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INTRODUCTION

Siddha system is such a great system of medicine, by taking care of both physique body and psychic mind (nun udal and paru udal). In olden days, it was called as Tamil Maruthuvam, ‘Tamil’ means ‘Amirtham’, which bring bless to oneself.

Siddha system of medicine which was founded by the Siddhars is considered to be one of the ancient medical systems in the world. The word ‘siddha’ comes from the word ‘Siddhi’ which means an object to be attained or perfection or heavenly bliss. Siddhi generally refers to Astama siddhi (ie) eight great supernatural powers.

The ancient Siddhars have developed the siddha system of medicine which based on Panchaboothangal and Mukkutrangal.

The body is made up of the five basic principles (i.e.) sky, wind, fire, water and earth.

The universe is made up of the same. It is well known by the version.

“அல்லாஹ்நிலாலாஹ் பிரித்து
பிரித்துலிலியா அல்லாஹ்
அல்லாஹ் பிரித்தும் கண்டு
அம்மா நாள் பார்க்கார் சாத்து”

- சல்லானல் குரானம்

According to siddhar philosophy, man is considered as a microcosm, universe is considered as the macrocosm. It means whatever occurs in man, occurs in universe and whatever occurs in universe and occurs in man. So any changes in universe will make as changes in man.
The physical body functions on the basis of the three humours like Vali, Azhal and Iyam. These three humours are nothing but combination of five elements. Any increase or decrease in ratio of the three humours causes disease in human body.

All living creatures need energy to lead their life. The energy is attained by what they consume. So regulating the dietary habits, one can make their help and mind moral. It is learnt by the following quotation.

“மாம்பாழயலாதஉறும் பெற்றால் எளிதாயிருக்கின்றது”

- தின்காரன்

Importance of diagnosis is stated in as,

“பாம்பாழயலாதையலாதபெற்றால் எளியானது
பாம்பாழயலாதபெற்றால் எளியானது
சுமாதையலாதபெற்றால் எளியானது
சுமாதையலாதையலாதபெற்றால் எளியானது
சுமாதையலாதையலாதையலாதபெற்றால் எளியானது
சுமாதையலாதையலாதையலாதையலாதபெற்றால் எளியானது”

-சேரன் மாத்தியம்பாரத

In Theriyar Maruthuva Bharatham, the author defining, a physician must have clear cut knowledge about the causative factors, normal physiological conditions, pathological changes, nature of its presentation and prognosis of the disease before treating the patient otherwise it will be a erroneous. Diagnosis of disease is chiefly arrived through the examination of patient Envagai thervugal.
Treatment in Siddha system is arrived at keeping the three thodam in equilibrium and maintenance of the seven udal thathus. So proper diet medicine adjuvant regimens of life are advised for a healthy living and restore equilibrium of humours in diseased condition.

Disease affects an individual based on the immunity, dietary and personal habits, ultimate and environmental factors etc. Treatment is fruitful only of the basic pathology behind is well diagnosed. The disease can be diagnosed based on eight entities.

"அழ்வாழ்விருந்து விவசாயியாகவே உள்ளேயே"
- சுருள் நீதியுரூபத்தில்

To lead a disease in free healthy life, one has to follow the ‘Pini anuga withi muraigal’ i.e. preventive measures throughout the life time.

"சிறையில் மிருந்துக் காண்எருந்து "
அலுவல் மற்றும் பலர் செல்வது பலர் செல்வது என்று
சிறையில் சுருள் முடிகிறது முடிகிறது முடிகிறது
பலர் செல்வது நீரே பிள்ளி"
- சுருள் நீதியுரூபத்தில்

The dissertation deals the basic principles of siddha medicine, the etiology and pathology of the disease and its diagnostic measures in concluding the disease as Uragan Vatham with clinical measurement.
SIDDHA PHYSIOLOGY

Physiology is the most fascinating and ancient branch of science. It is fascinating because, it unfolds the mystery of complicated functional aspects of individual organ in the body. It is ancient because, it exits ever since the origin of life. Even before knowing the language, culture and society, man knows about the hunger, thirst, pain and fear which are the basics of physiology.

The udal thathuvam (Physiology) of siddha system composed of

- Thathuvangal - 96 basic elements
- Udal Kattukkal - 7 physical constituent
- Vegangal - 14 reflex function
- Suvaigal - 6 tastes
- Udal Thee - 4 body fires
- Udal Vanmai - 3 immunities

96 THATHUVAM

The human body composed of 96 basic thathuvangal or constituent principles. The basic thathuvangal are responsible for the creation, protection and destruction of life, which is mediated through the Panchabootha and Mukkuttra theory.

1. The five basic elements – Bootham
2. The five organs of sense – Pori
3. The five objects of sense – Pulan
4. The five organs of action – Kanmenthiriyam
5. The five organs of perception – Kanmenthirya vidayam
6. The four intellectual faculties – Anthakaranam
7. The wisdom – Arivu
8. The ten naadi – Dasa naadi
9. The ten vital airs – Dasa vaayu
10. The five visceral cavities – Aasayam
11. The five cases of sheaths of the soul – Kosam
12. The six station of the soul – Aatharam
13. The three regions – Mandalam
14. The three principle of moral evil – Malam
15. The three humours – Dhodam
16. The three physical binding – Edanai
17. The three cosmic qualities – Gunam
18. The eight prominent passions – Raagam
19. The two deeds – Vinaigal
20. The five status of soul – Avaththai

**DOSHAM 3**

“புரிந்து குறுகியலாம் சிதம் விளையாட்டு புரிந்து
மதி கொண்டா காண்புற உண்டு”

-முதலாம்

The three humours are the fundamental principles and essential factors in the composition and constitution of the human body. The three humours Vali, Azhal, Iyam represent wind, bile and phlegm respectively.

**RELATION BETWEEN BOOTHAS AND MUKKUTTRAM**

Vali – Air
Azhal – Fire
Iyam – Water
FORMATION OF THREE HUMOURS

The physiological function of the body is mediated by 3 humours which are made up of five basic elements. These three functional factors maintain the integrity of the human body.
VALI

Dwelling places of Vali
  - Abaan
  - Hip region
  - Idakalai
  - Bones
  - Kaamakodi
  - Joints
  - Unthiyin keezh moolam
  - Skin
  - Hair follicles
  - Stools
  - Nerves
  - Muscles

Nature properties of Vali
  - Giving briskness
  - Respiration
  - Optimal functioning of the mind, thoughts and body
  - Regulation of the fourteen physiological reflexes
  - Uniform functioning of the seven udal thathukkal
  - Strengthening the five sensory organs

Types of Vali
  1. Praanan
     - Lies in the chest
     - Regulates the respiration and digestion
     - Derangement leads to respiratory disorder.
2. *Abaanan*

- Constrict the anal sphincter
- Expels the faeces and urine
- Spreads the nutrient of the digested food all over the body for its utilizations
- It expels the sperm, ova and menstrual outflow.
- Its derangement leads to bowel disturbances and reproductive system disease.

3. *Viyaanan*

- It spreads all over the body.
- It controls voluntary and involuntary movement.
- It responsibilities for movement and sensory perception.
- *It causes the flow of fluids, sweat and Opening and Closing the Eye.*
- It distributes the energy of the assimilated to various parts of the body.
- *Its derangement leads to Neurological disturbances and locomotor problems.*

4. *Udaanan*

- It regulates the Speech.
- Induces the physiological reflexes such as vomiting, hiccough, cough, sneezing.
- Derangement leads to Gastro intestinal tract disturbances.

5. *Samaanan*

- It Controls the digestion.
- It acts as an activity factor for the other Vayus.
- Its derangement leads to Gastro intestinal, Respiratory and Neurological problem.
6. **Naagan**
   - Intelligence quotient of an individual.
   - *Open and Closes the eye lids.*
   - Derangement leads to impaired memory and lack of comprehending the thinking

7. **Koorman**
   - *It makes the closure of the eyes, lacrimation and yawning.*
   - It is responsible for vision.
   - It supplies energy to build up the body.

8. **Kirukaran**
   - *It helps to salivary secretion,* nasal secretion, hunger, sneeze, cough and mind concentration.

9. **Devathaththan**
   - It causes the laziness, angry, arguing and occular movement.

10. **Dhananjayan**
    - It produces swelling all over the body.
    - Leaves body breaking up the cranium after three days of death.
    - It is responsible for destruction of bodily elements.

**AZHAL**

It is the representation of the Thee Bootham.

**Location**

It is located in piraanavayu, bladder, moolaakkini, hunger, thirst, complexion, wisdom, strength, taste, light and softness of the body.
**Types of Azhal- 5**

1. Analam  –  It controls the appetite and help in digestion  
2. Ranjagam  –  It gives colour to the blood.  
3. Saathagam  –  It has the property of fulfillment and controls the body.  
4. Aalosagam  –  It is located in the eyes and responsible for visual perception.  
5. Prasagam  –  It gives complexion to the skin.

**IYAM**

It is representation of Neer and Mann Bootham

**Properties of Iyam**

It gives stability, lubrication, holding together of the joints, power endurance for hunger, thirst, sorrow, disturbed mind and heart

**Types of Iyam**

1. **Avalambagam**
   
   It is present in the lungs and is responsible for the basic function of the heart and other four types of Iyam.

2. **Kilethagam**
   
   It is present in the stomach. It makes the food wet and helps for digestion

3. **Pothagam**
   
   It is present in tongue and is responsible for the sense of taste.

4. **Tharpagam**
   
   It is located in the head and keeps the eye cool.

5. **Santhigam**
   
   It is located in the joint and responsible for free movement of the joints.
SUVAIGAL 6

Taste denotes the enrichment of the food. This is very much related with the udal thathukkal (physical constituents) as well as the uyir thathukkal (humours).

The tastes are six in number. Each taste is formed by combination of two boothas.

<table>
<thead>
<tr>
<th>Suvaigal</th>
<th>Bootham</th>
<th>Humour</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inippu(sweet)</td>
<td>Mann + Neer</td>
<td>Iyam</td>
</tr>
<tr>
<td>2. Pulippu (sour)</td>
<td>Mann + Thee</td>
<td>Azhal</td>
</tr>
<tr>
<td>3. Uppu (salt)</td>
<td>Neer + Thee</td>
<td></td>
</tr>
<tr>
<td>4. Kaippu (bitter)</td>
<td>Vaayu + Aakayam</td>
<td>Vali</td>
</tr>
<tr>
<td>5. Karppu (pungent)</td>
<td>Vaayu + Thee</td>
<td></td>
</tr>
<tr>
<td>6. Thuvarppu (astringent)</td>
<td>Mann + Vaayu</td>
<td></td>
</tr>
</tbody>
</table>

UDAL THATHUUKKAL 7 (Seven physical constituents)

The seven Udal Thathukkal are responsible for the entire structure of the body. These are

"இரசஉதிரிஇறவசிேதாமைதமைவயுெயெபாமாைசெய்
பரவஹாயுத்துபாத்1500"

1. Saaram (chyle)

Contain nutrient from digested food and nourishes all the tissues, organs and systems. It is responsible for growth and development.
2. **Senneer (blood)**
   Blood is a complex fluid which contains both organic and inorganic constituents suspended in a colloidal medium called as plasma. It is responsible for knowledge.

3. **Oon (muscle)**
   It forms the shape of the body.

4. **Kozhuppu (fat)**
   It maintains lubrication and oiliness of all the tissues and gives energy to the body.

5. **Enbu (bone)**
   It forms the frames and structure of the body.

6. **Moolai (bone marrow)**
   It nourishes the bones

7. **Sukkilam and Suronitham**
   It is responsible for reproduction.

**VEGANGAL 14 (The fourteen reflexes)**
Reflex is generally understood as a psycho neuro muscular function of the body. The natural reflex, excretions, protective and preventive mechanisms are called fourteen vegangal.

1. Vatham – flatus
2. Thummal – sneezing
3. Siruneer – urine
4. Malam – stool
5. Kottavi – yawning
6. Pasi – hunger
7. Neervetgai – thirst
8. Kaasam – erumal
9. Elaippu – fatigue / exhaustion
10. Nithirai – sleep
11. Vaanthi – vomit
12. Kanneer – tear
13. Sukkilam / Suronitham – genital secretion
14. Suvasam – respiration

All the above mentioned reflexes are closely linked between the neurological functions and muscular activity.

