<td>Yellow</td>
<td>5</td>
<td>29.5%</td>
</tr>
<tr>
<td>4.</td>
<td>Total</td>
<td>17</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Observation:**
Among 17 cases, the zone of BA was red for 70.5% of cases and yellow for 29.5% of cases.

**Inference:**
In most of the cases (52.2%), the zone of BA was green.
### 7.A.21. NEIKURI IN FEMALE CASES:

<table>
<thead>
<tr>
<th>Neikuri</th>
<th>Green</th>
<th>Yellow</th>
<th>Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coin</td>
<td>77.8%</td>
<td>11.1%</td>
<td>0%</td>
</tr>
<tr>
<td>Circular</td>
<td>3.7%</td>
<td>55.6%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Pearl</td>
<td>7.4%</td>
<td>0%</td>
<td>75.0%</td>
</tr>
<tr>
<td>Disc</td>
<td>11.1%</td>
<td>33.3%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Oval</td>
<td>0%</td>
<td>0%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Kidney</td>
<td>0%</td>
<td>0%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

![Graph showing distribution of Neikuri in female cases]
**Observation:**

The following are the neikuri pattern results observed among 23 female cases.

In cases with green zone of BA, 77.8% of cases showed Coin shape, 3.7% showed Circular shape, 7.4% showed Pearl and 11.1% of cases showed disc shape.

In cases with Yellow zone of BA, 11.1% of cases showed Coin shape, 55.6% showed Circular shape and 33.3% showed disc shape.

In cases with red zone of BA, 8.3% of cases showed Disc shape, 8.3% showed Circular shape and 75% showed Pearl, 4.2% showed oval shape and 4.4% kidney shape.

**Inference:**

In most of the cases with green zone of BA, neikuri observed was Coin shape.

In most of the cases with yellow zone of BA, neikuri observed was Circular shape.

In most of the cases with red zone of BA, neikuri observed was Pearl shape.
### 7.A.22. NEIKKURI IN MALE CASES:

<table>
<thead>
<tr>
<th>Neikuri</th>
<th>Green</th>
<th>Yellow</th>
<th>Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coin</td>
<td>0%</td>
<td>0%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Circular</td>
<td>0%</td>
<td>84.5%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Pearl</td>
<td>0%</td>
<td>2.2%</td>
<td>57.4%</td>
</tr>
<tr>
<td>Disc</td>
<td>0%</td>
<td>13.3%</td>
<td>12.1%</td>
</tr>
<tr>
<td>Oval</td>
<td>0%</td>
<td>0%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Kidney</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Observation:

The following are the neikuri pattern results observed among 17 male cases.

No case was found with green zone of BA.

In cases with yellow zone of BA, 84.5% showed Circular shape, 2.2% showed Pearl and 13.3% of cases showed disc shape.

In cases with red zone of BA, 57.4% showed Pearl shape, 12.1% showed Disc shape and 11.1% of cases showed coin shape, 11.1% showed oval shape and 8.3% showed circular shape.

Inference:

In most of the cases with yellow zone of BA, neikuri observed was Circular shape.

In most of the cases with red zone of BA, neikuri observed was Pearl shape.
OBSERVATION AND RESULTS - HEALTHY VOLUNTEERS...

neerkkuri neikkuri

- Manthaara Kaasam
7.B. HEALTHY VOLUNTEERS

7.B.1. COLOUR OF URINE:

<table>
<thead>
<tr>
<th>COLOUR</th>
<th>NO OF CASES</th>
<th>PERCENTAGE</th>
<th>NO OF CASES</th>
<th>PERCENTAGE</th>
<th>NO OF CASES</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PALE YELLOW</td>
<td>9</td>
<td>90%</td>
<td>10</td>
<td>100%</td>
<td>9</td>
<td>90%</td>
</tr>
<tr>
<td>DARK YELLOW</td>
<td>1</td>
<td>10%</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>10%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>100%</td>
<td>10</td>
<td>100%</td>
<td>10</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Observation:**

Among 10 cases, the colour of the urine had 90% pale yellow colour, 10% of cases had dark yellow colour in first day and third day. 100% of cases had pale yellow colour.

**Inference:**

In most of the cases, the colour of the urine observed were pale yellow colour.
### 7.B.2. ODOUR OF URINE:

| ODOUR     | DAY 1 |      |              |              |              |              |              |
|-----------|-------|------|--------------|--------------|--------------|--------------|
|           | NO OF CASES | PERCENTAGE | NO OF CASES | PERCENTAGE | NO OF CASES | PERCENTAGE |
| Aromatic  | 10    | 100% | 10           | 100%        | 10           | 100%        |
| Ammonical | 0     | 0%   | 0            | 0%          | 0            | 0%          |
| Total     | 10    | 100% | 10           | 100%        | 10           | 100%        |

**Observation:**

Among 10 cases, the odour of the urine 100% had aromatic odour in three days.

**Inference:**

In all of the cases, the odour of the urine observed were of aromatic odour. The odour obtained were normal.
7.B.3. SPECIFIC GRAVITY:

<table>
<thead>
<tr>
<th>SPECIFIC GRAVITY</th>
<th>DAY 1</th>
<th></th>
<th>DAY 2</th>
<th></th>
<th>DAY 3</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.003-1.010</td>
<td>2</td>
<td>20%</td>
<td>1</td>
<td>10%</td>
<td>1</td>
<td>10%</td>
<td></td>
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</tr>
<tr>
<td>1.011-1.015</td>
<td>3</td>
<td>30%</td>
<td>4</td>
<td>40%</td>
<td>5</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.016-1.020</td>
<td>4</td>
<td>40%</td>
<td>4</td>
<td>40%</td>
<td>2</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.021-1.025</td>
<td>1</td>
<td>10%</td>
<td>1</td>
<td>10%</td>
<td>2</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>100%</td>
<td>10</td>
<td>100%</td>
<td>10</td>
<td>100%</td>
<td></td>
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</tr>
</tbody>
</table>

**Observation:**

Among 10 cases, the Specific gravity of the urine in the first day, 20% had Specific gravity between 1.003-1.010, 30% had Specific gravity between 1.011-1.015, 40% had Specific gravity between 1.015-1.020 and 10% had Specific gravity between 1.021-1.025.

Among 10 cases, the Specific gravity of the urine in the first day, 10% had Specific gravity between 1.003-1.010, 40% had Specific gravity between 1.011-1.015, 40% had Specific gravity between 1.015-1.020 and 10% had Specific gravity between 1.021-1.025.

Among 10 cases, the Specific gravity of the urine in the first day, 10% had Specific gravity between 1.003-1.010, 50% had Specific gravity between 1.011-1.015, 20% had Specific gravity between 1.015-1.020 and 20% had Specific gravity between 1.021-1.025.
Inference:
In most of the cases, the Specific gravity of the urine observed were of 1.010–1.020. The result obtained were normal.

7.B.4.FROTH:

<table>
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<th>FROTH</th>
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<th>DAY 3</th>
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<tr>
<td></td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
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<tr>
<td>ABSENT</td>
<td>10</td>
<td>100%</td>
<td>10</td>
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<tr>
<td>PRESENT</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>100%</td>
<td>10</td>
</tr>
</tbody>
</table>

Observation:
Among 10 cases the froth of the urine is absent in 100% in three days.

Inference:
In most of the cases, the froth is absent in the urine. The result which is Obtained were normal.
7.B.5. VOLUME OF URINE:

<table>
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<th>VOLUME OF URINE</th>
<th>DAY 1</th>
<th></th>
<th>DAY 2</th>
<th></th>
<th>DAY 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
</tr>
<tr>
<td>500ml-1 lit</td>
<td>1</td>
<td>10%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>1.1-1.5lit</td>
<td>9</td>
<td>90%</td>
<td>10</td>
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<tr>
<td>1.6-2lit</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>100%</td>
<td>10</td>
<td>100%</td>
<td>10</td>
<td>100%</td>
</tr>
</tbody>
</table>

Observation:
Among 10 cases 90% of cases passed 1.1-1.5 lit per day, 10% of cases passed 500ml-1 lit in first day. 100% of cases passed 1.1-1.5 lit in the second and third day.

Inference:
In all of the cases, the volumes of the urine passed per day were 1.1-1.5litres.
7.B.6. PH VALUE:

<table>
<thead>
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<th>PH</th>
<th>NO OF CASES</th>
<th>PERCENTAGE</th>
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<td>BELOW 6</td>
<td>9</td>
<td>90%</td>
</tr>
<tr>
<td>6.1-7</td>
<td>1</td>
<td>10%</td>
</tr>
<tr>
<td>Above 7</td>
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</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Observation:**
Among 10 cases, 90% of cases had PH below 6, 10% of cases had pH between 6.1-7.

**Inference:**
In most of the cases, the PH of the urine observed were of below 6. The result which obtained were normal.
7.B.7.DIFFERENT PATTERNS OBSERVED IN NEIKKURI: DAY 1

<table>
<thead>
<tr>
<th>DAY 1</th>
<th>1 MINUTE</th>
<th>3 MINUTE</th>
<th>7 MINUTE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
</tr>
<tr>
<td>COIN</td>
<td>10</td>
<td>100%</td>
<td>9</td>
</tr>
<tr>
<td>CIRCULAR</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>EGG</td>
<td>0</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>100%</td>
<td>10</td>
</tr>
</tbody>
</table>

Observation:
Among 10 cases, the shape of the Neikkuri in first minute, 100% of cases had coin shape. In three minutes, 90% of cases had coin shape, 10% of cases had egg shape. In seven minutes, 70% of cases had coin shape, 30% of cases had circular shape.