**UDAL VANMAI 3 (Three immune status)**

1. Iyarkkai vanmai – It is inherited vitality
2. Kaala vanmai – Vitality that is generally found in different age and periods.
3. Seyarkkai vanmai – Improvement of vitality obtained by good habits, physical exercise and proper diet.

**UDAL THEE 4 (Four body fires)**

The normal digestive fire is called sadaraakkini and it is a combination of samaanavayu, analapitham and kilethagam.

1. **Samanaakkini**

   When the sadaraakkini normal with the proper balance of the above three constituent it is called samanaakkini. The balanced diet of an individual is properly digested in time.

2. **Mandaakkini**

   An increased kilethagam with the deficiency of analapitham causes this condition in which food is poorly digested and the process of digestion takes longer time.
3. **Dheekshaakini**

   An increased analapitham with the deficiency of kilethagam leads this condition, causing excessive digestive fire burning larger quantum of food in a lesser duration of time.

4. **Vishamaakkini**

   The samana vaayu is mostly affected here causing irregular digestion and make the food poisonous.
SIDDHA PATHOLOGY

The word pathology is derived from two Greek words – ‘pathos’ meaning suffering and ‘logos’ meaning study. Pathology is scientific study of structure and function of the body in disease; it deals with causes, effects, mechanism and nature of disease. The knowledge and understanding of pathology be is essential for all would be doctors as well as general practitioners. And specialists since unless they know the cause and mechanism of disease and understood the language spoken by the pathologist in the form of laboratory reports, they would not be able to institute appropriate treatment or suggest prevention measure to the patient.
The knowledge and understanding of pathology is essential for all would be doctors as well as general practitioners.

**MUKKUTRAM**

The changes of the three uyir thathus are called mukkutram. The mukkutram is the basic principle of all disease.

The changes take place in the uyir thathu caused by

1. Variation in the intake of diet.
2. Alteration in the udal kattugal.
3. Environmental changes,
   a. Seasonal variation in humours.
   b. Regional variation in humours.

When the normal maathirai proportions of the uyir thathus are disturbed, it leads to mukkutram. This condition is called us disease.

“மிகி§u ஒறய完备 தூவலம்பு யுசகா
வலிமான வாசியம் பெறும்”
- முச்காண்

The three humours changed and causes disease by self exaggeration and combining with other humours, and thus the disease are classified under 9 major groups of naadi nadai.

1. Vali naadi - self exaggeration of vali
2. Vali azhal naadi - maximum exaggeration of vali combined with exaggerations of azhal
3. Vali iya naadi - maximum exaggeration of vali combined with exaggeration of iyam
4. Azhal naadi - self exaggeration of azhal
5. Ahal vali naadi - maximum exaggeration of azhal combined with exaggeration of vali
6. Azhal iya naadi - maximum exaggeration of azhal combined with exaggeration of iyam
7. Iya naadi - self exaggeration of iyam
8. Iya vali naadi - maximum exaggeration of iyam combined with exaggeration of vali
9. Iya azhal naadi - maximum exaggeration of iyam combined with exaggeration of azhal
Table-1

Thannilai valarchi and vettrunilai valarchi of the three humours causes the symptoms of increasing and decreasing properties of the uyir thathukkal.

<table>
<thead>
<tr>
<th>Humours</th>
<th>Increased Feature</th>
<th>Decreased Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vali</td>
<td>Wasting, blackish discoloration, affinity on hot foods, tremors, distended abdomen, constipation, weakness, insomnia, weakness in sense organs, giddiness and brisklessness.</td>
<td>Body pain, feeble voice, diminished capability of the brain, decreased intellectual quotient, syncope, increased Iya condition.</td>
</tr>
<tr>
<td>Azhal</td>
<td>Yellowish discoloration of conjunctiva, skin, urine and faces, polyphagia, polydypsia, burning sensation all over the body, sleeping disturbances.</td>
<td>Loss of appetite, cold, pallor, feature of increased Iyam.</td>
</tr>
<tr>
<td>Iyam</td>
<td>Loss of appetite, excessive salivation, diminished activity, heaviness, pallor, cold, decreased physical constituents, dyspnoea, flatulence, cough, excessive sleep.</td>
<td>Giddiness dryness of the joints and prominence of bones, profuse sweating in the hair follicles, palpitation of heart.</td>
</tr>
</tbody>
</table>

1. Variation in the intake of diet

Any material that provides the nutritive requirement of an organism to maintain growth and physical well being is called food. Food comprises six suvaigal in appropriate proportion.
So, any alteration in the normal, regular diet will produce changes in the proportion of the suvaigal resulting disease.

**Table-2**

Excessive intake of a particular suvai may produce hyperactivities and develops some clinical manifestation. These are given below,

<table>
<thead>
<tr>
<th>Suvaigal</th>
<th>Diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inippu (sweet)</td>
<td>Obesity, indigestion, diabetes, cervical adenitis, increased lyam and its disease.</td>
</tr>
<tr>
<td>Pulippu (sour)</td>
<td>Body weakness, dull vision, giddiness, anemia, dropsy, fever, dryness of the tongue, herpes, scabies and blisters.</td>
</tr>
<tr>
<td>Uppu (salt)</td>
<td>Grey hair, aging, falling of hair and progressive weakness of the body.</td>
</tr>
<tr>
<td>Kaippu (bitter)</td>
<td>Disease related to vali, disorder of physical constituents.</td>
</tr>
<tr>
<td>Kaarppu (pungent)</td>
<td>Excessive dryness of the tongue, defect in spermatogenesis, general malaise, syncope, lassitude, tremors and back pain.</td>
</tr>
<tr>
<td>Thuvarppu(astringent)</td>
<td>Abdominal discomfort, heart disease, dryness of the tongue, tiredness, impotency, vascular constriction and constipation.</td>
</tr>
</tbody>
</table>
### Table-3

*Alterations in Udal Kattukkal*

<table>
<thead>
<tr>
<th>S.No</th>
<th>Udal Kattukkal</th>
<th>Increase Feature</th>
<th>Decreased Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Saaram (Chyle)</td>
<td>Loss of appetite, excessive salivation, diminished activity, pallor cold, decreased physical constituents, dyspnoea, flatulence, cough, excessive sleep.</td>
<td>Dryness of skin, tiredness, loss of weight, lassitude, less ability in hearing.</td>
</tr>
<tr>
<td>2.</td>
<td>Senneer (Blood)</td>
<td>Boils in different parts of the body, splenomegaly, tumours, pricking pain, loss of appetite, haematuria, hypertension, reddish eye and skin, leprosy, jaundice</td>
<td>Affinity to sour and cold food, nervous debility, dryness and pallor.</td>
</tr>
<tr>
<td>3.</td>
<td>Oon (muscle)</td>
<td>Tubercular adenitis, venereal diseases, extra growth around neck, cheeks, abdomen, thigh and genitalia.</td>
<td>Lethargic sense organ, pain in the joints, muscle wasting in chin, gluteal region, penis and thigh.</td>
</tr>
<tr>
<td>4.</td>
<td>Kozhuppu (fat)</td>
<td>Identical features of increased oon, tiredness, dyspnea on exertion, extra musculature in the genital region, external genitalia, chest, abdomen and thighs.</td>
<td>Loin pain, splenomegaly, emaciation</td>
</tr>
</tbody>
</table>
5. Enbu (bone) | Excessive ossification and dentition | Joint pain, falling of teeth, falling and splitting of hairs and nails.


7. Sukkilam or Suronitham | Increased sexual activity, urinary calculi | Dripping of semen, vaginal fluid or blood during coitus, pricking pain in the scrotum, inflammation and contoured external genitalia.

Environmental changes

The environmental changes consist of two factors.

(a). Seasonal changes of humours
(b). Regional changes of humours

Table-4

(a) Seasonal changes of humours

<table>
<thead>
<tr>
<th>Humour</th>
<th>Thannilaivalarchi</th>
<th>Vetrunilaivalarchi</th>
<th>Thannilai adaithal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vali</td>
<td>Mudhuvenil kaalam</td>
<td>Kaar kaalam</td>
<td>Koodir kaalam</td>
</tr>
<tr>
<td>Azhal</td>
<td>Kaarkaalam</td>
<td>Koodir kaalam</td>
<td>Munpani kaalam</td>
</tr>
<tr>
<td>Iyam</td>
<td>Pinpani kaalam</td>
<td>Elavenil kaalam</td>
<td>Muduvenil kaalam</td>
</tr>
</tbody>
</table>
(b) Regional Changes of Humours:

- Kurunji – Iya diseases occur
- Mullai – Azhal diseases occur
- Marutham – Diseases will not occur
- Neydhal – Vali diseases occur
- Paalai – Mukkutra diseases occur

Table-5

Effects on self suppression of fourteen vegangal

Reflexes are essential for the normal physiology when there is any self suppression to those reflexes that will lead to the pathologic state.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Vegangal</th>
<th>Diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Vatham</td>
<td>Heart disease, gastritis, umbilical hernia, body pain, liver disorder, constipation, oliguria, loss of appetite.</td>
</tr>
<tr>
<td>2.</td>
<td>Thummal</td>
<td>Head ache, defect of the special sensory organ and its activities, pain over the face, hip joint pain</td>
</tr>
<tr>
<td>4.</td>
<td>Malam</td>
<td>Diarrohoea caused by increased abaanan, cold, knee pain, head ache, flatulence, weakness and its leads to many diseases.</td>
</tr>
<tr>
<td>5.</td>
<td>Pasi</td>
<td>All organs are affected, pricking pain all over the body, schizophrenia, emaciation, apathetic face, pain in the joints.</td>
</tr>
<tr>
<td>6.</td>
<td>Kottavi</td>
<td>Lethargic face, exhaustion, indigestion, urinary disorders, leucorrhoea associated with schizophrenia and abdominal disease.</td>
</tr>
<tr>
<td>No</td>
<td>Name</td>
<td>Symptoms</td>
</tr>
<tr>
<td>----</td>
<td>------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>Neer Vetkai</td>
<td>All organs are affected, pricking pain all over the body, schizophrenia, emaciation, apathetic face, pain in the joints.</td>
</tr>
<tr>
<td>8</td>
<td>Erumal</td>
<td>Increased cough, bad breath, heart disease</td>
</tr>
<tr>
<td>9</td>
<td>Elaippu</td>
<td>Urinary disorder, peptic ulcer, syncope, rigor, identical features of suppression of sneezing.</td>
</tr>
<tr>
<td>10</td>
<td>Thookkam</td>
<td>Heaviness of head, pain in the eyes, deafness, unclear speech</td>
</tr>
<tr>
<td>11</td>
<td>Vaanthi</td>
<td>Urticarial rashes, itching, anemia, eye diseases, disease of increased azhal, asthma, fever, cough</td>
</tr>
<tr>
<td>12</td>
<td>Kanneer</td>
<td>Heart diseases, upper respiratory disorders, eye diseases, wound in the scalp, peptic ulcer.</td>
</tr>
<tr>
<td>13</td>
<td>Sukkilam</td>
<td>Fever, anuria, joint diseases of the upper and lower limbs, acute chest pain, increased urinary diseases.</td>
</tr>
<tr>
<td></td>
<td>Suronitham</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Suvasam</td>
<td>Cough, abdominal discomfort, tastelessness, epigastric pain, fever, venereal diseases</td>
</tr>
</tbody>
</table>

**PINIYARI MURAMAI**

Diagnosis of the disease is an essential factor before commencing the treatment whatever may be the system of medicine.

"தொத்தி தொத்தி தொத்தி முதல் தொத்தியை தொத்தி முதல் தொத்தியை தொத்தி முதல் தொத்தி முதல் தொத்தி "

- இலங்கார்

In siddha system, noi naadal noi mudal naadal indicates the approach to the process of diagnosis. It is based upon the following principles,
1. Poriyaal arithal

Poriyaal arithal means the art of perception of five organs viz.

1. Mei – skin
2. Vaai – mouth
3. Kan – eye
4. Mookku – nose
5. Sevi – ear

2. Pulanaal arithal

Pulanaal arithal means art of knowing objective senses viz.

1. Sparisam – sensation
2. Rasam – taste
3. Roobam – vision
4. Kantham – smell
5. Saptham – sound

3. Vinaadhal

It is a method of history taking. History taking is an art of diagnosing a disease very interestingly.

About 50% of the diagnosis is made up on history taking. The history of entire illness can be obtained from the patient and his relatives.
Envagai Thervuvugal:

The diagnosis is also made by the eight tools of diagnosis as mentioned below.

“அன்றி தேவாரை விளை விவசம் காணி.”
- வண்ணா துன்னாரை ஆராத

1. Meikuri – signs in the body
2. Niram – colour
3. Thoni – sound and speech variation
4. Vizhi – eye
5. Naa – tongue
6. Malam – faeces
7. Moothiram – urine
8. Kaikuri – signs in hand pulse

In the above verse, inspection, palpation, percussion and interrogation are mentioned first. The pulse is mentioned in the last. This order is suitable for the diagnosis.

1. Meikuri

By meikuri, the temperature of skin (heat or cold), smoothness, roughness, softness, sweat, dryness, tenderness, ulcers, hard patches, swellings, abnormal growth and nourishment can be examined by the following examination.

- Palpation – feeling
- Percussion – tapping
- Auscultation – hearing with stethoscope.
The following should be noted,

- Condition of the skin
- Organ not mentioned in the Envagi thervugal
- Nail
- Enlargement of visceras
- Tenderness
- Touch, pain, and temperature sensation

2. Niram

Diagnosis made with the help of colour of the skin, nails, hairs, conjunctiva, teeth and mucous membrane etc.

3. Thoni

The quality of the sound is assessed in the examination of them. The following also should be examined under speech.

- Pitch
- Fluency
- Articulation
- Intelligence
- Breathlessness
- Aphasia

4. Vizhi

As, both the physiological and pathological conditions are reflected in the eyes, the examination of eyes are important in the diagnosis of disease.

- Size and shape
- Colour
- Conjuctiva and cornea
- Occular movement
- Colour of vision
- Field of vision
- Acuity of vision
- Light reflex
- Inflammation
- Condition of eye lids and eye lashes.

5. Naa

In the examination of the tongue,
- Colour of the tongue
- Coating
- Dryness, increased salivation, any deviation, movement of the tongue
- Taste sensation of tongue
- Ulceration
- Macroglossia
- Microglossia
- Teeth and gum

6. Malam

Malam examined under the qualities of,
- Colour
- Froth
- Solid
- Semi solid or liquid
- Quantity
- Odour
- Consistency
- Abnormal substances and parasites.
7. Moothiram

The diagnostic value of urine is observed by two peculiar studies.

- Neerkuri
- Neikuri

Neerkuri

“என்று நிறம் வாய்ந்த பொழுது சுமார் காலமான 
சுருக்கிக்கும்போன மாணை போலறை”

- சுரு நிறம் வடிவம

From the above quotation, the neerkuri consists of the following characters.

- Niram - It indicates the colour of the urine.
- Manam - It indicates the smell of the urine.
- Edai - It indicates the specific gravity of the urine.
- Nurai - It indicates the frothy of the urine.
- Enjal - It indicates the quantity of the urine.

Neikuri

The patient is advised to take a balanced diet and should have a good sleep prior to the day of urine examination.

After early morning wake up, the first urine voided by the patient is collected in a glass container. The analysis should be performed within one and a half hour.

A drop of gingerly oil is dropped at the top of the urine without shaking, the spreading mode of oil noted.

“அரெவன் நிறங்களில் அ’சு மாகால்
உற்சீராக பாரியில் அ’சு பிடித்தை
முக்கியமாக விளக்கம் பாரியுள்ளை குறிப்பிடும்”

- சுருங்க விளக்கம் பார்க்கும்
Oil spreading like snake indicated Vali.
Oil spreading like ring indicated Azhal.
Oil remains floating as a pearl indicated Iyam.
Mixed reaction of any two of the above indicates Thontham.

The siddhars relied on these methods for prognosis of the disease and classify the disease as curable and incurable.

**NAADI**

The rhythmic expansion of an artery which may be felt by the finger which represents the state of function of the heart. Naadi is nothing but, the vital energy that sustains the life in our body.

Naadi plays the important role in envagai thervu and it has been considered to be the most important for assessing the prognosis and diagnosis of the disease. Any variation that occurs in the three humour is reflected in the naadi. These three humour organize, regularize and integrate the functions of the human body. So, naadi serves as a good indicator of all ill health. Naadi can be perceived by feeling it at the appropriate site, suitable places for pulse reading.

“தா¢ மாரை என் கூம்பு கயில் வசேபா¢
தா¢ கனிப்பினும் மோசி மக்கன்
காந்து வைத்து வழக்கம் களம் பிள்ளையது
சூரையை மோசி பாழு பாட்டு பாட்டுவில்.”
- கல்வியார் கைவா

Naadi is felt as
- Vali – tip of index finger
- Azhal – tip of the middle finger
- Iyam – tip of the ring finger
In normal condition the ratio of naadi is

- Vali – 1
- Azhal – \( \frac{1}{2} \)
- Iyam – \( \frac{1}{4} \)

The gait of the naadi compared to the various animals, reptiles and birds

“வாகினில் லயுக்கோட்டி போதித்து வட்டம் மற்றும்
சிறிய வரண்பாண்ட பரிவாரம் வட்டம் பிடியே
பெரும் வரண்பாண்ட போதித்து வட்டம் வட்டமேற்பரப்பள்ளிக்கேன்.”

- Vali – movement of swan and peacock
- Azhal – movement of tortoise and leech
- Iyam – movement of frog and serpent

Other than this the following should be noted.

- Rate of the pulse
- Rhythm
- Volume
- Character
- Whether felt in all peripheral areas and Condition of the arterial wall.
AIM AND OBJECTIVES

“மாதாண்டு விமர்சனங்கள்”

As Vali is the main cause of all sorts of ailments the author chosen Vali disease.

“Face is the index of the mind”

From the above proverb one’s feeling and thoughts can be reflected in the face. That’s why the face is considered to be very important in the world of beauty. If any flaw or blemish or inability has occurred in face it leads to profound stress.

The main aim of present study of Uragan Vatham with clinical study is to evaluate the Mukkutra verupadugal, changes of Udal kattugal in this disease.

- Collection of various literatures dealing with definition, etiology, classification, signs and symptoms of the Uragan Vatham.
- To expose the Siddhar’s diagnostic methods.
- To have a better understanding, regarding the incidence of this disease with disease with reference to Age, Sex, and Paruvakaalam.
- To study under the topics of Mukkutram, Pori, Pulangal, Udal thathukkal, Envagai thervugal, Naadi, Neerkkuri, Neikuri and Manikkadai Nool. The changes brought about by this disease under normal condition.
- The pathogenesis of the disease ruled out on the basis of etiology.
- To use modern parameters in the investigation of the disease that enhances to be diagnosed and observe the prognosis of the patient.
ELUCIDATION ABOUT DISSERTATION TOPIC

In Yugi vaithiya Chinthamani Vatha roga nithanam is mentioned in Chapter 7. The ‘Uragan Vatham’ is mentioned in poem 282.

These lines describe the disease which affects the ear and the eye brows. They are partially affected: only half of the face is affected, that is pulling of face in one side.

Deviation of face and mouth to normal side.
Involuntary facial movement called ‘Tics’. Some times the involuntary facial movements are present in Facial Nerve Paralyzis. Heaviness and numbness over the face. But no sensory loss is demonstrable.

Disuse atrophy and excessive sweating

Excessive Salivation

Summary

The clinical features of the Uragan Vatham are, Pulling of face, Deviation of mouth, Involuntary facial movement, Numbness over the face, Shyness, Inability to close the eye, Disuse atrophy, Increased sweating and Excessive salivation.
DETAILED PATHOLOGICAL VIEW OF THE DISSERTATION TOPIC

SIDDHA ASPECT

"வாதாலாம் வாரியர்"

-விள்ளோல வேகமா

விள்ளோல வாரி வருவன அறும், விள்ளோல வேகமா (நீக்கியாலும் முதல் காட்டி வேகமா குறுமாக).

மனணி வருவன

அபரவல், பலவ, திரவான, துளை, புளோறு, தார, மேற்கு, முறைக்காருகா

மனணி வருவன

துளை நீக்கி வேலையுடன், புளோறு, பலவ காலத்தில், மேற்கு பலவ பக்தம் வேறு பலவ வேறுதல், பலவ வேறுதல், துளை, புளோறு பலவ பக்தம்.

காலம் வேலையுடன் மனணி குறிப்பிட்டு, மனணி வருவன வேலையுடன் வடிவமாகும். பின்னர் விள்ளோல வாரி வருவன வேலையுடன் வடிவமாகும். மேற்கு, புளோறு வேலையுடன் வடிவமாகும். சிறுகாலமாக வருவன வேலையுடன் வடிவமாகும்.

"துவக் காலம் துளையுடன் வேலையுடன் வடிவமாகும்

பின்னர் விள்ளோல வேலையுடன் வடிவமாகும்

காலம் வேலையுடன் பலவ புளோறு வேலையுடன்

பின்னர் துளையுடன் வேலையுடன் மனணி வருவன வேலையுடன்."

- விள்ளோல வேலை

மனணித் துளையுடன் பலவ புளோறு வேலையுடன், காலம், புளோறு, பலவ புளோறு, வேலையுடன், துளை, புளோறு, காலம் வேலையுடன் வடிவமாகும் போக்கினால் வேலையுடன் வணங்கி வேறுபட்டு வாரி வேலையிட்டு வருமான்.
Altered thirithodam in Uragan Vatham

The following types of Vali humour actions are increased in Uragan Vatham

Praanan
Dyspnoea present

Abaanan
Constipation present

Viyaanan
Diminished facial muscle action, Inability to close the eye

Udhaanan
Mild dysarthria present

Samaanan
Increased appetite present

Naagan
Inability to close the eye present

Koorman
Inability to close the eye and tear present

Kirukaran
Increased salivation present

Devathathan
Irritability present
**Azhal**

The above increased Vali humour is also increases the Azhal humour. The following types of Azhal humour actions are increased.

**Anarpitham**

Increased appetite present

**Ranjagapitham**

Pallorness present

**Saathaga pitham**

Diminished facial muscles action.

**Praasagapitham**

Dryness is present.

**Iyam**

The Iya humour action is decreased. Following types of Iya humour action is decreased.

**Avalambagam**

Dyspnoea present.

**Pothagam**

Loss of taste.

**Altered Udal Thathukkal in Uragan Vatham**

**Saaram**

Depression and anxiety.

**Senneer**

Nerve paralyzis.

**Oon**

Diminished facial muscle action.

**Kozhuluppu**

Disuse atrophy
MODERN ASPECT

Muscles of facial expressions are,

- Orbicularis oris
- Levator labii superioris alaeque nasi
- Levator labii superioris
- Zygomaticus major
- Zygomaticus minor
- Levator anguli oris
- Depressor labii inferioris
- Depressor anguli oris
- Mentalis
- Buccinator

These facial expression muscles are subcutaneous muscles and they are attached to the skin. They are developed from the second pharyngeal arch. Hence these muscles are supplied by the facial nerve. These muscles are arranged around the openings of the face. The main functions of these muscles will be either to open or close these openings. While doing these movements the facial expression results as a biproduct. If one side is paralyzed, then the byproduct will be disabled. So deviation occurs in normal side.
Opening of the palpebral fissure

- **Sphincter** - Orbicularis oculi
- **Dilator** - Levator palpebrae superioris
  Frontalis

The above muscles are supplied by Facial Nerve. If the nerve is paralyzed the above muscle actions are weakened. So the Eye lid cannot be closed.

Nerve supply to Salivary Gland

Salivary glands are under the control of Autonomic Nervous system.

Parasympathetic Nerve fibers supplying the salivary glands arise from superior and inferior Salivatory Nuclei of Pons and Medulla.