Inference:
In most of the cases, the shape of the Neikkuri observed in first minute, three minutes and seven minutes were of coin and circular shapes.
7.B.8. DIFFERENT PATTERNS OBSERVED IN NEIKKURI: DAY 2

<table>
<thead>
<tr>
<th>DAY 2</th>
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<th>3 MINUTE</th>
<th>7 MINUTE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO OF CASES</td>
<td>PERCENTAGE</td>
<td>NO OF CASES</td>
</tr>
<tr>
<td>COIN</td>
<td>10</td>
<td>100%</td>
<td>7</td>
</tr>
<tr>
<td>CIRCULAR</td>
<td>0</td>
<td>0%</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>100%</td>
<td>10</td>
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</tbody>
</table>

**Observation:**

Among 10 cases, the shape of the Neikkuri in first minute, 100% of cases had coin shape. In three minutes, 70% of cases had coin shape, 30% of cases had circular shape. In seven minutes, 40% of cases had coin shape, 60% of cases had circular shape.

**Inference:**

In most of the cases, the shape of the Neikkuri observed in first minute, three minutes and seven minutes were of coin and circular shapes.
7.B.9. DIFFERENT PATTERNS OBSERVED IN NEIKKURI: DAY 3

<table>
<thead>
<tr>
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<th>1 MINUTE</th>
<th></th>
<th>3 MINUTE</th>
<th></th>
<th>7 MINUTE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO OF</td>
<td>PERCENTAGE</td>
<td>NO OF</td>
<td>PERCENTAGE</td>
<td>NO OF</td>
<td>PERCENTAGE</td>
</tr>
<tr>
<td></td>
<td>CASES</td>
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<td>CASES</td>
<td></td>
<td>CASES</td>
<td></td>
</tr>
<tr>
<td>COIN</td>
<td>9</td>
<td>90%</td>
<td>8</td>
<td>80%</td>
<td>4</td>
<td>40%</td>
</tr>
<tr>
<td>CIRCULAR</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>20%</td>
</tr>
<tr>
<td>JASMINE BUD</td>
<td>1</td>
<td>10%</td>
<td>1</td>
<td>10%</td>
<td>1</td>
<td>10%</td>
</tr>
<tr>
<td>EGG</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>10%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>LUTE</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>10%</td>
</tr>
<tr>
<td>RING</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>20%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>100%</td>
<td>10</td>
<td>100%</td>
<td>10</td>
<td>100%</td>
</tr>
</tbody>
</table>

Observation:
Among 10 cases, the shape of the Neikkuri in first minute, 90% of cases had coin shape and 10% of cases had jasmine bud shape. In three minutes, 80% of cases had coin shape, 10% of cases had jasmine bud and egg shape. In seven minutes, 40% of cases had coin shape, 20% of cases had circular, ring shape, 10% of cases had jasmine bud, lute shape.

Inference:
In most of the cases, the shape of the Neikkuri observed in first minute, three minutes and seven minutes were of coin and circular shapes.
<table>
<thead>
<tr>
<th>S.NO</th>
<th>IP NO</th>
<th>AGE /SEX</th>
<th>HB</th>
<th>TRBC</th>
<th>TC</th>
<th>DC</th>
<th>PLT</th>
<th>ESR</th>
<th>SPECIAL INVESTIGATION</th>
<th>MOTION</th>
</tr>
</thead>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>4036</td>
<td>35/F</td>
<td>11.4</td>
<td>4.1</td>
<td>7100</td>
<td>68</td>
<td>30</td>
<td>3</td>
<td>3.3</td>
<td>2 6</td>
</tr>
<tr>
<td>2</td>
<td>4038</td>
<td>42/F</td>
<td>13.7</td>
<td>4.5</td>
<td>9,400</td>
<td>62</td>
<td>35</td>
<td>3</td>
<td>2.3</td>
<td>6 14</td>
</tr>
<tr>
<td>3</td>
<td>4040</td>
<td>45/F</td>
<td>14.1</td>
<td>4.8</td>
<td>9,600</td>
<td>40</td>
<td>43</td>
<td>17</td>
<td>2.5</td>
<td>2 6</td>
</tr>
<tr>
<td>4</td>
<td>5026</td>
<td>60/M</td>
<td>15.8</td>
<td>4.1</td>
<td>4,600</td>
<td>61</td>
<td>36</td>
<td>3</td>
<td>3.5</td>
<td>4 8</td>
</tr>
<tr>
<td>5</td>
<td>5027</td>
<td>56/M</td>
<td>14.1</td>
<td>4</td>
<td>9800</td>
<td>67</td>
<td>30</td>
<td>3</td>
<td>5.7</td>
<td>38 126</td>
</tr>
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<td>4014</td>
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<td>19.7</td>
<td>6.5</td>
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<td>50</td>
<td>41</td>
<td>9</td>
<td>2.2</td>
<td>2 4</td>
</tr>
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<td>22/F</td>
<td>9.4</td>
<td>4.7</td>
<td>5,900</td>
<td>60</td>
<td>36</td>
<td>3</td>
<td>2.5</td>
<td>32 68</td>
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<td>C89774</td>
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<td>3.6</td>
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<td>73</td>
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<td>5</td>
<td>3.6</td>
<td>42 94</td>
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<td>5.9</td>
<td>6,500</td>
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<td>6</td>
<td>2</td>
<td>4 8</td>
</tr>
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<td>1</td>
<td>2.4</td>
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<td>12.5</td>
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<td>4.4</td>
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<td>7</td>
<td>2.3</td>
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<td>7</td>
<td>2.6</td>
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<td>2.7</td>
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<td>3.7</td>
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<td>4.6</td>
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<td>58</td>
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<td>12</td>
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<td>10</td>
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<td>27/M</td>
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<td>3.6</td>
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<td>3.9</td>
<td>8000</td>
<td>43</td>
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<td>8</td>
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<td>11.9</td>
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<td>4</td>
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<td>38/F</td>
<td>11.9</td>
<td>4.4</td>
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<td>70</td>
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<td>5</td>
<td>2.6</td>
<td>20</td>
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<td>48/M</td>
<td>16.3</td>
<td>5</td>
<td>5400</td>
<td>60</td>
<td>32</td>
<td>8</td>
<td>1.9</td>
<td>4</td>
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**TABLE SHOWS MANTHAARA KAASAM PATIENTS - LAB INVESTIGATIONS**

- **SGO**: Serum Glucose Oxidase
- **SGPT**: Serum Glutamic Pyruvic Transaminase
- **ALP**: Alkaline Phosphatase
- **TOTAL**: Total Protein
- **ALBUMIN**: Albumin
- **GLOBIN**: Globin
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TABLE SHOWS MANTHAARA KAASAM PATIENTS -LAB INVESTIGATIONS

**S.No:** Sequential number of the patient.
**IP No:** Individual patient number.
**Age/sex:** Age and sex of the patient.
**SUGAR:** Blood sugar level.
**CHOLESTEROL:** Cholesterol level.
**URIC ACID:** Uric acid level.
**UREA:** Urea level.
**CREATININE:** Creatinine level.
**SGOT:** Serum glutamic oxaloacetic transaminase.
**SGPT:** Serum glutamic pyruvic transaminase.
**ALP:** Alkaline phosphatase.
**PROTEIN:** Total protein level.
**TOTAL ALBUMIN:** Total albumin level.
**GLOBIN:** Globin level.
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TABLE SHOWS ANALYSIS OF HEALTHY VOLUNTEERS LAB INVESTIGATIONS

- **S.NO**: Sequence number
- **OP/IP NO**: Operative/Identifying number
- **AGE/SEX**: Age and sex of the volunteer
- **PH**: pH level
- **SPECIFIC GRAVITY**: Specific gravity
- **ALBUMIN**: Albumin level
- **SUGAR**: Sugar level
- **ACETONE**: Acetone level
- **BILE SALT**: Bile salt level
- **BILE PIGMENT**: Bile pigment level
- **UROBILI NOGEN**: Urobilinogen level
- **OCCULT BLOOD**: Occult blood level
- **DEPOSITS**: Deposits
  - **PUS**: Presence of pus
  - **EPI**: Presence of epithelial cells
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NEIKKURI PICTURES...

neerkkuri neikkuri

- Manthaara Kaasam
MANTHAARA KAASAM
PATIENTS...

neerkkuri netkkuri

- Manthaara Kaasam
1. IPD NO: 4036/Mrs. M. Jothi

**DAY 1:**
- 1 minute
- Shape: Pearl

**DAY 2:**
- 1 minute
- Shape: Coin

**DAY 1:**
- 3 minutes
- Shape: Pearl

**DAY 2:**
- 3 minutes
- Shape: Coin

**DAY 1:**
- 7 minutes
- Shape: Circular

**DAY 2:**
- 7 minutes
- Shape: Coin
2. IPD NO: 4068/Mrs. A. Eswari

DAY 3: 1 minute
Shape: Pearl

DAY 1: 1 minute
Shape: Pearl

DAY 3: 3 minutes
Shape: Pearl

DAY 1: 3 minutes
Shape: Pearl

DAY 3: 7 minutes
Shape: Pearl

DAY 1: 7 minutes
Shape: Pearl
DAY 2 : 1 minute
Shape : Pearl

DAY 3 : 1 minute
Shape : Pearl

DAY 2 : 3 minutes
Shape : Pearl

DAY 3 : 3 minutes
Shape : Pearl

DAY 2 : 7 minutes
Shape : Pearl

DAY 3 : 7 minutes
Shape : Pearl
3. IPD NO : 4040/Mrs. A. J. Roselet

DAY 1 : 1 minute
Shape : Pearl

DAY 2 : 1 minute
Shape : Pearl

DAY 1 : 3 minutes
Shape : Pearl

DAY 2 : 3 minutes
Shape : Pearl

DAY 1 : 7 minutes
Shape : Pearl

DAY 2 : 7 minutes
Shape : Pearl
4. IPD NO: 5026/Mr.M.Veerappan

DAY 3: 1 minute
Shape: Pearl

DAY 1: 1 minute
Shape: Pearl

DAY 3: 3 minutes
Shape: Pearl

DAY 1: 3 minutes
Shape: Pearl

DAY 3: 7 minutes
Shape: Pearl

DAY 1: 7 minutes
Shape: Pearl
DAY 2 : 1 minute
Shape : Disc

DAY 3 : 1 minute
Shape : Pearl

DAY 2 : 3 minutes
Shape : Disc

DAY 3 : 3 minutes
Shape : Pearl

DAY 2 : 7 minutes
Shape : Disc

DAY 3 : 7 minutes
Shape : Pearl
5. IPD NO: 5027/Mr. N. Megan

DAY 1: 1 minute
Shape: Pearl

DAY 2: 1 minute
Shape: Pearl

DAY 1: 3 minutes
Shape: Pearl

DAY 2: 3 minutes
Shape: Pearl

DAY 1: 7 minutes
Shape: Pearl

DAY 2: 7 minutes
Shape: Pearl
6.OPD NO: Mr.P.Eganathan

DAY 3: 1 minute
Shape: Pearl

DAY 1: 1 minute
Shape: Pearl

DAY 3: 3 minutes
Shape: Pearl

DAY 1: 3 minutes
Shape: Pearl

DAY 3: 7 minutes
Shape: Pearl

DAY 1: 7 minutes
Shape: Pearl
DAY 2: 1 minute  DAY 3: 1 minute
Shape: Disc  Shape: Disc

DAY 2: 3 minutes  DAY 3: 3 minutes
Shape: Disc  Shape: Disc

DAY 2: 7 minutes  DAY 3: 7 minutes
Shape: Circular  Shape: Disc
OPD NO : C 80999/Miss.B.Poorani

DAY 1 : 1 minute
Shape : Pearl

DAY 2 : 1 minute
Shape : Disc

DAY 1 : 3 minutes
Shape : Pearl

DAY 2 : 3 minutes
Shape : Disc

DAY 1 : 7 minutes
Shape : Pearl

DAY 2 : 7 minutes
Shape : Disc
DAY 3: 1 minute
Shape: Pearl

DAY 1: 1 minute
Shape: Disc

DAY 3: 3 minutes
Shape: Pearl

DAY 1: 3 minutes
Shape: Disc

DAY 3: 7 minutes
Shape: Pearl

DAY 1: 7 minutes
Shape: Disc
DAY 2 : 1 minute
Shape : Coin

DAY 3 : 1 minute
Shape : Oval

DAY 2 : 3 minutes
Shape : Coin

DAY 3 : 3 minutes
Shape : Oval

DAY 2 : 7 minutes
Shape : Circular

DAY 3 : 7 minutes
Shape : Oval
9. OPD NO: C69926/Mr. K. Vijayan

DAY 1: 1 minute
Shape: Pearl

DAY 2: 1 minute
Shape: Pearl

DAY 1: 3 minutes
Shape: Pearl

DAY 2: 3 minutes
Shape: Disc

DAY 1: 7 minutes
Shape: Disc

DAY 2: 7 minutes
Shape: Disc
10. OPD NO: C 88048/Mr. C. Ramesh

DAY 3: 1 minute
Shape: Disc

DAY 1: 1 minute
Shape: Circular

DAY 3: 3 minutes
Shape: Disc

DAY 1: 3 minutes
Shape: Circular

DAY 3: 7 minutes
Shape: Disc

DAY 1: 7 minutes
Shape: Circular
DAY 2 : 1 minute
Shape : Coin

DAY 3 : 1 minute
Shape : Pearl

DAY 2 : 3 minutes
Shape : Circular

DAY 3 : 3 minutes
Shape : Pearl

DAY 2 : 7 minutes
Shape : Circular

DAY 3 : 7 minutes
Shape : Pearl
DIFFERENT COLOUR OF THE URINE

COLOUR LESS URINE

STRAW COLOURED URINE

YELLOW COLOUR URINE

DARK YELLOW COLOUR URINE
11. OPD NO: C88049/Mr. S. Veerapandian

DAY 1 : 1 minute
Shape: Disc

DAY 2 : 1 minute
Shape: Pearl

DAY 1 : 3 minutes
Shape: Disc

DAY 2 : 3 minutes
Shape: Pearl

DAY 1 : 7 minutes
Shape: Disc

DAY 2 : 7 minutes
Shape: Pearl
DAY 3 : 1 minute
Shape : Pearl

DAY 3 : 3 minutes
Shape : Pearl

DAY 3 : 7 minutes
Shape : Pearl

DAY 1 : 1 minute
Shape : Pearl

DAY 1 : 3 minutes
Shape : Pearl

DAY 1 : 7 minutes
Shape : Pearl
DAY 2 : 1 minute
Shape : Pearl

DAY 3 : 1 minute
Shape : Pearl

DAY 2 : 3 minutes
Shape : Pearl

DAY 3 : 3 minutes
Shape : Pearl

DAY 2 : 7 minutes
Shape : Pearl

DAY 3 : 7 minutes
Shape : Pearl
13. OPD NO: C60988/Mrs. S. Jeevitha

DAY 1: 1 minute
Shape: Pearl

DAY 2: 1 minute
Shape: Oval

DAY 1: 3 minutes
Shape: Pearl

DAY 2: 3 minutes
Shape: Oval

DAY 1: 7 minutes
Shape: Pearl

DAY 2: 7 minutes
Shape: Oval
14.OPD NO : C89036/Mr.S.Krithivasan

DAY 3 : 1 minute
Shape : Kidney

DAY 1 : 1 minute
Shape : Oval

DAY 3 : 3 minutes
Shape : Kidney

DAY 1 : 3 minutes
Shape : Oval

DAY 3 : 7 minutes
Shape : Kidney

DAY 1 : 7 minutes
Shape : Oval
DAY 2: 1 minute
Shape: Oval

DAY 2: 3 minutes
Shape: Oval

DAY 2: 7 minutes
Shape: Oval

DAY 3: 1 minute
Shape: Pearl

DAY 3: 3 minutes
Shape: Pearl

DAY 3: 7 minutes
Shape: Pearl
15. OPD NO: 5039/Mr. K. Selvam

DAY 1: 1 minute
Shape: Pearl

DAY 1: 3 minutes
Shape: Pearl

DAY 1: 7 minutes
Shape: Pearl

DAY 2: 1 minute
Shape: Disc

DAY 2: 3 minutes
Shape: Disc

DAY 2: 7 minutes
Shape: Disc
16. OPD NO: C89980/Mrs.S.Amala

DAY 1: 1 minute
Shape: Pearl

DAY 3: 1 minute
Shape: Coin

DAY 1: 3 minutes
Shape: Pearl

DAY 3: 3 minutes
Shape: Coin

DAY 1: 7 minutes
Shape: Pearl

DAY 3: 7 minutes
Shape: Coin
DAY 2 : 1 minute
Shape : Pearl

DAY 3 : 1 minute
Shape : Disc

DAY 2 : 3 minutes
Shape : Pearl

DAY 3 : 3 minutes
Shape : Disc

DAY 2 : 7 minutes
Shape : Pearl

DAY 3 : 7 minutes
Shape : Disc
17. OPD NO : C94039/Mrs. M. Rukmani

DAY 1 : 1 minute  
Shape : Pearl

DAY 2 : 1 minute  
Shape : Pearl

DAY 1 : 3 minutes  
Shape : Pearl

DAY 2 : 3 minutes  
Shape : Pearl

DAY 1 : 7 minutes  
Shape : Pearl

DAY 2 : 7 minutes  
Shape : Pearl
18. OPD NO: C94552/Mrs. S. Navaneetham

DAY 3: 1 minute
Shape: Pearl

DAY 1: 1 minute
Shape: Pearl

DAY 3: 3 minutes
Shape: Pearl

DAY 1: 3 minutes
Shape: Pearl

DAY 3: 7 minutes
Shape: Pearl

DAY 1: 7 minutes
Shape: Pearl
DAY 2 : 1 minute
Shape : Pearl

DAY 3 : 1 minute
Shape : Pearl

DAY 2 : 3 minutes
Shape : Pearl

DAY 3 : 3 minutes
Shape: Pearl

DAY 2 : 7 minutes
Shape : Pearl

DAY 3 : 7 minutes
Shape : Pearl
19. OPD NO: C92028/Mrs. V. Kavitha

Day 1: 1 minute
Shape: Disc

Day 2: 1 minute
Shape: Disc

Day 1: 3 minutes
Shape: Disc

Day 2: 3 minutes
Shape: Disc

Day 1: 7 minutes
Shape: Disc

Day 2: 7 minutes
Shape: Disc
DAY 3: 1 minute
Shape: Coin

DAY 3: 3 minutes
Shape: Coin

DAY 3: 7 minutes
Shape: Coin

DAY 1: 1 minute
Shape: Disc

DAY 1: 3 minutes
Shape: Disc

DAY 1: 7 minutes
Shape: Disc
DAY 2 : 1 minute
Shape : Disc

DAY 3 : 1 minute
Shape : Circular

DAY 2 : 3 minutes
Shape : Disc

DAY 3 : 3 minutes
Shape : Circular

DAY 2 : 7 minutes
Shape : Disc

DAY 3 : 7 minutes
Shape : Circular
DIFFERENT COLOUR OF THE URINE

COLOUR LESS URINE

STRAW COLOURED URINE

YELLOW COLOUR URINE

DARK YELLOW COLOUR URINE
21. OPD NO: B60353 Mr. Balakrishnan S

DAY 1: 1 minute
Shape: Disc

DAY 2: 1 minute
Shape: Disc

DAY 1: 3 minutes
Shape: Coin

DAY 2: 3 minutes
Shape: Disc

DAY 1: 7 minutes
Shape: Coin

DAY 2: 7 minutes
Shape: Disc
DAY 3 : 1 minute
Shape : Coin

DAY 1 : 1 minute
Shape : Coin

DAY 3 : 3 minutes
Shape : Coin

DAY 1 : 3 minutes
Shape : Coin

DAY 3 : 7 minutes
Shape : Coin

DAY 1 : 7 minutes
Shape : Coin
DAY 2 : 1 minute
Shape : Disc

DAY 3 : 1 minute
Shape : Disc

DAY 2 : 3 minutes
Shape : Disc

DAY 3 : 3 minutes
Shape : Disc

DAY 2 : 7 minutes
Shape : Disc

DAY 3 : 7 minutes
Shape : Disc
23. IPD NO: 4121 / Mrs. R. Chandrika

DAY 1: 1 minute
Shape: Coin

DAY 2: 1 minute
Shape: Circular

DAY 1: 3 minutes
Shape: Coin

DAY 2: 3 minutes
Shape: Circular

DAY 1: 7 minutes
Shape: Coin

DAY 2: 7 minutes
Shape: Circular
DAY 3 : 1 minute
Shape : Disc

DAY 3 : 3 minutes
Shape : Disc

DAY 3 : 7 minutes
Shape : Disc

DAY 1 : 1 minute
Shape : Disc

DAY 1 : 3 minutes
Shape : Disc

DAY 1 : 7 minutes
Shape : Disc
DAY 2 : 1 minute
Shape: Disc

DAY 3 : 1 minute
Shape : Coin

DAY 2 : 3 minutes
Shape : Disc

DAY 3 : 3 minutes
Shape : Coin

DAY 2 : 7 minutes
Shape : Disc

DAY 3 : 7 minutes
Shape : Coin
25. OPD NO: C97203/Mr.K. Prakash

**DAY 1**: 1 minute
Shape: Disc