Parasympathetic Nerve fibers of Facial Nerve supply to sub mandibular and sub lingual gland

*Schematic representation of Nerve supply to Salivary Gland*

```
Superior salivatory Nucleus
    ↓
Nervous intermedius
    ↓
Geniculate ganglion
    ↓
Chorda Tympani
    ↓
Lingual Nerve
    ↓
SubMaxillary ganglion
    ↓
    |         |
Sublingual gland  Submaxillary gland
```
**Paralytic secretion of Saliva**

When the parasympathetic Nerve to salivary gland is cut, salivary secretion increase for three weeks and diminishes and then stop at about 6\textsuperscript{th} week. This is because of release of more amount of Adrenaline from the from the supra renal gland after the denervation. The acinar cells of the salivary glands are hypersensitive to adrenaline. The paralytic secretion does not occur after cutting the sympathetic nerve fibre to salivary gland.
Deviation of mouth occur in emotional condition. The clinical feature of above poem may be emotional type of upper motor neuron type of Facial Nerve paralyzis.
REVIEW OF LITERATURE

The same clinical features of Uragan Vatham are found in various literatures under various headings. They are,

- Ear pain
- Dysarthria
- Deviation of face and mouth

Part I

- Deviation of face
- Dysarthria
- Ear pain
பதிமகம்

“பாறையில் போக்கும் மாட்டு பார்க்க
முழு வகையான வண்ணக்கல்லில்
பிள்ளையாறு நி஖ையுள்ள பிள்ளை
காண்போன்ற பல்வேறுபட்டு வேறு
சட்டு போக்கும் பல்வேறு வேறு
சரியில்லாத வண்ணக்கல்லில் காண்போன்ற
பிள்ளையாறு நி஖ையுள்ள பிள்ளை
காண்போன்ற பல்வேறு வேறு
சரியில்லாத வண்ணக்கல்லில் காண்போன்ற”

- பார்க்கின்று

❖ Difficulty in swallowing
❖ Dysarthria
❖ Pain over the face

அந்தா பார்க்கின்ற

“பிள்ளையாறு காண்போன்ற வண்ணக்கல்லில்
பிள்ளையாறு நி஖ையுள்ள பிள்ளையாறு
சட்டு போக்கும் பல்வேறு வேறு
சரியில்லாத வண்ணக்கல்லில் காண்போன்ற
பிள்ளையாறு நி஖ையுள்ள பிள்ளை
காண்போன்ற பல்வேறு வேறு
சரியில்லாத வண்ணக்கல்லில் காண்போன்ற”

- பார்க்கின்று

❖ Loss of naso labial fold
❖ Inability to close the eye
❖ Drooling of face
❖ Deviation of mouth
பாதுகாப்பு கோளியில் தவறாக அசத்தம் செய்யும் ஒவ்வொரு காலத்திற்கும் காலத்தின் கல்லால் ஏற்படும் கருத்திற்கு குறிப்பிட்டாள். பொருள்களின் அமைப்பு மற்றும் தொழில்களின் குறைவைச் சார்ந்த பிறவுகின்ற, தொன்மையை மேல்படுத்தும் தொடர்புகளை கண்டுபிடிப்பதை விளக்கும்.

- அக்காலத்தில் இளைஞர் வெட்டு 1500

- Deviation of mouth and face
- Difficulty in swallowing
THEORETICAL VIEW OF DISSERTATION TOPIC IN MODERN ASPECT

ANATOMY OF THE FACIAL NERVE

Facial nerve is a seventh cranial nerve. It is a mixed cranial nerve.

Development

The cartilage of second pharyngeal arch or hyoid arch (Reichert’s Cartilage) gives rise to the stapes, styloid process of the temporal bone, stylohyoid ligament, the lesser horn and upper part of the body of the hyoid bone. Muscles of the hyoid arch are the stapedius, stylohyoid, posterior belly of the digastric, auricular muscles and muscles of facial expression.

The facial nerve, the nerve of the second pharyngeal arch, supplies all of these muscles.

Nuclei of the facial nerve

Nuclei are situated within the dorsal part of the pons. The nuclei are

- Motor nucleus
- Sensory nucleus – nucleus of the tractus solitarius
- Para sympathetic nucleus – superior salivatory nucleus.
- Upper part of nucleus of the spinal tract of trigeminal.

Motor nucleus

Motor nucleus is found within the reticular formation of the pons. It is divided into lateral, intermediate and medial portions.
The lateral portion of the nucleus mainly supplies muscles around the mouth including buccinator. The intermediate portion mainly supplies muscles of the upper face including orbicularis oculi. The medial portion mainly supplies auricular muscles, platysma and occipitofrontails.

*Nucleus of the tractus solitarius*

This is the sensory nucleus of the facial nerve, situated in the upper part of the tractus solitarius. To this nucleus, the sensory part of the facial nerve or the nervus intermedius brings sensation from the anterior 2/3 of tongue and palate.

*Superior salivatory nucleus*

It is the parasympathetic nucleus to supply submandibular and sublingual salivary glands.

*Upper part of the nucleus of the spinal tract of trigeminal*

This nucleus receives auricular sensation via the auricular branch of vagus nerve. The geniculate ganglion of the facial nerve contains cell bodies of these fibres.

*Connections*

Cortico nuclear fibres of same side and opposite side. The facial muscles of lower half of face receive contralateral nerve supply but the frontails and muscles around the eye are supplied by bilateral cortical innervation. Therefore these muscles are not paralysed during upper motor neuron lesion of the facial nerve.
**Course within the pons**

The motor and sensory roots winds round the abducent nerve nucleus to form the facial colliculus. They pass forward and leave the pons. They emerge between the lower border of pons and upper border of the olive of the medulla.

**Course**

After emerging from the pons, two roots of facial nerve pass laterally and enter the internal auditory meatus. This part of the nerve is accompanied by the stato acoustic nerve. Laterally, the two roots unite to form the geniculate ganglion and from the trunk of the facial nerve. Now the nerve is passing through *facial canal or canal of Fallopei*.

On reaching medial wall of middle ear it runs posteriorly. It is situated superior to the promontory of the middle ear. It reaches the medial wall of mastoid antrum and passes behind the posterior wall of the middle ear cavity, it runs vertically downwards to the stylomastoid foramen.

**Extra cranial course**

After emerging through the stylo mastoic foramen it runs forward and it crosses styloid process of the temporal bone. It enters the posterio medial surface the parotid gland. Within the gland it crosses the retro mandibular and external carotid artery.

**Termination**

It terminates by dividing into temporo facial and cervico facial branches.

The temporo facial branch passes upwards and divides into

- Temporal nerve
- Zygomatic nerve
The cervico branch passes downwards and divides into

- Buccal nerves
- Marginal mandibular nerve
- Cervical nerve

From the anterior border of the parotid gland five terminal branches of facial nerve are emerging.

**Branches of facial nerve**

1. **Branches in the facial nerve canal**
   a. Nerve to stapedius to supply the stapedius muscle of the middle ear.
   b. Chorda tympani nerve. It commences about 0.5cm. above the stylomastoid foramen.

2. **Branches immediately below the stylomastoid foramen.**
   a. Posterior auricular nerve to supply posterior muscles of the pinna and occipitalis in the scalp.
   b. Nerve to posterior belly of the digastric. This nerve supplies
      - Posterior belly of the digastric
      - Stylohyoid muscle

3. **Branches in the face**
   a. **Temporal branch**

      This nerve pierces upper surface of the parotid gland passes upwards and crossing the zygomatic arch. It supplies muscles of the auricle, namely auricularis anterior, auricularis superior, upper half of orbicularis oculi, frontalis, and corrugator supercilli muscles.
\textbf{b. Zygomatic branch}

This nerve runs along the zygomatic arch and supplies lower half of orbicularis oculi.

\textbf{c. Buccal branch}

This nerve divides into superficial and deep branches. The superficial branch supplies procerus muscle. The deep branch divides into superior and inferior divisions. The superior divisions supplies zygomaticus major, zygomaticus minor, levator labii superioris, levator labii superioris alaeque nasi and levator angularis. The inferior division of deep buccal nerve supplies buccinator and orbicularis oris muscle.

\textbf{d. Marginal mandibular}

This nerve passes downwards and enters the neck below the angle of the mandible. It then passes along the lower border of the mandible. It supplies depressor anguli, orbicularis oris, risorius, depressor labii inferioris, mentalis.

Marginal mandibular nerve near the angle of mandible is related to a lymph gland. This lymph gland may be infected and form an abscess. During draining this abscess the incision may endanger this nerve; incisions along the lower border of the mandible may injure this nerve.

\textbf{e. Cervical branch}

It passes vertically downwards behind the angle of mandible to the neck. It supplies the platysma muscle.
Communications of the facial nerve

1. Within the internal acoustic meatus it communicates with the vestibulocochlear nerve.

2. At geniculate ganglion
   a. It communicates with the external petrosal nerve. (middle meningeal plexus)
   b. It communicates with the lesser superficial petrosal nerve. (Otic ganglion)
   c. It communicates with greater superficial petrosal nerve. (Pterygo palatine ganglion).

3. At facial nerve canal, it communicates with vagus (auricular branch)

4. Just below the stylomastoid foramen it communicates with the glossopharyngeal, vagus, auriculo temporal and great auricular nerves.

5. Behind the pinna, it communicates with the lesser occipital nerve.

6. In the face, it communicates with branches of the trigeminal nerve.

7. In the neck, it communicates with the transverse cutaneous nerve of the neck.

There are three supra nuclear pathways to control facial movements. They are voluntary, emotional and extra pyramidal motor.
**Muscles of the facial expression**

These are subcutaneous muscles and they are attached to the skin. They are developed from the second pharyngeal arch. Hence these muscles are supplied by the facial nerve. These muscles are arranged around the openings of the face. The main functions of these muscles will be either to open or close these openings. While doing these movements the facial expression results as a biproduct.

**Muscles of the nose**
- Nasalis
- Depressor septi nasi

**Muscles of the mouth**
- Orbicularis oris
- Levator labii superioris alaeque nasi
- Levator labii superioris
- Zygomaticus major
- Zygomaticus minor
- Levator anguli oris
- Depressor labii inferioris
- Depressor anguli oris
- Mentalis
- Buccinator

**Muscles of the eye lid**
- Orbicularis oculi
- Corrugator supercilli
- Levator palpebrae
Orbicularis oris

- This is the sphincter of the mouth.
- This muscle encircles the oral fissure. It is partly formed by other muscles inserted into the lips and partly formed by proper lip muscles.
- It is made into many layers.

Nerve supply

- Buccal nerve
- Marginal mandibular branch of the facial nerve.

Actions

- It compresses the lips against the teeth.
- It helps in mastication and speech.
- It produces the lips.
- The superficial layer helps in opening of the lips.

Buccinator muscle (trumpet muscle)

This is the muscle of the cheek.

Origin

- Lateral surface of the maxilla and mandible at the level of the third molar tooth.
- Pterygomandibular raphe

Insertion

- All the fibres converge at the angle of the mouth.
- Upper fibres go to the upper lip.
- Lower fibres go to the lower lip.
- Middle fibres decussate near the angle of the mouth.
  - The lower part of the middle fibres reaches the upper lip.
  - The upper part of the middle fibres reaches the lower lip.
- All the fibres fuse with the fibres of the orbicularis oris.
Nerve supply:
Buccal Nerve of the facial nerve.

Action
- It compresses the cheek against the teeth. This action is acquired during the process of chewing, when the food accumulates within the vestibule of the mouth.
- It helps in sucking by compressing the cheek. Its action is required to blow the cheek. Hence it is called as the trumpet muscle.

The levator labii superioris alaeque nasi

Origin
Frontal process of the maxilla.

Insertion
- It divides into nasal and labial parts. The nasal part is medially situated and inserted to the skin and cartilage of the ala of the nose.
- The labial part is laterally situated and it is inserted into the orbicularis oris.

Nerve supply
Buccal branch of the facial nerve.

Actions
The medial part dilates the nose by lifting the ala of the nose. The lateral part elevates the upper lip.

The levator labii superioris

Origin
- Infra orbital margin of the maxilla, above the infra orbital foramen.
- Zygomatic bone.
Insertion
Orbicularis oris

Nerve supply
Buccal branch of the facial nerve.

Actions
It elevates and everts the upper lip. Its action is required for the formation of the nasolabial furrow.

Zygomaticus minor

Origin
Outer surface of the zygomatic bone behind the zygomatico maxillary suture.

Insertion
Orbicularis oris

Nerve supply
Buccal branch of the facial nerve.

Actions
It pulls the upper lip upwards. Its action is required for the formation of the naso labial furrow.

Zygomaticus major (Smiling muscle)

Origin
Zygomatic bone infront of the zygomatico temporal suture.

Insertion
Orbicularis oris.

Nerve supply
Buccal branch of facial nerve.

Action
Elevation of the angle of the mouth and forms the naso labial furrow.
**The Depressor anguli oris**

**Origin**

Oblique line of the mandible.

**Insertion**

Blends with the orbicularis oris near the angle of the mouth.

**Nerve supply**

Marginal mandibular branch of the facial nerve.

**Action**

Draws the angle of the mouth downwards and laterally.

---

**The Depressor labii inferioris**

**Origin**

Oblique line of mandible near symphysis menti.

**Insertion**

- Orbicularis oris
- Skin of the lower lip

**Nerve supply**

Marginal mandibular nerve

**Action**

Depressor of the lower lip.