**DAY 2**: 1 minute
Shape: Coin

**DAY 1**: 3 minutes
Shape: Disc

**DAY 2**: 3 minutes
Shape: Coin

**DAY 1**: 7 minutes
Shape: Disc

**DAY 2**: 7 minutes
Shape: Coin
DAY 3 : 1 minute
Shape : Disc

DAY 1 : 1 minute
Shape : Pearl

DAY 3 : 3 minutes
Shape : Disc

DAY 1 : 3 minutes
Shape : Pearl

DAY 3 : 7 minutes
Shape : Disc

DAY 1 : 7 minutes
Shape : Pearl

26.OPD NO:C82509 /Mrs.V.Vijaya
DAY 2 : 1 minute
Shape : Pearl

DAY 3 : 1 minute
Shape : Disc

DAY 2 : 3 minutes
Shape : Pearl

DAY 3 : 3 minutes
Shape : Disc

DAY 2 : 7 minutes
Shape : Pearl

DAY 3 : 7 minutes
Shape : Disc
27.OPD NO :C97496 /Mrs.D.Chithra

DAY 1 : 1 minute
Shape : Pearl

DAY 2 : 1 minute
Shape : Coin

DAY 1 : 3 minutes
Shape : Pearl

DAY 2 : 3 minutes
Shape : Coin

DAY 1 : 7 minutes
Shape : Pearl

DAY 2 : 7 minutes
Shape : Coin
28. OPD NO: C75187/Mrs. M. Jeyanthi

Day 3: 1 minute
Shape: Coin

Day 3: 3 minutes
Shape: Coin

Day 3: 7 minutes
Shape: Coin

Day 1: 1 minute
Shape: Coin

Day 1: 3 minutes
Shape: Coin

Day 1: 7 minutes
Shape: Coin
DAY 2 : 1 minute
Shape : Coin

DAY 2 : 3 minutes
Shape : Coin

DAY 2 : 7 minutes
Shape : Coin

DAY 3 : 1 minute
Shape : Coin

DAY 3 : 3 minutes
Shape: Coin

DAY 3 : 7 minutes
Shape : Coin
29. OPD NO: C98741/Mr. M.K. Moorthy

**DAY 1:** 1 minute
Shape: Coin

**DAY 2:** 1 minute
Shape: Coin

**DAY 1:** 3 minutes
Shape: Coin

**DAY 2:** 3 minutes
Shape: Coin

**DAY 1:** 7 minutes
Shape: Coin

**DAY 2:** 7 minutes
Shape: Coin
30. OPD NO: /Mrs. S. Thilagavathy

DAY 3: 1 minute
Shape: Coin

DAY 1: 1 minute
Shape: Coin

DAY 3: 3 minutes
Shape: Coin

DAY 1: 3 minutes
Shape: Coin

DAY 3: 7 minutes
Shape: Coin

DAY 1: 7 minutes
Shape: Coin
DAY 2 : 1 minute
Shape : Coin

DAY 3 : 1 minute
Shape : Coin

DAY 2 : 3 minutes
Shape : Coin

DAY 3 : 3 minutes
Shape : Coin

DAY 2 : 7 minutes
Shape : Coin

DAY 3 : 7 minutes
Shape : Coin
DIFFERENT COLOUR OF THE URINE

COLOUR LESS URINE

STRAW COLOURED URINE

YELLOW COLOUR URINE

DARK YELLOW COLOUR URINE
31. OPD NO: C81982/Mrs. A. Rani

DAY 1: 1 minute
Shape: Coin

DAY 2: 1 minute
Shape: Circular

DAY 1: 3 minutes
Shape: Coin

DAY 2: 3 minutes
Shape: Circular

DAY 1: 7 minutes
Shape: Coin

DAY 2: 7 minutes
Shape: Circular
DAY 3: 1 minute
Shape: Coin

DAY 1: 1 minute
Shape: Coin

DAY 3: 3 minutes
Shape: Coin

DAY 1: 3 minutes
Shape: Coin

DAY 3: 7 minutes
Shape: Coin

DAY 1: 7 minutes
Shape: Coin
DAY 2 : 1 minute
Shape : Coin

DAY 3 : 1 minute
Shape : Coin

DAY 2 : 3 minutes
Shape : Coin

DAY 3 : 3 minutes
Shape : Coin

DAY 2 : 7 minutes
Shape : Coin

DAY 3 : 7 minutes
Shape : Coin
33. OPD NO: AL9663/Mrs. P. Eswari

DAY 1: 1 minute
Shape: Coin

DAY 2: 1 minute
Shape: Coin

DAY 1: 3 minutes
Shape: Coin

DAY 2: 3 minutes
Shape: Coin

DAY 1: 7 minutes
Shape: Coin

DAY 2: 7 minutes
Shape: Coin
34.OPD NO : C99206/Miss.K.Nisha

DAY 3 : 1 minute
Shape : Coin

DAY 1 : 1 minute
Shape : Coin

DAY 3 : 3 minutes
Shape : Coin

DAY 1 : 3 minutes
Shape : Coin

DAY 3 : 7 minutes
Shape : Coin

DAY 1 : 7 minutes
Shape : Coin
DAY 2 : 1 minute  
Shape : Coin

DAY 3 : 1 minute  
Shape : Coin

DAY 2 : 3 minutes  
Shape : Coin

DAY 3 : 3 minutes  
Shape : Coin

DAY 2 : 7 minutes  
Shape : Coin

DAY 3 : 7 minutes  
Shape : Coin
35. OPD NO:D2877 /Mrs.K. Amudha

**DAY 1:** 1 minute  
Shape: Coin

**DAY 2:** 1 minute  
Shape: Coin

**DAY 1:** 3 minutes  
Shape: Coin

**DAY 2:** 3 minutes  
Shape: Coin

**DAY 1:** 7 minutes  
Shape: Coin

**DAY 2:** 7 minutes  
Shape: Coin
DAY 3 : 1 minute  
Shape : Coin

DAY 3 : 3 minutes  
Shape : Coin

DAY 3 : 7 minutes  
Shape : Coin

36.OPD NO:D2865/Mr.P.Sundar  
DAY 1 : 1 minute  
Shape : Coin

DAY 1 : 3 minutes  
Shape : Coin

DAY 1 : 7 minutes  
Shape : Coin
DAY 2 : 1 minute  
Shape : Coin

DAY 3 : 1 minute  
Shape : Coin

DAY 2 : 3 minutes  
Shape : Coin

DAY 3 : 3 minutes  
Shape : Circular

DAY 2 : 7 minutes  
Shape : Coin

DAY 3 : 7 minutes  
Shape : Circular
37.OPD NO : C87895/Mrs.S.Vijayalakshmi

DAY 1 : 1 minute  
Shape : Coin  

DAY 2 : 1 minute  
Shape : Coin  

DAY 1 : 3 minutes  
Shape : Coin  

DAY 2 : 3 minutes  
Shape : Coin  

DAY 1 : 7 minutes  
Shape : Coin  

DAY 2 : 7 minutes  
Shape : Coin
DAY 3 : 1 minute
Shape : Coin

DAY 1 : 1 minute
Shape : Coin

DAY 3 : 3 minutes
Shape : Coin

DAY 1 : 3 minutes
Shape : Coin

DAY 3 : 7 minutes
Shape : Coin

DAY 1 : 7 minutes
Shape : Coin
DAY 2 : 1 minute  
Shape : Coin

DAY 3 : 1 minute  
Shape : Coin

DAY 2 : 3 minutes  
Shape : Coin

DAY 3 : 3 minutes  
Shape : Coin

DAY 2 : 7 minutes  
Shape : Coin

DAY 3 : 7 minutes  
Shape : Coin
39. OPD NO: B80815/Mr. E. Karthik

DAY 1: 1 minute
Shape: Coin

DAY 2: 1 minute
Shape: Coin

DAY 1: 3 minutes
Shape: Coin

DAY 2: 3 minutes
Shape: Coin

DAY 1: 7 minutes
Shape: Coin

DAY 2: 7 minutes
Shape: Coin
40. OPD NO: /Mr. Gothandaraman

DAY 3: 1 minute
Shape: Circular

DAY 1: 1 minute
Shape: Coin

DAY 3: 3 minutes
Shape: Circular

DAY 1: 3 minutes
Shape: Coin

DAY 3: 7 minutes
Shape: Circular

DAY 1: 7 minutes
Shape: Coin
DAY 2 : 1 minute  
Shape : Circular

DAY 3 : 1 minute  
Shape : Oval

DAY 2 : 3 minutes  
Shape : Circular

DAY 3 : 3 minutes  
Shape : Oval

DAY 2 : 7 minutes  
Shape : Circular

DAY 3 : 7 minutes  
Shape : Oval
DIFFERENT COLOUR OF THE URINE

COLOUR LESS URINE

STRAW COLOURED URINE

YELLOW COLOUR URINE

DARK YELLOW COLOUR URINE
HEALTHY VOLUNTEERS...
HEALTHY VOLUNTEERS

1. OPD NO: D19928  25/M

DAY 1: 1 MINUTES
SHAPE: COIN

DAY 2: 1 MINUTES
SHAPE: COIN

DAY 1: 3 MINUTES
SHAPE: COIN

DAY 2: 3 MINUTES
SHAPE: COIN

DAY 1: 7 MINUTES
SHAPE: COIN

DAY 2: 7 MINUTES
SHAPE: CIRCULAR
DAY 3 : 1 MINUTES
SHAPE : JASMINE BUD

DAY 1 : 1 MINUTES
SHAPE : COIN

DAY 3 : 3 MINUTES
SHAPE : JASMINE BUD

DAY 1 : 3 MINUTES
SHAPE : COIN

DAY 3 : 7 MINUTES
SHAPE : LUTE

DAY 1 : 7 MINUTES
SHAPE : COIN

2.O.PD NO: D19929 60/M

249
3. OPD NO: D30224 30/M

DAY 1: 1 MINUTES
SHAPE: COIN

DAY 2: 1 MINUTES
SHAPE: COIN

DAY 1: 3 MINUTES
SHAPE: COIN

DAY 2: 3 MINUTES
SHAPE: CIRCULAR

DAY 1: 7 MINUTES
SHAPE: COIN

DAY 2: 7 MINUTES
SHAPE: CIRCULAR