---

**The mentalis**

**Origin**

Incisive of the lower lip

**Nerve supply**

Marginal mandibular nerve.

**Action**

It draws the lower lip downwards.
The Risorius

Origin
Fascia covering the parotid gland.

Insertion
Angle of the mouth

Nerve supply
Buccal branch of facial nerve.

Action
Its action expresses grining. It retracts the angle of the mouth.

Orbicularis oculi - muscles around the orbit
It is found within the eyelid, forehead, temporal region and upper part of the cheek. It encircles the orbital margin.

Parts of orbicularis oculi

- Orbital part
- Palpebral part
- Lacrimal part

Orbital part

Origin
- Medial palpebral ligament
- Frontal process of the maxilla
- Nasal process of the frontal bone.

Insertion
It encircles around the orbital margin. The upper and lower fibres are continuous with each other at the lateral orbital margin. Some fibres are inserted on the skin over the eyebrow. Upper fibres meet and fuse with the frontal belly of occipito frontalis muscle.
**Palpebral part**

*Origin*

- Medial palpebral ligament
- Medial border of the orbit above and below the medial palpebral ligament.

*Insertion*

Lateral palpebral raphe

**Lacrimal part**

*Origin*

- Lacrimal fascia
- Lacrimal crest and lateral surface of the lacrimal bone.

*Insertion*

It divides into upper and lower portions. They enter the eyelids. They are attached to the tarsalplate and lacrimal canaliculi. Most fibres of this muscle extend laterally and decussate at lateral palpebral raphe.

*Nerve supply*

Temporal and zygomatic branch of the facial nerve.

*Actions*

1. **Orbital part**
   - It locks the eyelids. Thus it acts as a strong sphincter of the orbit.
   - It opposes the action of the frontalis muscle.

2. **Palpebral part**
   Shuts the eyelids tightly during blinking and sleeping.

3. **Lacrimal part**
   Pulls the eyelids medially. Dilates the lacrimal sac.
The corrugator supercilli (Muscle of frowning)

**Origin**
Medial part of super ciliary arch.

**Insertion**
Skin and fascia above the supra orbital margin.

**Nerve supply**
Temporal branch of facial nerve.

**Action**
Draws the eyebrow medially. It forms vertical furrows on the eyebrow. This causes the expression of frowning.
PHYSIOLOGY

The Facial Nerve has four component with distinct function. These are,

1. **Branchial motor (Special visceral efferent)**
   Branchial motor supplies the muscles of Facial expression, Posterior belly of Digastric, Stylohyoid and Stapedius.

2. **Visceral motor (General visceral efferent)**
   Visceral motor supplies the Parasympathetic innervations of the Lacrimal, Sub mandibular and Sub lingual glands, as well as mucous membrane of Naso pharynx, Hard palate and soft palate.

3. **Special sensory (Special afferent)**
   Taste sensation from the anterior 2/3 of tongue, hard palate and soft palate.

4. **General sensory (General somatic efferent)**
   General sensation from the skin of the concha of auricle and from a small area behind the ear.

   Branchial motor fibres constitute the largest portion of the Facial Nerve. The remaining three components are bound in a distinct facial sheath from the branchial motor fibres. Collectively these three are referred to as the nervous intermedius.
PATHOLOGY

The symptoms explained in the poem are, Inability to closing the eye, Deviation of mouth and face in to normal side, numbness over the face, excessive salivation, increased sweating.

Bell’s Palsy is caused by an inflammation within a small bony tube called the fallopian canal. The canal is an extremely narrow area. An inflammation within it is likely to exert pressure on the nerve, compressing it. Likewise, if the nerve itself becomes inflamed within this small canal, it can encounter pressure, with the same result of compression.

The main Pathology behind these symptoms are paralysis of Facial Nerve.

Bell’s palsy is a one type of Idiopathic acute Facial Nerve paralysis. This is accurately described as a multiple cranial nerve ganglionitis that involves the Facial Nerve.

Pathogenesis

Pathogenesis of the facial paralysis is unknown. The few autopsied cases of this disease have shown only on descript changes in the facial nerve and not inflammatory changes, as is commonly presumed.
**FACIAL PARALYSIS**

Facial Paralysis is due to paralysis of the VII Cranial Nerve.

*Classification of facial palsy*

It may be broadly classified into two types. They are:

- Upper motor neuron type or supra nuclear type
- Lower motor neuron type

1. **UPPER MOTOR NEURON TYPE OR SUPRA NUCLEAR TYPE**

In this type, the cortico spinal tract supplying the facial neuron muscles are affected and the lesion is always above the level of pons.

It is again classified into two types. They are:

- Voluntary
- Emotional

*Table -6*

**Difference Between Voluntary And Emotional Palsy**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Voluntary</th>
<th>Emotional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of lesion</td>
<td>Cortex or sub cortical pyramidal tract</td>
<td>Frontal lobes anterior to precentral gyrus or thalamus or basal ganglia</td>
</tr>
<tr>
<td>Facial involvement</td>
<td>More marked on voluntary contraction</td>
<td>No change in voluntary contraction</td>
</tr>
<tr>
<td>a. Voluntary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Involuntary</td>
<td>Preservation of function during crying and smiling etc.</td>
<td>Paresis becomes apparent during these emotional conditions.</td>
</tr>
</tbody>
</table>
**LOWER MOTOR NEURON TYPE**

The lower motor neuron is the common pathway. Hence a lesion at this site produces measures of entire half of the face on the ipsilateral side.

*Table -7.*

*The exact site and level of lesions are tabulated as follows.*

<table>
<thead>
<tr>
<th>Site</th>
<th>Causes</th>
<th>Clinical Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pons (Nuclear)</td>
<td>Infarction</td>
<td>LMN type of ipsilateral face weakness, often VI nerve also affected and contralateral hemiparesis.</td>
</tr>
<tr>
<td></td>
<td>Demyelination</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Haemorrhage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tumour.</td>
<td></td>
</tr>
<tr>
<td>Cerebello pontine angle</td>
<td>Acoustic neuroma menigioma</td>
<td>LMN type of ipsilateral face weakness, deafness and tinnitus ophthalmic division of V nerve affected.</td>
</tr>
<tr>
<td>Facial canal</td>
<td>Bell’s palsy</td>
<td>LMN type of ipsilateral face weakness loss of taste, if lesion is proximal to chorda tympani salivation and lacrimation seen, if lesion is proximal to nerve to stapedius hyper acusis.</td>
</tr>
<tr>
<td></td>
<td>mastoiditis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HZV (Ram say hunt syndrome)</td>
<td></td>
</tr>
<tr>
<td>Parotid gland</td>
<td>Tumour sarcoidosis</td>
<td>Selective weakness of parts of face due to branch involvement.</td>
</tr>
<tr>
<td>Neuro Muscular junction</td>
<td>Myasthemia gravis</td>
<td>Associated ptosis and external ophthalmoplegia, dysphagia, dysarthria and limb weakness.</td>
</tr>
<tr>
<td>Muscles</td>
<td>Muscular dystrophy myositis</td>
<td>Limb weakness also weak, tenderness of muscles involved.</td>
</tr>
<tr>
<td></td>
<td>myositis</td>
<td></td>
</tr>
</tbody>
</table>
Since the Uragan Vatham may correlate with Bell’s palsy, it is discussed here in detail.

**BELL’S PALSY**

**Definition**

Bell’s palsy is a form of facial paralysis resulting from damage to the VII cranial nerve.

The condition is named for Charles Bell, a Scottish surgeon in Edinburgh who studied the nerve and its innervations of the facial muscle in 1821.

Since the function of the facial nerve is so complex, many symptoms may occur when the fibres of the facial nerve are disrupted.

Bell’s palsy temporarily prevents the nerve from transmitting signals to the muscles causing weakness or paralysis.

**Age incidence**

It may occur at any age group, but it is slightly more common in the age group from 20-50 years.

**Incidence rate**

It is about 23 per 1,00,000 annually, or about one in 60 or 70 persons in a life time.

**Sexual preponderance**

This disorder affects men and women more or less equally and occurs at all ages and at all times of the year.

This incidence is not disproportionately high in pregnant women, contrary to popular belief, but is probably higher in diabetics than in normal population.
Aetiology

The specific cause of Bell’s palsy is unknown. A number of things can damage the facial nerve. Several factors predispose this disease. The predisposing factors are,

- Diabetic mellitus.
- Hyper tension.
- Respiratory infection.
- Chronic otitis media.
- Parotitis.
- Exposure to cold.
- Stress.
- Dental treatment.
- Poor nutrition.
- Leprosy.
- Brain stem injuries.
- Trauma to facial nerve.
- Surgical wounds.
- Temporal bone fracture.
- Tumours.

Clinical features

Onset

The onset of Bell’s palsy in fairly abrupt, maximum measures being attained by 48 hours as a general rule.

There is frequently pain at the onset in the ear, in the mastoid region, or around the angle of the jaw.
**Symptoms**

- Bell’s palsy is usually unilateral; rarely bilateral. There is paralysis of the muscles of facial expression. The upper and lower facial muscles are equally affected.

- A person may not be able to close one eye, inability to blink, or he/ she may have difficulty in shutting their eye completely. Diminished blinking and the absence of fearing together can reduce or eliminate the flow of tears across the eye ball, resulting in drying, erosion, and ulcer formation.

- When the patient attempts to close the eye, the globe rolls upwards and slightly inwards called Bell’s phenomenon.

- Eversion of the lower lid (ectropion) so the punctum falls away from conjunctiva permitting tears to spill over the cheek. So tears absorption is impaired.

- The eyebrow droops, and the wrinkles of the brow are smoothed out. So frowning and raising the eyebrow are impossible.

- The patient complaints of a heaviness or numbness in the face, but no sensory loss are demonstrable.

- The palpebral fissure becomes narrowed and the naso labial fold deepens with the passage of time, the face and even the tip of the nose become pulled to the normal side.

- The patient cannot retract the angle of mouth, or purse the lips as in whistling.

- Owing to paralysis of the buccinator, Food accumulates between the cheek and the teeth.
Dripping of saliva over angle of the mouth.

The fore head does not wrinkle when a person tries to lift their eye brow.

Distortion of the mouth may cause the tongue to deviate to the normal side when protruded, thus giving a false impression of hypoglossal lesion.

There may be mild dysarthria.

When the inflammatory process extends upwards to involve the nerve above the point at which the chorda tympani leaves it, there is loss of taste on the anterior two thirds of the tongue.

When the stapedius is also involved, the patient complaining of hyperacusis

**Signs**

- Asymmetry of the face.
- Widening of palpebral fissure.
- Bell’s phenomenon.
- Obliteration of nasolabial fold.
- Deviation of angle of mouth.

**Examination of motor function**

- The motor function of the Facial Nerve is tested by asking the patient
- To shut the eyes and then try to open
- To raise the eyebrows
- To frown
- To whistle
- To smile or show his teeth
- To inflate his mouth with air and blow out the cheeks. Tap the finger in turn on each inflated cheeks.
- To open his mouth against resistance and see if platysma muscle contracts or not. (Babinski’s platysma sign)
- To show the teeth, the angle of mouth is drawn in to the healthy side.

**Examination of Sensory function**

*The sensory function of the Facial Nerve is tested by,*

**Taste**

Examine the anterior two-third portion of each half of the tongue separately. Use strong solution of sugar and common Salt and Weak solution of Citric acid to test for ‘Sweet’, ‘Sour’, and ‘bitter’ taste respectively.

**Examination of Secretory function**

**Lacrimation:**

Increased lacrimation is usually apparent and decreased lacrimation may be determined from the history.

**Schirmer’s Test**

Keep a piece of special blotting paper under the lower eye lid and remove it after five minutes. Normally at least 10 mm of blotting paper will be dampened by the evoked tear secretion.

**Nasolacrimal Reflex**

Reflex secretion of tears usually produced by stimulation of nasal mucosa by irritating substances such as dilute solutions of ammonia or formaldehyde.

- **Afferent** – Trigeminal Nerve
- **Efferent** – Greater superficial nerve (a branch of Facial Nerve)
Salivation

Increased or decreased salivation is also appearing from the history.

Examination of the Reflexes

Corneal reflex

- Afferent  –  Trigeminal nerve
- Efferent  –  Facial nerve

Stapedial reflex

- Afferent  –  Vestibulo cochlear nerve
- Efferent  –  Facial nerve

Diagnosis

It is purely a clinical diagnosis but it should be differentiated from facial palsy due to other causes.