251
4.OPD NO : C 86813  27/M

DAY 3 : 1 MINUTE  
SHAPE : COIN

DAY 1 : 1 MINUTES
SHAPE : COIN

DAY 3 : 3 MINUTES  
SHAPE : COIN

DAY 1 : 3 MINUTES
SHAPE : COIN

DAY 3 : 7MINUTES  
SHAPE : COIN

DAY 1 : 7MINUTES
SHAPE : COIN

252
DAY 2: 1 MINUTE
SHAPE : COIN

DAY 3: 1 MINUTE
SHAPE : COIN

DAY 2: 3 MINUTES
SHAPE : COIN

DAY 3: 3 MINUTES
SHAPE : COIN

DAY 2: 7 MINUTES
SHAPE : COIN

DAY 3: 7 MINUTES
SHAPE : COIN
5. OPD NO : C72223 37/M

DAY 1 : 1 MINUTES
SHAPE: COIN

DAY 1 : 3 MINUTES
SHAPE: COIN

DAY 1 : 7 MINUTES
SHAPE : COIN

DAY 2 : 1 MINUTES
SHAPE:COIN

DAY 2 : 3 MINUTES
SHAPE : COIN

DAY 2 : 7 MINUTES
SHAPE : CIRCULAR
DAY 3 : 1 MINUTES
SHAPE : COIN

DAY 3 : 3 MINUTES
SHAPE : COIN

DAY 3 : 7 MINUTES
SHAPE : RING

DAY 1 : 1 MINUTES
SHAPE : COIN

DAY 1 : 3 MINUTES
SHAPE : COIN

DAY 1 : 7 MINUTES
SHAPE : COIN

6.O.P. NO: D15789  27/F
DAY 2: 1 MINUTES
SHAPE: COIN

DAY 3: 1 MINUTES
SHAPE: COIN

DAY 2: 3 MINUTES
SHAPE: COIN

DAY 3: 3 MINUTES
SHAPE: COIN

DAY 2: 7 MINUTES
SHAPE: COIN

DAY 3: 7 MINUTES
SHAPE: COIN
7. O.P.NO: D15797 24/ F

DAY 1: 1 MINUTES
SHAPE: COIN

DAY 2: 1 MINUTES
SHAPE: COIN

DAY 1: 3 MINUTES
SHAPE: COIN

DAY 2: 3 MINUTES
SHAPE: COIN

DAY 1: 7 MINUTES
SHAPE: COIN

DAY 2: 7 MINUTES
SHAPE: COIN
8. O.P. NO: D13393 26/ F

DAY 3 : 1 MINUTES
SHAPE : COIN

DAY 1 : 1 MINUTES
SHAPE : COIN

DAY 3 : 3 MINUTES
SHAPE : COIN

DAY 1 : 3 MINUTES
SHAPE : COIN

DAY 3 : 7 MINUTES
SHAPE : JASMINE BUD

DAY 1 : 7 MINUTES
SHAPE : CIRCULAR
DAY 2 : 1 MINUTES
SHAPE : COIN

DAY 3 : 1 MINUTES
SHAPE : COIN

DAY 2 : 3 MINUTES
SHAPE : CIRCULAR

DAY 3 : 3 MINUTES
SHAPE : COIN

DAY 2 : 7 MINUTES
SHAPE : OVAL

DAY 3: 7 MINUTES
SHAPE : CIRCULAR
9. O.P. NO: C33345 38/M

DAY 1: 1
SHAPE: COIN

DAY 2: 1 MINUTES
SHAPE: COIN

DAY 1: 3 MINUTES
SHAPE: EGG

DAY 2: 3 MINUTES
SHAPE: COIN

DAY 1: 7 MINUTES
SHAPE: CIRCULAR

DAY 2: 7 MINUTES
SHAPE: CIRCULAR

260
10. OPD NO: C33793  37/M

DAY 3 : 1 MINUTES
SHAPE : COIN

DAY 1 : 1 MINUTES
SHAPE : COIN

DAY 3 : 3 MINUTES
SHAPE : EGG

DAY 1 : 3 MINUTES
SHAPE : COIN

DAY 3 : 7
SHAPE : RING

DAY 1 : 7 MINUTES
SHAPE : CIRCULAR
DAY 2 : 1 MINUTE
SHAPE : COIN

DAY 3 : 1 MINUTES
SHAPE : COIN

DAY 2 : 3 MINUTES
SHAPE : CIRCULAR

DAY 3 : 3 MINUTES
SHAPE : COIN

DAY 2 : 7 MINUTES
SHAPE : CIRCULAR

DAY 3 : 7 MINUTES
SHAPE : CIRCULAR
CHEST X- RAY PA VIEW

1. Mrs. M. Jothi  35/F   IP NO : 4036

Heart:  Normal
Lungs:  Trachea in midline
        Both apices are free
        No evidence of Pulmonary Tuberculosis
        Mediastinum and both hilar regions are normal
        All angles are free
        Lung fields are clear

Impression :  Normal study.
CHEST X- RAY PA VIEW

2. Mrs. A. Eswari  42/F   IP NO : 4038

Heart: Normal
Lungs: Trachea in midline
Both apices are free
No evidence of Pulmonary Tuberculosis
Mediastnum and both hilar regions are normal
All angles are free
Lung fields are clear

Impression : Normal study.
CHEST X-RAY PA VIEW

3. Mrs. A. J. Roselet 45/F IP NO : 4040

Heart: Normal
Lungs: Trachea in midline
Both apices are free
No evidence of Pulmonary Tuberculosis
Mediastnum and both hilar regions are normal
All angles are free
Lung fields are clear

Impression: Normal study.
CHEST X-RAY PA VIEW

4. Mr. M. Veerappan 60/M   IP NO : 5026

Heart: Normal

Lungs: Trachea in midline
Both apices are free
No evidence of Pulmonary Tuberculosis
Mediastnum and both hilar regions are normal
All angles are free
Lung fields are clear

Impression: Normal study.
CHEST X- RAY PA VIEW

5. Mr. N. Megan 56/M   IP NO : 5027

Heart:   Normal
Lungs:   Trachea in midline
          Both apices are free
          No evidence of Pulmonary Tuberculosis
          Mediastnum and both hilar regions are normal
          All angles are free
          Lung fields are clear

Impression :   Normal study.
DISCUSSION...

neerkkuri neikkuri

- Manthaara Kaasam
DISCUSSION

Neerkkuri and Neikkuri are exclusively Siddha methods of diagnostic urine examination propounded by Sage Theriyar. These are an efficient method in elucidating the prognosis of the given disease.

Out of the 80 cases screened, 40 diagnosed cases were selected from the outpatient department and 20 normal subjects were screened, 10 normal subjects will be selected from this study of Neerkkuri and Neikkuri urine analysis.

Among 40 cases, 30% of cases fell in the age group 41-50 years, 25% of cases fell in the age group 21-30 years, 25% of cases fell in the age group 31-40 years, 10% of cases fell in the age group 51-60 years and the remaining 10% of the cases fell in the age group 11-20 years.

Among 40 cases, 57.5% of cases were females and 42.5% were males.

Among 40 cases, 50% of cases fell in Vatha kaalam ie 0-33yrs, 50% of cases fell in Pitha kaalam 34-66 yrs.

Among 40 cases, 45% of cases had the naadinadai of Vathakabam, 30% of cases had Pitha kabam, 27.5% cases had Kabavatham, 22.5% of cases had Kaba pitham. In most of the cases had Vathakaba naadi. Manthaara kaasam disease is said to be associated with Vathakaba Naadi.

Among 40 cases, the colour of the urine were of 50% straw colour urine, 30% Pale yellow colour urine and 20% colourless urine. In most of the cases, the colour of the urine observed were of straw colour.

Among 40 cases, the odour of the urine 62.5% had ammonical odour, 32.5% aromatic odour, and remaining 5% putrid odour.

Among 40 cases the froth of the urine is absent in 87.50% and remaining 12.50% of urine had froth.
Among 40 cases 2.5% of cases passed 500ml -1 lit of urine per day, 97.5% of cases passed 1.1-1.5 lit per day.

When more solutes are mixed in the urine, the Specific gravity tends to increase and the tension is likely to decrease. When the urine becomes more diluted, the Specific gravity decreases and surface tension tends to increase.

Among 40 cases, the specific gravity of the urine 50% had Specific gravity between 1.016-1.020, 22.5% had Specific gravity between 1.011-1.015, 15% had Specific gravity between 1.021-1.025 and 12.5% had Specific gravity between 1.003-1.010.

Among 40 cases, 92.5% of cases had $\text{pH}$ between 5.1-6, 7.5% of cases had $\text{pH}$ between 6.1-7.

**In day 1**

In most of the cases, the shape of the Neikkuri observed in three minutes, seven minutes and ten minutes were of coin shape.

**In day 2**

In most of the cases, the shape of the Neikkuri observed in three minutes, seven minutes and ten minutes were of circular shape.

**In day 3**

In most of the cases, the shape of the Neikkuri observed in three minutes, seven minutes and ten minutes were of coin and pearl shapes.

The reason for the difference in the Neikkuri patterns of a given patient on three consecutive days could be dietary variations. Sage theran mentioned about various patterns of Neikkuri formation in his treatise. In that pearl shaped patterns are said to be associated with the Kaba humour in the urine.
CONCLUSION...

neerkuri neikkuri

- Manthaara Kaasam
CONCLUSION

In Neerkkuri, colour, odour, froth, specific gravity, volume and pH were observed. The urine was mostly straw colour and aromatic odour. The froth was mostly absent and the specific gravity was mostly ranged from 1.003-1.010. The volume of urine passed per day was mostly 1-1.5 lit per day. The pH was mostly ranged between 5.1 and 6.

The reason for the difference in the Neikkuri patterns of a given patient on three consecutive days could be dietary variations. In most of the cases the dissemination dynamics of oil drop observed were of slow spreading nature. It indicates good prognosis.

If there is kabam in urine, the spread of the instilled oil drop will be slow. As the spread of oil is limited, the oil forms a pearl like appearance which can be observed in Neikuri. So, the pearl formation can be predominantly presumed to be because of kapham in the urine. More concentrated the pearl formation, higher the kapham in urine.

The Neikuri pattern observed for members in green zone, yellow zone and red zone were coin shape, circular shape and pearl shape respectively. In other words, from the Neikuri pattern, the zone of BA can be identified.

From the above study it is clearly evident that there was no variation of neikkuri shapes observed on the three consecutive days.

This study the author conclude that the Neikuri in Manthaara kaasam can be a good diagnostic tool for differentiating the zones of Bronchial asthma.

This study may throw new lights to standardize the Neerkkuri and Neikkuri and provide a lead to carry out further researches by the upcoming generation.
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Yugi Vaithya Chindhamani
Theraiyar vaagadam
Dhanvandri Vaithiyam
Pathinen siddhargal naadi sasthiram
Tamil vaithiya sathagam
4448 viyathigal
Theraiyar Aruliya seitha siruneerkuri sothanai
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ANNEXURE...

neerkkuri neikkuri

- Manthaara Kaasam
ANNEXURE

Form –I    Screening and selection Proforma

Form –IA   History Proforma on enrollment

Form    II  Clinical Assessment on enrollment

Form –III   Laboratory investigations on enrollment, during the study

Form –IV    Consent form
            (Vernacular and English versions)

Form -IV- A  Patient Information Sheet
             (Vernacular and English versions)
ANNEXURE-I
NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47.
DEPARTMENT OF NOI NAADAL
A STUDY ON NEERKKURI NEIKKURI DIAGNOSTIC METHODOLOGY IN MANTHARA KAASAM/BRONCHIAL ASTHMA”
FORM I
SCREENING AND SELECTION PROFORMA

10. Address: 


11. Contact Nos: 
12. E-mail:


INCLUSION CRITERIA

- Age: 18-60 years
- Difficulty in breathing
- Wheezing
- Cough without expectoration
- Increased perspiration
- Patient willing for blood, urine and sputum tests

YES NO
<table>
<thead>
<tr>
<th>EXCLUSION CRITERIA:</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung carcinoma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuberculosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major systemic illness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vulnerable group</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Date: ________________________________  Signature of Lecturer: ________________________________

Signature of Student: ________________________________
1. Sl.No of the case: _______________

2. Name: ___________________ Height: ___ cms Weight: ___ Kg BMI:___

3. Age (years): ______ ___ DOB [ ] [ ] [ ] [ ] [ ] [ ]

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:

<table>
<thead>
<tr>
<th>Condition</th>
<th>1. Yes</th>
<th>2. No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systemic hypertension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ischemic heart disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dyslipidaemia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jaundice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bronchial asthma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any drug allergy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any surgeries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any major illnesses</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Habits:

<table>
<thead>
<tr>
<th>Habit</th>
<th>1. Yes</th>
<th>2. No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoker</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcoholic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug Addiction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Betel nut chewer:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of diet</td>
<td>V</td>
<td>NV</td>
</tr>
</tbody>
</table>
10. Personal history:

Marital status: Married ☐ Unmarried ☐

No. of children: Male: _____ Female: ______

11. Family history:

History of diabetes mellitus  Yes No
Father ☐ ☐
Mother ☐ ☐

Others:

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 MANTHARA KAASAM:

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased exposure to cool air</td>
<td>☐</td>
</tr>
<tr>
<td>Increased roaming in sunlight</td>
<td>☐</td>
</tr>
<tr>
<td>Increased intake of hot and cold foods</td>
<td>☐</td>
</tr>
<tr>
<td>Increased speech and singing</td>
<td>☐</td>
</tr>
<tr>
<td>Inhaling dust,fumes,gases,pungent smell</td>
<td>☐</td>
</tr>
<tr>
<td>Breaks in the respiratory passages</td>
<td>☐</td>
</tr>
<tr>
<td>Sleeping in the mist</td>
<td>☐</td>
</tr>
</tbody>
</table>
ANNEXURE-III

NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47

DEPARTMENT OF NOI NAADAL

A STUDY ON NEERKURI NEIKURI DIAGNOSTIC METHODOLOGY IN MANTHARA KAASAM/ BRONCHIAL ASTHMA”

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 :

**VITAL ORGANS EXAMINATION**

<table>
<thead>
<tr>
<th></th>
<th>1. Normal</th>
<th>2. Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Lungs</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Brain</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Liver</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Kidney</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Spleen</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Stomach</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**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

[1] ENVAGAI THERVU  [EIGHT-FOLD EXAMINATION]

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

(a) Naadi Nithanam (Pulse Appraisal)

1. Kalam (Pulse reading season)
   1. Kaarkaalam (Rainy season)  2. Koothirkaalam (Autumn)
   3. Munpanikaalam (Early winter)  4. Pinpanikaalam (Late winter)
   5. Ilavenirkaalam (Early summer)  6. Muthuvenirkaalam (Late summer)

2. Desam (Climate of the patient’s habitat)
   1. Kulir (Temperate)  2. Veppam (Hot)

3. Vayathu (Age)  1. 1-33yrs  2. 34-66yrs  3. 67-100

4. Udal Vanmai (General body condition)
   1. Iyyalbu (Normal built)  3. Valivu (Robust)  4. Melivu (Lean)

5. Vanmai (Expansile Nature)
   1. Vanmai  2. Menmai

6. Panbu (Habit)
   1. Thannadai (Playing in)  2. Puranadai (Playing out)  3. Illaitthal (Feeble)
   4. Kathithal (Swelling)  5. Kuthithal (Jumping)  6. Thullal (Frisking)
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Azhutthal (ducking)</td>
<td>8. Padutthal (Lying)</td>
<td>9. Kalatthal (Blending)</td>
</tr>
<tr>
<td>13. Pakkamnokku (Swerving)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) Naadi nadai (Pulse Play)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

II. NAA (TONGUE)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maa Padinthiruthal (Coatedness)</td>
<td>1. Present</td>
<td>2. Absent</td>
</tr>
<tr>
<td>3. Suvai (Taste sensation)</td>
<td>1. Pulippu (Sour)</td>
<td>2. Kaippu (Bitter)</td>
</tr>
<tr>
<td>4. Vedippu (Fissure)</td>
<td>1. Present</td>
<td>2. Absent</td>
</tr>
<tr>
<td>5. Vai neer ooral (Salivation)</td>
<td>1. Normal</td>
<td>2. Increased</td>
</tr>
</tbody>
</table>

III. NIRAM (COMPLEXION)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Karuppu (Dark)</td>
<td>2. Manjal (Yellowish)</td>
<td>3. Velluppu (Fair)</td>
</tr>
</tbody>
</table>

IV. MOZHI (VOICE)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sama oli (Medium pitched)</td>
<td>2. Urattha oli (High pitched)</td>
<td>3. Thazantha oli (Low pitched)</td>
</tr>
</tbody>
</table>
## V. VIZHI (EYES)

1. **Niram (Venvizhi)**
   - (Discolouration)
     - 1. Karuppu (Dark)
     - 2. Manjal (Yellow)
     - 3. Sivappu (Red)
     - 4. Velluppu (White)
     - 5. No Discoloration

2. **Kanneer**
   - (Tears)
     - 1. Normal
     - 2. Increased
     - 3. Reduced

3. **Erichchal**
   - (Burning sensation)
     - 1. Present
     - 2. Absent

4. **Peelai seruthal**
   - (Mucus excrements)
     - 1. Present
     - 2. Absent

## VI. MEI KURI (PHYSICAL SIGNS)

1. **Veppam**
   - (Warmth)
     - 1. Mitham (Mild)
     - 2. Migu (Moderate)
     - 3. Thatpam (Low)

2. **Viyarvai**
   - (Sweat)
     - 1. Increased
     - 2. Normal
     - 3. Reduced

3. **Thodu vali**
   - (Tenderness)
     - 1. Absent
     - 2. Present

## VII. MALAM (STOOLS)

1. **Niram**
   - (Color)
     - 1. Karuppu (Dark)
     - 2. Manjal (Yellowish)
     - 3. Sivappu (Reddish)
     - 4. Velluppu (Pale)