Pathogenesis

Pathogenesis of the facial paralysis is unknown. The few autopsied cases of this disease have shown only on descript changes in the facial nerve and not inflammatory changes, as is commonly presumed.

Differential diagnosis

1. Tumors

Which invade the temporal bone (carotid body, cholesteoma, and dermoid), may produce a facial palsy, but the onset is insidious and the course is progressive.

2. Fracture of the Temporal bone

It occurs with damage to middle or internal ear.

3. Ram say hunt syndrome

It is presumably due to Herpes Zoester of the geniculate ganglion, consists of a severe facial palsy, associated with vesicular eruptions, external auditory canal, and other parts of the cranial intugement; often the eighth cranial nerve is also affected.
4. **Pontine lesion**

Infarcts and tumors are the common pontine lesions which may interrupt the facial nerve fibres.

5. **Melkersson-Rosenthal syndrome**

It consists of a triad of recurrent facial paralysis, permanent facial especially labial edema, less constantly, placation of the tongue.

6. **Mobius syndrome**

It is congenital facial diplegia. It is development of bilateral facial paralysis usually associated with oculomotor nerve or other disorders.

7. **Mimic paralysis:**

It is due to frontal or thalamic lesion, which abolish the contralateral emotional movements of the face leaving the voluntary movements unimpaired.

8. **Facial hemiatrophy of Rhomberg**

It occurs mainly in females and is characterized by a disappearance of fat in the dermal and subcutaneous tissues on one side of the face. It usually begins in adolescence or early adult years and is slowly progressive. In its advance form, the face is gaunt and the skin is thin, wrinkled, and rather brown. The facial hair may turn white, and fall out and the sebaceous glands become atrophic.

9. **Supra nuclear type**

All of these form of nuclear or peripheral palsy must be distinguished from the supra nuclear type. The frontalis and orbicularis oculi muscles are less involved than that of lower face. There may be dissociation of emotional and voluntary facial movements, and often some degree of paralysis of the arm and leg or aphasia of dominant hemisphere lesions is conjoined.
Complications

Hemifacial spasm

There is frequent contraction of varying speed of the facial muscles, limited to one side. Similar spasm associated with synkinetic facial movement, may develop after incomplete recovery of Bell’s palsy.

Facial synkinesis

Attempts to move one group of facial muscles results in contraction of all of them. Facial spasm may develop and persist indefinitely, being initiated by every facial movement.

Prognosis

In Bell’s palsy, approximately 85% of cases, there is local conduction block within the facial canal without axonal degeneration. The conduction block is presumably the consequence of segmental demyelination, and this recover fully within a few weeks.

In about 15 percent of cases will have axonal degeneration, resulting in total paralysis. The recovery has to take place by axonal degeneration. Evidence of reinnervation does not appear in under 3 months and the ultimate recovery is incomplete.

Clinically, the presence of incomplete paralysis in the first week is the most favorable prognostic sign. Factors associated with a poorer prognosis than average include hyperacusia, diminished lacrimation, an age greater than 60 yrs, diabetes mellitus and hypertension.
Investigations

No specific confirmatory investigation. But it should be made to rule out, alternate diagnosis.

1. Nerve conduction study

   It is a measure of the velocity of conduction of impulse is a nerve. The velocity of the conduction of the impulse between any two points of the nerve can be calculated. The normal nerve conduction velocity of motor is 70 meters/second (40-60 m/s)

Motor Nerve conduction:

   - Electrical stimulation of a motor nerve normally produces contraction of the muscles supplied by that nerve.
   - The stimulus is applied in the skin over the nerve.
   - The motor unit response is measured by a concentric needle electrode inserted into the muscle. (Motor action potential MAP) – MAP is amplified and displayed on an oscilloscope.
   - If the test is repeated at two points a measured distance apart along the nerve and values obtained are subtracted from one another. Conduction velocity between those two points can be determined.

Sensory Nerve conduction:

   - If a sensory nerve is stimulated distally, the sensory nerve action potential (SNAP) can be recorded at a proximal site.
   - Here again, by measuring the distance between the stimulating and recording electrodes and the time lapse between stimulus and response, the sensory nerve conduction velocity can be calculated.
2. Electro diagnostic study

It can be performed, but it should not give any diagnosis and it should give the prognostic index. Electro myography may be of value in distinguishing temporary conduction defect from a pathologic interruption in the continuity of nerve fibres.

Axons remain excitable distal to the lesion for 3 or 4 days after interruption. It is therefore not possible to be certain from electro diagnostic tests, whether axonal degeneration has taken place until after this time.

At that stage, electrical stimulation of the facial nerve at the stylomastoid foramen with brief pulses will still elicit a muscle contraction if the paralysis is due to conduction block, whereas none will be obtained if axonal degeneration has taken place.
EVALUATION OF THE DISSERTATION TOPIC

Materials and method
The clinical study on Uragan Vatham was carried out at the post graduate Noi Naadal Department of Government Siddha Medical College Hospital, Palayamkottai.

Case Selection and Supervision
15 cases of similar of “Uragan Vatham” were taken from the PG OP, Department of GSMC, Palayamkottai. From which 10 typical cases of “Uragan Vatham” were selected and were followed by the author whose work was under the close supervision of the professor and lecture of the PG Noi Naadal Department.

Evaluation of Clinical Parameters
The cases were subjected to careful scrutiny, which involved history taking and examination of clinical features.

- Detailed history of present and past illness.
- Personal and family history.
- Socio economic status.
- Occupational history.
- Dietary habits.
- Seasonal variation.
- Raasi, Natchathiram.
- Manikkadai nool.

Were noted. All the clinical features were carefully examined.

The clinical signs and symptoms of Uragan Vatham were taken from Yugi Vaithya chinthamani – 800.
**Signs and symptoms of Uragan Vatham**

- Pulling of face to normal side
- Deviation of mouth
- Numbness over the face
- Involuntary facial movement
- Inability to close the eye
- Excessive salivation
- Disuse atrophy
- Increased sweating

**Study on Siddha clinical diagnosis**

Modes of investigation of cases are

- Poriyaalarithal
- Pulanaalarithal
- Vinaathal
- Mukkuttra Nilaigal
- Udal Kattu Nilaigal
- Envagai Theruvugal

**The clinical investigation**

For further detailed study about this disease, the following laboratory investigations were done in these cases.

**Haematological**

- Total count of w.b.c.
- Differential count of w.b.c.
- Haemoglobin
- Erythrocyte sedimentation rate

**Bio-chemical**

- Blood sugar
**Urine Analysis**
- Albumin
- Sugar
- Deposit

**Motion**
- Ova
- Cyst

**Other test**

Nerve conduction study
OBSERVATION AND RESULTS

Results are observed with respect to the following aspects.

- Age and Sex reference
- Thinai
- Paruva kaalam
- Mukkutranilai
- Udal thathukkal
- Envagai thervugal
- Manikkadai nool
- Clinical feature
- Laboratory findings

Table -8

**Age and Sex reference**

<table>
<thead>
<tr>
<th>Age</th>
<th>Sex</th>
<th>No of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>20-30 years</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>31-40 years</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>41-60 years</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Table - 9

**Thinai**

<table>
<thead>
<tr>
<th>SI No</th>
<th>Thinai</th>
<th>No of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kurinji</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Mullai</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Marutham</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Neithal</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Paalai</td>
<td>-</td>
</tr>
</tbody>
</table>
**Table - 10**

*Paruvakaalangal*

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Paruvakaalam</th>
<th>No. of cases affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Kaarkaalam (Aavani-Puratasi)</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>Koothirkaalam (Iyppasi-Karthigai)</td>
<td>-</td>
</tr>
<tr>
<td>3.</td>
<td>Munpanikaalam (Margazhi-Thai)</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>Pinpanikaalam (Masi-Panguni)</td>
<td>4</td>
</tr>
<tr>
<td>5.</td>
<td>Ilavenilkaalam (Chithirai-Vaigasi)</td>
<td>4</td>
</tr>
<tr>
<td>6.</td>
<td>Muthu-venilkaalam (Aani-Aadi)</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table - 11**

*Derangement of Vali*

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Types</th>
<th>No of cases affected</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Piraanan</td>
<td>3</td>
<td>Dyspnoea</td>
</tr>
<tr>
<td>2</td>
<td>Abaanen</td>
<td>4</td>
<td>Constipation</td>
</tr>
<tr>
<td>3</td>
<td>Viyaanan</td>
<td>10</td>
<td>Inability to close the eye</td>
</tr>
<tr>
<td>4</td>
<td>Udaanan</td>
<td>10</td>
<td>Mild dysarthria</td>
</tr>
<tr>
<td>5</td>
<td>Samaanan</td>
<td>10</td>
<td>Increased appetite</td>
</tr>
<tr>
<td>6</td>
<td>Naagan</td>
<td>10</td>
<td>Inability to close the eye</td>
</tr>
<tr>
<td>7</td>
<td>Koorman</td>
<td>10</td>
<td>Inability to close the eye</td>
</tr>
<tr>
<td>8</td>
<td>Kirukaran</td>
<td>10</td>
<td>Increased salivation</td>
</tr>
<tr>
<td>9</td>
<td>Thevathathan</td>
<td>10</td>
<td>Irritability</td>
</tr>
<tr>
<td>10</td>
<td>Thananjayan</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
### Table - 12

**Derangement of Azhal**

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Types</th>
<th>No of cases affected</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Analapitham</td>
<td>10</td>
<td>Increased appetite</td>
</tr>
<tr>
<td>2</td>
<td>Ranjagapitham</td>
<td>4</td>
<td>Pallorness</td>
</tr>
<tr>
<td>3</td>
<td>Sathagam</td>
<td>10</td>
<td>Diminished facial expression</td>
</tr>
<tr>
<td>4</td>
<td>Aalosagam</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Praasagam</td>
<td>4</td>
<td>Dryness</td>
</tr>
</tbody>
</table>

### Table - 13

**Derangement of Iyam**

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Types</th>
<th>No of cases affected</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Avalambagam</td>
<td>10</td>
<td>Dyspnoea</td>
</tr>
<tr>
<td>2</td>
<td>Kilethagam</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Pothagam</td>
<td>10</td>
<td>Loss of taste</td>
</tr>
<tr>
<td>4</td>
<td>Tharpagam</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Santhigam</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Table - 14

Udal Thathukkal

The observation in Udal Thathukkal has been tabulated as follows.

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Types</th>
<th>No. of cases affected</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Saaram</td>
<td>10</td>
<td>Depression, anxiety</td>
</tr>
<tr>
<td>2</td>
<td>Senneer</td>
<td>10</td>
<td>Nerve weakness</td>
</tr>
<tr>
<td>3</td>
<td>Oon</td>
<td>10</td>
<td>Diminished facial expression</td>
</tr>
<tr>
<td>4</td>
<td>Kozhuppu</td>
<td>3</td>
<td>Disuse atrophy</td>
</tr>
<tr>
<td>5</td>
<td>Enbu</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Moolai</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>Sukkilam/suronitham</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Table - 15

Envagai Thervugal

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>15513</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>N</td>
<td>VA</td>
</tr>
<tr>
<td>22823</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>N</td>
<td>VA</td>
</tr>
<tr>
<td>29449</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>N</td>
<td>VA</td>
</tr>
<tr>
<td>32537</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>N</td>
<td>VA</td>
</tr>
<tr>
<td>32994</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>N</td>
<td>VA</td>
</tr>
<tr>
<td>33004</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>N</td>
<td>VA</td>
</tr>
<tr>
<td>33014</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>N</td>
<td>VA</td>
</tr>
<tr>
<td>33499</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>N</td>
<td>VA</td>
</tr>
<tr>
<td>33504</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>N</td>
<td>VA</td>
</tr>
<tr>
<td>33508</td>
<td>A</td>
<td>A</td>
<td>NA</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>N</td>
<td>VA</td>
</tr>
</tbody>
</table>

N- Normal   A- Affected   NA- Not Affected   VA- Vali Azhal
Table - 16

Manikkadai Nool

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Viral kadai Alavu</th>
<th>No.of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>9 ¼</td>
<td>6</td>
</tr>
</tbody>
</table>

From the Viral kadai Alavu majority of patient were having 9 ¼ , as Viral kadai Alavu, the symptom mentioned under the Uragan Vatham is eye irritation.