2. **Sikkal**
   - (Constipation)
     - 1. Present

3. **Sirutthal**
   - (Poorly formed stools)
     - 1. Present

---

195
4. Kalichchal  
(Loose watery stools)  
1. Present ☐  
2. Absent ☐

5. Seetham  
(Watery and mucoid excrements)  
1. Present ☐  
2. Absent ☐

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 : ☐  ☐
   Fruity : ☐  ☐
   Others : _________________________

3. Edai (Specific gravity)

   Yes ☐  No ☐

   Normal (1.010-1.025) : ☐  ☐
   High Specific gravity (>1.025) : ☐  ☐
   Low Specific gravity (<1.010) : ☐  ☐
   Low and fixed Specific gravity (1.010-1.012): ☐  ☐
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  

6. Enjal (deposits)  
Yes  No  

(b) NEI KURI (oil spreading sign)  

1. Aravam  
(Serpentine fashion)  
2. Mothiram  
(Ring)  

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)

<table>
<thead>
<tr>
<th>1. Normal</th>
<th>2. Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mei (skin)</td>
<td></td>
</tr>
<tr>
<td>2. Vaai (Mouth/ Tongue)</td>
<td></td>
</tr>
<tr>
<td>3. Kan (Eyes)</td>
<td></td>
</tr>
<tr>
<td>4. Mookku (Nose)</td>
<td></td>
</tr>
<tr>
<td>5. Sevi (Ears)</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>1. Normal</th>
<th>2. Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Kai (Hands)</td>
<td></td>
</tr>
<tr>
<td>2. Kaal (Legs)</td>
<td></td>
</tr>
<tr>
<td>3. Vaai (Mouth)</td>
<td></td>
</tr>
<tr>
<td>4. Eruvai (Analepy)</td>
<td></td>
</tr>
<tr>
<td>5. Karuvaai (Birth canal)</td>
<td></td>
</tr>
</tbody>
</table>
[5]. YAKKAI (SOMATIC TYPES)

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

RESULTANT SOMATIC TYPE: ________________________________
### [6] GUNAM

1. Sathuva Gunam  
2. Rajo Gunam  
3. Thamo Gunam

### [7] UYIR THATHUKKAL

#### A. VALI

<table>
<thead>
<tr>
<th>1. Normal</th>
<th>2. Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Praanan (Heart centre)</td>
<td></td>
</tr>
<tr>
<td>2. Abaanan (Matedial of muladhar centre)</td>
<td></td>
</tr>
<tr>
<td>3. Samaanan (Navel centre)</td>
<td></td>
</tr>
<tr>
<td>4. Udhaanan (Forehead centre)</td>
<td></td>
</tr>
<tr>
<td>5. Viyaanan (Throat centre)</td>
<td></td>
</tr>
<tr>
<td>6. Naahan (Higher intellectual function)</td>
<td></td>
</tr>
<tr>
<td>7. Koorman (Air of yawning)</td>
<td></td>
</tr>
<tr>
<td>8. Kirukaran (Air of salivation)</td>
<td></td>
</tr>
<tr>
<td>9. Devathathan (Air of laziness)</td>
<td></td>
</tr>
<tr>
<td>10. Dhananjeyan (Air that acts on death)</td>
<td></td>
</tr>
</tbody>
</table>
### B. AZHAL

<table>
<thead>
<tr>
<th>1. Normal</th>
<th>2. Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Anala pittham (Gastric juice)</td>
<td></td>
</tr>
<tr>
<td>2. Prasaka pittham (Bile)</td>
<td></td>
</tr>
<tr>
<td>3. Ranjaka pittham (Haemoglobin)</td>
<td></td>
</tr>
<tr>
<td>4. Aalosaka pittham (Aqueous Humour)</td>
<td></td>
</tr>
<tr>
<td>5. Saathaka pittham (Life energy)</td>
<td></td>
</tr>
</tbody>
</table>

### C. IYYAM

<table>
<thead>
<tr>
<th>1. Normal</th>
<th>2. Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Avalambagam (Serum)</td>
<td></td>
</tr>
<tr>
<td>2. Kilethagam (saliva)</td>
<td></td>
</tr>
<tr>
<td>3. Pothagam (lymph)</td>
<td></td>
</tr>
<tr>
<td>4. Tharpagam (cerebrospinal fluid)</td>
<td></td>
</tr>
<tr>
<td>5. Santhigam (Synovial fluid)</td>
<td></td>
</tr>
</tbody>
</table>
## [8] UDAL THATHUKKAL

<table>
<thead>
<tr>
<th>INCREASED SAARAM (CHYLE)</th>
<th>DECREASED SAARAM(CHYLE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of appetite</td>
<td>Loss weight</td>
</tr>
<tr>
<td>Excessive salivation</td>
<td>Tiredness</td>
</tr>
<tr>
<td>Loss of perseverance</td>
<td>Dryness of the skin</td>
</tr>
<tr>
<td>Excessive heaviness</td>
<td>Diminished activity of</td>
</tr>
<tr>
<td>White musculature</td>
<td>sense organs</td>
</tr>
<tr>
<td>Cough, dyspnea, excessive sleep</td>
<td></td>
</tr>
<tr>
<td>Weakness in all joints of the body</td>
<td></td>
</tr>
</tbody>
</table>

### A. SAARAM: INCREASED □ DECREASED □

<table>
<thead>
<tr>
<th>INCREASED CENNEER(BLOOD)</th>
<th>DECREASED CENNEER(BLOOD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boils in different parts of the body</td>
<td>Anemia</td>
</tr>
<tr>
<td>Anorexia</td>
<td>Tiredness</td>
</tr>
<tr>
<td>Mental disorder</td>
<td>Neuritis</td>
</tr>
<tr>
<td>Spleenomegaly</td>
<td>Lassitude</td>
</tr>
<tr>
<td>Colic pain</td>
<td>Pallor of the body</td>
</tr>
<tr>
<td>Increased pressure</td>
<td></td>
</tr>
<tr>
<td>Reddish eye and skin</td>
<td></td>
</tr>
<tr>
<td>Jaundice</td>
<td></td>
</tr>
<tr>
<td>Haematuria</td>
<td></td>
</tr>
</tbody>
</table>

### B. CENNEER: INCREASED □ DECREASED □
<table>
<thead>
<tr>
<th>INCREASED OON (MUSLE)</th>
<th>DECREASED OON (MUSLE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervical lymphadenitis</td>
<td>Impairment of sense organs</td>
</tr>
<tr>
<td>Vernical ulcer</td>
<td>Joint pain</td>
</tr>
<tr>
<td>Tumour in face, abdomen, thigh, genitalia</td>
<td>Jaw, thigh and genitalia gets shortened</td>
</tr>
<tr>
<td>Hyper muscular in the cervical region</td>
<td></td>
</tr>
</tbody>
</table>

C. OON: INCREASED ☐ DECREASED ☐

<table>
<thead>
<tr>
<th>INCREASED KOZHUPPU (ADIPOSE TISSUE)</th>
<th>DECREASED KOZHUPPU (ADIPOSE TISSUE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervical lymph adenitis</td>
<td>Pain in the hip region</td>
</tr>
<tr>
<td>Vernical ulcer</td>
<td>Disease of the spleen</td>
</tr>
<tr>
<td>Tumour in face, abdomen, thigh, genitalia</td>
<td></td>
</tr>
<tr>
<td>Hyper muscular in the cervical region</td>
<td></td>
</tr>
<tr>
<td>Dyspnoea</td>
<td></td>
</tr>
<tr>
<td>Loss of activity</td>
<td></td>
</tr>
</tbody>
</table>

D. KOZHUPPU: INCREASED ☐ DECREASED ☐

<table>
<thead>
<tr>
<th>INCREASED ENBU (BONE)</th>
<th>DECREASED ENBU (BONE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth in bones and teeth</td>
<td>Bones diseases</td>
</tr>
<tr>
<td></td>
<td>Loosening of teeth</td>
</tr>
<tr>
<td></td>
<td>Nails splitting</td>
</tr>
<tr>
<td></td>
<td>Falling of hair</td>
</tr>
</tbody>
</table>

E. ENBU: INCREASED ☐ DECREASED ☐
### INCREASED MOOLAI (BONE MARROW) vs. DECREASED MOOLAI (BONE MARROW)

<table>
<thead>
<tr>
<th>Symptom</th>
<th>INCREASED</th>
<th>DECREASED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heaviness of the body</td>
<td></td>
<td>Osteoporosis</td>
</tr>
<tr>
<td>Swollen eyes</td>
<td></td>
<td>Sunken eyes</td>
</tr>
<tr>
<td>Swollen phalanges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chubby fingers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oliguria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-healing ulcer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### F. MOOLAI: INCREASED vs. DECREASED

<table>
<thead>
<tr>
<th>Symptom</th>
<th>INCREASED</th>
<th>DECREASED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infatuation and lust towards women / men</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urinary calculi</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### G. SUKKILAM/SURONITHAM: INCREASED vs. DECREASED

<table>
<thead>
<tr>
<th>Symptom</th>
<th>INCREASED</th>
<th>DECREASED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevents infertile semen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improves sexual desire</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### [9] MUKKUTRA MIGU GUNAM

#### I. Vali Migu Gunam

<table>
<thead>
<tr>
<th>Symptom</th>
<th>1. Present</th>
<th>2. Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Emaciation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Complexion – blackish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Desire to take hot food</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Shivering of body</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Abdominal distension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Constipation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Insomnia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Weakness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Defect of sense organs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Giddiness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Lake of interest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II. Pitham Migu Gunam</td>
<td>1. Present</td>
<td>2. Absent</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------</td>
<td>-----------</td>
</tr>
<tr>
<td>1. Yellowish discolouration of skin</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2. Yellowish discolouration of the eye</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3. Yellow coloured urine</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4. Yellowishness of faeces</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5. Increased appetite</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6. Increased thirst</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7. Burning sensation over the body</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8. Sleep disturbance</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. Kapham migu gunam</th>
<th>1. Present</th>
<th>2. Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Increased salivary secretion</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2. Reduced activeness</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3. Heaviness of the body</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4. Body colour – fair complexion</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5. Chillness of the body</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6. Reduced appetite</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7. Eraippu</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8. Increased sleep</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

[10]. NOIUTRA KALAM

1. Kaarkaalam
   (Aug15-Oct14) [☐] 2. Koothirkaalam
   (Oct15-Dec14) [☐]

3. Munpanikaalam
   (Dec15-Feb14) [☐] 4. Pinpanikaalam
   (Feb15-Apr14) [☐]

5. Ilavanirkaalam
   (Apr15-June14) [☐] 6. Muthuvenirkaalam
   (June15-Aug14) [☐]
[11]. NOI UTRA NILAM

1. Kurunji (Hilly terrain) □
2. Mullai (Forest range) □
3. Marutham (Plains) □

4. Neithal (Coastal belt) □
5. Paalai (Desert) □

[12]. Date of Birth
□ □ □ □ □ □ □ □ □ □ □

[13]. Time of Birth
□□ □ AM □ □ PM □

[14]. Place of Birth: _______________________

[15]. Rasi (Zodiac Sign)

1. Mesam □
2. Rishabam □
3. Midhunam □

4. Katakam □
5. Simmam □
6. Kanni □

7. Thulam □
8. Viruchiham □
9. Dhanusu □

10. Maharam □
11. Kumbam □
12. Meenam □
[16]. Natchathiram (birth stars):

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1 | Aswini | ☐ | 2 | Barani | ☐ | 3 | Karthikai | ☐ | 4 | Rohini | ☐ | 5 | Mirugaseeradam | ☐ | 6 | Thiruvathirai | ☐ | 7 | Punarpoosam | ☐ | 8 | Poosam | ☐ | 9 | Ayilyam | ☐ | 10 | Makam | ☐ | 11 | Pooram | ☐ | 12 | Utthiram | ☐ |
ANNEXURE-IV
NATIONAL INSTITUTE OF SIDDHA, CHENNAI – 47

DEPARTMENT OF NOI NAADAL
A STUDY ON NEERKURI NEIKURI DIAGNOSTIC METHODOLOGY IN MANTHARA KAASAM/BRONCHIAL ASTHMA”

Form –III

LABORATORY INVESTIGATION

HEMATOLOGY

Haemoglobin: ………………gm %

Total RBC count:……………..millions cells / cu.mm

Total WBC count:…………….cells / cu.mm

Differential count:

- Polymorphs ……%  
- Lymphocytes ……%  
- Monocytes ……%  
- Basophils ……%  
- Eosinophils ……%

Platelet count : …….cells / cu.mm

ESR (mm) ½ Hr:

- 1 Hr:

BIO CHEMISTRY

Sugar (F) ………………..mg %

PP ………………..mg %

Total cholesterol : …….mg %

- HDL ….. mg %  
- LDL : ………mg %
- VLDL : …… mg%
Urea: ..........mg %
Creatinine: ..........mg %
Uric acid: ........ mg %
Serum total bilirubin: ..........mg %
Direct bilirubin: ..........mg %
Indirect bilirubin: ..........mg %
SGOT: ..........IU
SGPT: ..........IU
Alkaline phosphatise: ......IU
Serum Total Protein: ......gm %
Serum Albumin: ......gm %
Serum Globulin:..............gm %
Serum Calcium: ......mg %
Serum Phosphorous: ......mg %
AEC:

URINALYSIS:
Colour:
Appearance:
Specific Gravity:
Ph:
Red blood cells:
White blood cells:
Pus cells:
Epithelial cells:
Protein:
Glucose :
Ketones :
Bilirubin :
Bile salts :
Bile pigments :
Urobilinogen :
CHEST X-RAY PA VIEW :
PEFR (Peak expiratory flow rate) :

SPECIFIC INVESTGATIONS

SPUTUM AFB:

Date:                                          Signature of the Doctor:
ANNEXURE-V
NATIONAL INSTITUTE OF SIDDHA, CHENNAI-47
DEPARTMENT OF NOI NAADAL
A STUDY ON NEERKURI NEIKURI DIAGNOSTIC METHODOLOGY
“MANTHARA KAASAM/ BRONCHIAL ASTHMA”
REGISTER NO:32103202 (2011-2012)
FORM IV A
INFORMED WRITTEN CONSENT FORM
I …………………..exercising my free power of choice, hereby give my consent to be included as a subject in the diagnostic trial entitled “A Study on Diagnostic Methodology in Siddha System For “Neerkuri – Neikuri MANTHARA KAASAM”. I may be asked to give urine and blood samples during the study.

I have been informed to about the study to my satisfaction by the investigator and the purpose of this trial and the nature of study and the laboratory investigations. I also give my consent to publish my urine sample photographs 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.

NAME OF THE VOLUNTEER:

SIGNATURE OR THUMB IMPRESSION

OF THE VOLUNTEER:

SIGNATURE OF INVESTIGATOR:

SIGNATURE OF H O D:

DATE:
குறிப்பிட்டும் மத்திய சேவைக், விளக்கம்-47.

தலைப்பு பக்கம் ஒன்று

முதல் கூற்றும் நிகழ்வுகள் விளக்கத்திற்குப் பதிவு அளிப்போ

பதிவு நோட்ட-32103202 (2010-2013)

குற்று முன்

அவ்வாறு கூற்றுக்குப் பின்னர் குறிப்பிட்டும்

தக்கான இறுதி ஆர்வம் தேவையாக அவசரத்தில் விளக்கமாகவே நிகழ்த்தப்படும்

பதிவு முடிக்கப்பட்டு இருந்துபட்டு ஒரு அச்சாரித்தியமாக

தக்கான : மேலின் பக்கம் :

மாவட்டத்தில் எடுத்துக்காட்டு

தக்கான, ------------ கல்வியறிவகத்தில் தொடங்கி

பின்னர் முடிக்கப்பட்டால் தொடர்ந்து செயல்பட்டால் மத்திய

கூற்று இறுதி விளக்கத்திற்குப் பதிவு அளிப்போ

முடிக்க விளக்கக் குறியீட்டின் சேவைகளை வரையறைக் கூற்று விளக்கத்தில் விளக்கமாக

சேர்த்து ஆவணில் பரிகாப்பு சரண சீர்த்திற்கு பெருக்கும்பட்டால்

கூற்று முடிக்கும் விளக்கத்திற்கு பதிவு அளிப்போ

தக்கான : மேலின் பக்கம் :

மாவட்டத்தில் எடுத்துக்காட்டு
ANNEXURE-VI
NATIONAL INSTITUTE OF SIDDHA, CHENNAI-47
DEPARTMENT OF NOI NAADAL
A STUDY ON NEERKKURI - NEIKKURI DIAGNOSTIC METHODOLOGY
IN "MANTHARA KAASAM/BRONCHIAL ASTHMA".
REGISTER NO:32103202 (2011-2013)
FORM - IV-E
INFORMATION SHEET

PURPOSE OF RESEARCH AND BENEFITS:

The diagnostic research study in which your participation is proposed to assess the accuracy of the neikuri procedure adopted in MANTHARA KAASAM patients. It is expected that you would benefit from this study. 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 blood pressure and routine blood and urine analysis. After matching the inclusion criteria you will be included in this study and neikuri procedure is done by the collection of your urine sample again.

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 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 to 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

INVESTIGATOR: Dr.P.Chithra, PG scholar,
Department of Noi Naadal
National Institute of Siddha,
Chennai-47.
Mobile no: 9150487201
விளை சிறு மாநில விளம்பரம், கொண்டிட்டை47.

நடவ நடவ தேர்

"மதில் காரியங்களில் நிகழ்த்து விளம்பங்கள் பாதிப்பு அடையும்"

விளம்பரதிதை தவறு படுத்தும்

அனுப்பில் விளக்கம் பாடும்:

காண்பது பல்வேறு "மதில் காரியங்களில் நிகழ்த்து விளம்பங்கள் பாதிப்பு அடையும்" சிக்கும் வருடங்களும் கொண்டிட்டை கொண்டிட்டை கொண்டிட்டை கொண்டிட்டை அடையும். தில்லியா நூற்றக்கணவன் விளம்பரதினர் விளம்பங்கள் நூற்றக்கணவன் விளம்பங்கள் நூற்றக்கணவன் விளம்பங்கள் நூற்றக்கணவன் விளம்பங்கள் நூற்றக்கணவன் விளம்பங்கள் நூற்றக்கணவன் விளம்பங்கள் நூற்றக்கணவன்

அம்மாம் வெளியே:


நூற்றக்கணவன்:

விளம்பரதிதை நூற்றக்கணவன் விளம்பரதிதை நூற்றக்கணவன்

நூற்றக்கணவன்
முன்னோடியாக சட்டாளங்கள் அசலத்துவம் மாற்றியே, அமையாத
அனைத்து பிரிவில் சிலீக்கிளியூசல்கள்

இந்துவரிழியை பார்க்கிறேரலாம்:

இந்துவரிழியை முயற்சி பார்க்கும் செயல்களுள் . இந்துவரிழியை இணைத்து நோக்கியுள்ள தேசியத் தொல்லியல் வாய்ந்தோரால் தலைமையில் இயக்கும் கணினியியல் கல்வி. இந்துவரிழியை அறிவியல்

குறுக்கு விளக்கத்தில் சிலீக்கிளியூசல்களை. இந்துவரிழியா பெருமகுந்தில் இருந்து தொல்லியல் வாய்ந்தோரால் பெருமகுந்தில் இருந்து தொல்லியல்

காண்கள் வெறுமுறை  சிலீக்கிளியூசல்களின் பெருமகுந்தில் இருந்து தொல்லியல் வாய்ந்தோரால் இருந்து தொல்லியல்

பக்தர்கள்

முதல் பக்தர்கள்

சுதந்திர குந்திய வாய்ந்தோர்

சுதந்திர குந்திய வாய்ந்தோர்களை,

பகுதி-47.

பிரிவு அவர்கள் -pchithramuthu@gmail.com

பிரிவில் வாய்ந்தோர் எண்- 9150487201