Table - 17

Clinical Feature

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Clinical Feature</th>
<th>No. of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pulling of face</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Deviation of mouth</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Numbness over the face</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Inability to close the eye</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Disuse atrophy</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>Increased sweating</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>Excessive salivation</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>Involuntary facial movement</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>Shyness</td>
<td>10</td>
</tr>
</tbody>
</table>
### ALLIED PARAMETERS

Laboratory investigation of selected 10 cases

<table>
<thead>
<tr>
<th>OP.No</th>
<th>Blood</th>
<th>ESR</th>
<th>Hb Gms%</th>
<th>Bio Chemical</th>
<th>Urine</th>
<th>Motion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>TC Cells/cumm</strong></td>
<td><strong>DC</strong></td>
<td><strong>½ hr mm</strong></td>
<td><strong>1 hr mm</strong></td>
<td><strong>Bl.sugar</strong></td>
<td><strong>Alb</strong></td>
</tr>
<tr>
<td></td>
<td><strong>P</strong></td>
<td><strong>L</strong></td>
<td><strong>E</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15513</td>
<td>9800</td>
<td>65</td>
<td>33</td>
<td>02</td>
<td>03</td>
<td>07</td>
</tr>
<tr>
<td>22823</td>
<td>7600</td>
<td>59</td>
<td>39</td>
<td>02</td>
<td>11</td>
<td>38</td>
</tr>
<tr>
<td>29449</td>
<td>9600</td>
<td>58</td>
<td>42</td>
<td>-</td>
<td>06</td>
<td>14</td>
</tr>
<tr>
<td>32537</td>
<td>9100</td>
<td>66</td>
<td>32</td>
<td>02</td>
<td>04</td>
<td>09</td>
</tr>
<tr>
<td>32994</td>
<td>9500</td>
<td>67</td>
<td>30</td>
<td>02</td>
<td>04</td>
<td>07</td>
</tr>
<tr>
<td>33004</td>
<td>9750</td>
<td>63</td>
<td>34</td>
<td>03</td>
<td>03</td>
<td>07</td>
</tr>
<tr>
<td>33014</td>
<td>9350</td>
<td>60</td>
<td>38</td>
<td>02</td>
<td>07</td>
<td>15</td>
</tr>
<tr>
<td>33499</td>
<td>9500</td>
<td>65</td>
<td>32</td>
<td>03</td>
<td>08</td>
<td>15</td>
</tr>
<tr>
<td>33504</td>
<td>9500</td>
<td>55</td>
<td>40</td>
<td>04</td>
<td>03</td>
<td>08</td>
</tr>
<tr>
<td>33508</td>
<td>9700</td>
<td>59</td>
<td>35</td>
<td>04</td>
<td>04</td>
<td>10</td>
</tr>
</tbody>
</table>
Statistical analysis of Uragan Vatham

The statistics mean 8.D median and percentages are used to analyses the study subjects and interpretation are made with the use of students’ t’ test, Relative Risk (RR), Attributable Risk (AR), and Odds Ratio (OR).

Observation and results

Age and Sex

The study subjects were analysed based on their Age and Sex. The comparison of Sex with their Age distribution is furnished in the below mentioned table.

Table - 19
Age and sex wise distribution of study subjects.

<table>
<thead>
<tr>
<th>Age group</th>
<th>Sex</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-29</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>30-34</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>35-39</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>40-44</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>45-49</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>50-54</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Mean</td>
<td>40.2</td>
<td>38.4</td>
<td>39.3</td>
</tr>
<tr>
<td>8.D</td>
<td>11.2</td>
<td>8.3</td>
<td>9.4</td>
</tr>
<tr>
<td>Medium</td>
<td>38</td>
<td>35</td>
<td>37</td>
</tr>
<tr>
<td>Range</td>
<td>29</td>
<td>20</td>
<td>29</td>
</tr>
<tr>
<td>‘t’</td>
<td></td>
<td></td>
<td>0.287</td>
</tr>
<tr>
<td>p</td>
<td>&gt;0.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

81
The mean age of the male subjects is 40.2±11.2 years and the same of female is 38.4±8.3 years. There is a difference between the mean ages of the sexes, but the observed difference of mean age is not statistically significant (t=0.287 and p>0.05)

The observed difference may be attributed to the sampling fluctuations. The mean ages of the total study subjects is 39.3±9.4 and the median age is 37 years. The incidence of the disease is 25 to 54 years.

*Paruvakaalam*

The incidence of the disease is classified according to the season.

*Table - 20*

*The Sex wise seasonal incidence of Uragan Vatham.*

<table>
<thead>
<tr>
<th>Paruvakaalam</th>
<th>Sex</th>
<th>RR</th>
<th>AR</th>
<th>OR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panikaalam</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Venil kaalam</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>5</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

The above table shows that there is no significant ratio is observed among the Sex and Paruvakaalam. The incidence of the disease is same in both Paruvakaalam since RR and OR = unity

*Etiological factor*

All the 10 subjects are exposure to chill weather. Chill weather is crucial factor in the incidence of the disease. But same cases are alone with other diseases like hypertension and diabetes mellitus. The below mentioned analysis and interpretation are clearly shows the etiology of exposure to chill weather with the diseases.
Table - 21

Distribution of exposure to chill weather with hypertension

<table>
<thead>
<tr>
<th>Hypertension</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
<th>RR</th>
<th>AR</th>
<th>OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure to chill weather</td>
<td>3</td>
<td>7</td>
<td>10</td>
<td>7.0</td>
<td>85.7%</td>
<td>10.5</td>
</tr>
<tr>
<td>Exposure to chill weather</td>
<td>0</td>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From above table it is shows that exposure to chill weather with hypertension risk is 7 times greater than the without hypertension exposure to chill weather. The attributable risk without hypertension exposure to chill weather is 85.7%. The odd of chill weather with hypertension risk is 10.5 times greater.

Table - 22

Distribution of exposure to chill weather with diabetic

<table>
<thead>
<tr>
<th>Diabetic</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
<th>RR</th>
<th>AR</th>
<th>OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure to chill weather</td>
<td>1</td>
<td>9</td>
<td>10</td>
<td>3.0</td>
<td>66.7%</td>
<td>3.5</td>
</tr>
<tr>
<td>Exposure to chill weather</td>
<td>0</td>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The diabetic with exposure to chill weather is a risk of incidence of the disease. The ratio is 3 times greater than the without diabetic exposure to chill weather. The chill weather is on attributable ratio in the absence of diabetic and the risk is 66.7%. The odd of exposure to chill weather with diabetic is 3.5 times greater than the without diabetic exposure to chill weather. Totally chill weather is a crucial etiological factor of the incidence of the Uragan Vatham.
Table - 23

Classification of mukkutra Nilaigal

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Component</th>
<th>N</th>
<th>Types</th>
<th>Affected</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Number</td>
<td></td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>Vali</td>
<td>10</td>
<td>Praanan</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>Abanan</td>
<td>4</td>
<td>40</td>
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<td></td>
<td></td>
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<td>Viyanan</td>
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<tr>
<td></td>
<td></td>
<td>10</td>
<td>Udanan</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>Samaanan</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>Naagan</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>Koorman</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>Kirukaran</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>Thevathathan</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Azhal</td>
<td>10</td>
<td>Anarpitham</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>Ranjagapitham</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>Sathagam</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>Prasagam</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>Iyam</td>
<td>10</td>
<td>Avalambagam</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>Pothagam</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

The above table shows the indication of cent percent of mukkutra nilaigal namely Praanan, Abanan, viyanan, Udanan, Samaanan, Naagan, Koorman, Kirukaran, Thevathathan, Anarpitham, Sathagam, Avalambagam, Pothagam. Abanan and Ranjagapitham are 40%.
### Table - 24

**Classification of affected udal thathukkal**

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Types</th>
<th>N</th>
<th>Affected cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>1</td>
<td>Saaram</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Senneer</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Oon</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Kozhuppu</td>
<td>10</td>
<td>3</td>
</tr>
</tbody>
</table>

The udal thathukkal saram, senner and oon are cent percent affected, kozhuppu 30% is affected.

### Table - 25

**Classification of Uragan Vatham under Envagai Thervugal.**

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Envagai Thervu</th>
<th>n</th>
<th>Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>1</td>
<td>Sparism</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Naa</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Niram</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Mozhi</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Vizhi</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>Malam</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Moothiram</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>Naadi-ValiAzhal</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Cent percent affected cases observed in all Envagai thervugal except Niram, Malam and Moothiram.

The affected level Malam is 40%. The remaining Niram and Moothiram cent percent not affected.
### Table – 26

**Viralkadai alavu**

<table>
<thead>
<tr>
<th>Viralkadai alavu</th>
<th>9</th>
<th>9 1/4</th>
<th>Total</th>
<th>Mean</th>
<th>Medium</th>
<th>8.D</th>
<th>Normal range</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of cases</td>
<td>4</td>
<td>6</td>
<td>10</td>
<td>9.25</td>
<td>9.25</td>
<td>0.23</td>
<td>9 to 9 1/2</td>
</tr>
</tbody>
</table>

The viralkadai alavu of Uragan vatham cases are term of mean is 9.25+\_ 0.25 and is term median is 9.25. The normal ranges will be 9-9 1/2.

### Table - 27

**Classification of neikuri.**

<table>
<thead>
<tr>
<th>Sl. no</th>
<th>Character of Neikuri</th>
<th>n</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>1</td>
<td>Mellana paraval</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Mellana paraval occur in 100% of the cases.
## Table - 28

*Classification of Uragan Vatham cases based on the symptoms.*

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Clinical features</th>
<th>n</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>1</td>
<td>Pulling of face</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Deviation of mouth</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Numbness over the face</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Involuntary facial movement</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Shyness</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>Inability to close the eye</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>Disuse atrophy</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Increased sweating</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>Excessive salivation</td>
<td>10</td>
<td>9</td>
</tr>
</tbody>
</table>

The cent percent clinical symptoms are observed in pulling of face, deviation of mouth, numbness over the face, Inability to close the eye. Only 30% of symptoms observed in both of increased sweating, disuse atrophy, shyness and involuntary movements and 90% in excessive salivation.
DISCUSSION

In Yugi Vaithiya sinthamani, ‘Uragan Vatham’ is described under Vali disease. The Name ‘Uragan Vatham’ itself implies, it is a Vali disease principally affecting the Facial Nerve.

The primary aim of this dissertation is to help arriving at a correct diagnosis of Uragan Vatham through Envagai thervugal, Mukkutra nilaigal, changes in Udal kattugal, along with Modern parameters. Apart from these major criteria, Age, Sex distribution, Socio economic status, Thinai and Paruvakaalam were also taken in arriving at the diagnosis.

The etiology and pathogenesis of the disease is unknown. The signs and symptoms are inability to close the eye, deviation of mouth, increased salivation, numbness over the face, involuntary facial movement and shyness. The disease only diagnosed by the above clinical feature.

Humoural changes, seasonal and environmental changes are important pathogenic factors which cause changes in the seven physical constituents and bring about the diseases. These changes in physical constituents are diagnosed through the Envagai thervugal.

Ten patients were selected for this study and they were properly enrolled in the Out Patient of PG Noi Naadal department and thoroughly examined.

1. Age distribution
   The incidence of the disease Uragan Vatham is between the ages of 25 to 60 years in the studied cases.

2. Sex distribution
   Both sexes are equally affected.
3. **Socio-economic status**

   Socio-economic status has no marked relevance to this disease.

4. **Thinai**

   The entire patient belongs to Marutha nilam. In Marutha nilam, normally the severity of the disease is under control. Change of the life style is play a major role in pathogenesis of the disease.

5. **Paruvakaalangal**

   Uragan vatham occur in all season, but it is mostly occur in Munpani kaalam and Pinpani kaalam. Because the main predisposing factor of the Uragan Vatham is exposure to chill weather.

6. **Humoral Variation (Mukkutra verupadukal)**

   Vali, Azhal and Iyam are three vital forces which form the functional units of the human body. The following changes are noted in this disease.

   **Table - 29**

   **Derangement of Vali**

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Types</th>
<th>Changes</th>
<th>Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Praanan</td>
<td>Affected</td>
<td>Dyspnoea</td>
</tr>
<tr>
<td>2</td>
<td>Abanan</td>
<td>Affected</td>
<td>Constipation</td>
</tr>
<tr>
<td>3</td>
<td>Viyanan</td>
<td>Affected</td>
<td>Inability to close the eye, diminished facial muscle action and excessive sweating</td>
</tr>
<tr>
<td>4</td>
<td>Udhanan</td>
<td>Affected</td>
<td>Mild dysarthria</td>
</tr>
<tr>
<td>5</td>
<td>Samaanan</td>
<td>Affected</td>
<td>Increased appetite</td>
</tr>
<tr>
<td>6</td>
<td>Naagan</td>
<td>Affected</td>
<td>Inability to close the eye</td>
</tr>
<tr>
<td>7</td>
<td>Koorman</td>
<td>Affected</td>
<td>Inability to close the eye</td>
</tr>
<tr>
<td>8</td>
<td>Kirukaran</td>
<td>Affected</td>
<td>Excessive salivation</td>
</tr>
<tr>
<td>9</td>
<td>Thevathaththan</td>
<td>Affected</td>
<td>Irritability</td>
</tr>
</tbody>
</table>
Table - 30

Derangement of Azhal

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Types</th>
<th>Changes</th>
<th>Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Anarpitham</td>
<td>Affected</td>
<td>Increased appetite</td>
</tr>
<tr>
<td>2</td>
<td>Ranjaga pitham</td>
<td>Affected</td>
<td>Pallorness</td>
</tr>
<tr>
<td>3</td>
<td>Sathaga pitham</td>
<td>Affected</td>
<td>Diminished facial expression in affected side.</td>
</tr>
<tr>
<td>4</td>
<td>Praasagam</td>
<td>Affected</td>
<td>Dryness</td>
</tr>
</tbody>
</table>

Table - 31

Derangement of Iyam

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Types</th>
<th>Changes</th>
<th>Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Avalambagam</td>
<td>Affected</td>
<td>Dyspnoea</td>
</tr>
<tr>
<td>2</td>
<td>Pothagam</td>
<td>Affected</td>
<td>Loss of taste in affected side.</td>
</tr>
</tbody>
</table>

Among the variation of the Mukutra nilaigal, the Vali and Azhal kutram are increased but Iya kutram is decreased.

Table - 32

Udal Thathukkal

The observation in udal Thathukkal has been tabulated as follows.

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Types</th>
<th>Changes</th>
<th>Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Saaram</td>
<td>Affected</td>
<td>Depression and anxiety</td>
</tr>
<tr>
<td>2</td>
<td>Senneer</td>
<td>Affected</td>
<td>Nerve weakness</td>
</tr>
<tr>
<td>3</td>
<td>Oon</td>
<td>Affected</td>
<td>Diminished facial muscle action.</td>
</tr>
<tr>
<td>4</td>
<td>Kozhuppu</td>
<td>Affected</td>
<td>Disuse atrophy</td>
</tr>
</tbody>
</table>
**Envagai Thervugal:**

Among the Envagai Thervugal Naa, Mozhi, Vizhi, Meikuri, Malam and Naadi were affected and reflects the characteristic picture of Uragan Vatham.

*Table – 33*

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Types</th>
<th>Changes</th>
<th>Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Meikuri</td>
<td>Affected</td>
<td>Thatam, numbness over the face</td>
</tr>
<tr>
<td>2</td>
<td>Niram</td>
<td>Not affected</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Vizhi</td>
<td>Affected</td>
<td>Inability to close eye, eye irritation</td>
</tr>
<tr>
<td>4</td>
<td>Mozhi</td>
<td>Affected</td>
<td>Thalntha oli</td>
</tr>
<tr>
<td>5</td>
<td>Naa</td>
<td>Affected</td>
<td>Loss of taste in affected side tongue</td>
</tr>
<tr>
<td>6</td>
<td>Malam</td>
<td>Affected</td>
<td>Constipation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Types</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Moothiram</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Niram</td>
<td>Not Affected</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Manam</td>
<td>Not Affected</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Edai</td>
<td>Not Affected</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Nurai</td>
<td>Not Affected</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Enjal</td>
<td>Not Affected</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>Kaikuri</td>
<td>Affected</td>
<td>ValiAzhal</td>
</tr>
</tbody>
</table>
Neerkuri:

The patient had straw coloured urine. No abnormality could be observed in Neerkuri.

Table – 34

Neikuri:

<table>
<thead>
<tr>
<th>Test</th>
<th>Character of Neikuri</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neikuri</td>
<td>Oil slowly spreads in urine</td>
<td></td>
</tr>
</tbody>
</table>

Interpretation of Allied parameters

In this disease, due to the absence of systemic involvement, the routine examination shows no specific changes. *Nerve Conduction* study help to prognosis of this disease.

Thus, allied parameters are not having important role to diagnose the disease.
HIGHLIGHTS OF DISSERTATION TOPIC

Uragan Vatham comes under vali disease seen in Yugi Vaithiya sinthamani.

Naturally Vali is living in the Nerves and it is maintain the normal physiological functions of the body i.e. both motor and sensory activities of the body. This concept is quoted in Maruthuva Baratham as “வாக்து பாடுபட்டு பெரித்து குளீனி குட்டியை பைதான் பெற்று கல்லாம்”

“தாது பாடு வலியுறயாகவோ மூன்றுவரை குளீனி குட்டியை பைதான் பெற்று கல்லாம்
சுதா பாத்திரங்களான பல்காத பக்துறை மாற்றியலாம்
பாது கிளித்து இராகமனை சோனி தான் வருந்துண்டாம்.”

- சுதா பாத்திரங்களா

If Vali thathu increased, causes the nerve paralysis, increased salivation and tone are decreased part.

Uragan Vatham patient is having Weakness of Facial muscle due to Paralysis of seventh cranial nerve. Facial Nerve is mixed cranial nerve, but mainly motor nerve; supply the Muscles of Facial Expression. If the nerve is paralyses all the action of the facial muscles are weakened.
CONCLUSION

The identification of disease and its pathogenesis are a prerequisite to best medical practice. A detailed history taking, clinical examination as per Siddha guidelines is necessary to arrive at a precise diagnosis.

The Uragan Vatham was carried out in this dissertation, giving importance to the changes in the physical constituents, seasonal and humeral changes.

In modern aspects the signs and symptoms of the Uragan Vatham may correlate with Bell’s palsy.

The disease diagnosed only by the clinical examination. Nerve conduction study of Facial nerve helps to prognosis of this disease.

80% of people with Uragan Vatham begin to recover several weeks after these symptoms begin, and they recover completely within several months. Few patients never recover completely and some of their symptoms continue permanently.

Thokkanam is advised to patient for quick improvement.

During recovery, the biggest concern is protecting the exposed eye from dryness and injury.
P.G. - NOI NAADAL DEPARTMENT,  
GOVT. SIDDHA MEDICAL COLLEGE,  
PALAYAMKOTTAI. 
A Study To Diagnose URAGANVATHAM Through Siddha 
Diagnostic Methodology  
SELECTION PROFORMA 


6. Name: ________________  7. Age (Years): [ ]  8. Sex: [ ]


11. Address:  
------------------------------------  
------------------------------------  
------------------------------------

12. Complaints and duration: 
------------------------------------
------------------------------------
------------------------------------

13. History of present illness: 
------------------------------------
------------------------------------
------------------------------------

14. Past history: 
------------------------------------
------------------------------------
------------------------------------

15. Family History: 
------------------------------------
------------------------------------
------------------------------------
<table>
<thead>
<tr>
<th>Habits</th>
<th>1.Yes</th>
<th>2.No</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Betelnut chewer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Tea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Coffee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Smoking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Alcohol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Food habits</td>
<td>V</td>
<td>NV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
</tr>
</tbody>
</table>

**GENERAL ETIOLOGY FOR URAGAN VADHAM**

<table>
<thead>
<tr>
<th></th>
<th>1.Yes</th>
<th>2.No</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. Herpes simplex virus infection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Respiratory infection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Acute and chronic otitis media</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Parotitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Venerian disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Diabetes mellitus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. High blood pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Thyroid malformation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. High winds directly into the face</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. Poor nutrition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32. Dental treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. Trauma to the facial nerve</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GENERAL EXAMINATION**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>34. Weight(kg)           :</td>
<td></td>
</tr>
<tr>
<td>35. Temperature(°F)      :</td>
<td></td>
</tr>
<tr>
<td>36. Pulse rate/minute    :</td>
<td></td>
</tr>
<tr>
<td>37. Heart rate/minute    :</td>
<td></td>
</tr>
<tr>
<td>38. Respiratory rate/minute :</td>
<td></td>
</tr>
<tr>
<td>39. Blood pressure(mmHg) :</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>---</td>
<td>-----</td>
</tr>
<tr>
<td>40. Pallor :</td>
<td>☐</td>
</tr>
<tr>
<td>41. Jaundice :</td>
<td>☐</td>
</tr>
<tr>
<td>42. Cyanosis :</td>
<td>☐</td>
</tr>
<tr>
<td>43. Lymphadenopathy :</td>
<td>☐</td>
</tr>
<tr>
<td>44. Pedal edema :</td>
<td>☐</td>
</tr>
<tr>
<td>45. Clubbing :</td>
<td>☐</td>
</tr>
<tr>
<td>46. Jugular venous pulsation :</td>
<td>☐</td>
</tr>
</tbody>
</table>

**VITAL ORGANS EXAMINATION**

<table>
<thead>
<tr>
<th></th>
<th>Normal</th>
<th>Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>47. Heart</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>48. Lungs</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>49. Brain</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>50. Liver</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>51. Kidney</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>52. Spleen</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>53. Stomach</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**SIDDHA SYSTEM OF EXAMINATION**

**ENNVAGAI THERVUKAL**

**NAA**

54. Maa Padinthiruthal

1. Present ☐
2. Absent ☐

55. Niram

1. Karuppu ☐
2. Manjal ☐
3. Velluppu ☐

56. Suvai

1. Pulippu ☐
2. Kaippu ☐
3. Inippu ☐
57. Vedippu
   1. Present □   2. Absent □

58. Vai neer ooral
   1. Normal □   2. Increased □   3. Reduced □

59. NIRAM

60. MOZHI
   1. Sama oli □   2. Urattha oli □   3. Thazhlntha oli □

VIZHI

61. Niram
   1. Karuppu □   2. Manjal □
   3. Sivappu □   4. Velluppu □

62. Kanneer
   1. Present □   2. Absent □

63. Erichchal
   1. Present □   2. Absent □

64. Peelai seruthal
   1. Present □   2. Absent □

MEI KURI

65. Veppam

66. Viyarvai
   1. Normal □   2. Increased □   3. Reduced □

67. Thodu vali
   1. Present □   2. Absent □

MALAM

68. Niram
   1. Karuppu □   2. Manjal □
   3. Sivappu □   4. Velluppu □
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>69. Sikkal</td>
<td>1. Present</td>
<td></td>
<td>2. Absent</td>
</tr>
<tr>
<td>70. Sirutthal</td>
<td>1. Present</td>
<td></td>
<td>2. Absent</td>
</tr>
<tr>
<td>71. Kalichchal</td>
<td>1. Present</td>
<td></td>
<td>2. Absent</td>
</tr>
<tr>
<td>72. Seetham</td>
<td>1. Present</td>
<td></td>
<td>2. Absent</td>
</tr>
<tr>
<td>73. Vemmai</td>
<td>1. Present</td>
<td></td>
<td>2. Absent</td>
</tr>
<tr>
<td><strong>MOOTHIRAM</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NEER KURI</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>75. Manam</td>
<td>1. Present</td>
<td></td>
<td>2. Absent</td>
</tr>
<tr>
<td>76. Nurai</td>
<td>1. Nill</td>
<td></td>
<td>2. Increased</td>
</tr>
<tr>
<td>77. Edai(Ganam)</td>
<td>1. Normal</td>
<td></td>
<td>2. Increased</td>
</tr>
<tr>
<td>78. Enjal(Alavu)</td>
<td>1. Normal</td>
<td></td>
<td>2. Increased</td>
</tr>
<tr>
<td><strong>NEI KURI</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Aravam</td>
<td></td>
<td>2. Mothiram</td>
<td></td>
</tr>
<tr>
<td>3. Muthu</td>
<td></td>
<td>4. Aravil Mothiram</td>
<td></td>
</tr>
<tr>
<td>5. Aravil Muthu</td>
<td></td>
<td>6 Mothirathil Aravam</td>
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</tr>
<tr>
<td>7. Mothirathil Muthu</td>
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<td>8. Muthil Aravam</td>
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</tr>
<tr>
<td>9. Muthil Mothiram</td>
<td></td>
<td>10. Asaathiyam</td>
<td></td>
</tr>
<tr>
<td>11. Mellena paraval</td>
<td></td>
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</table>
### NAADI (KAI KURI)

#### Naadi Nithanam

80. Kaalam

<table>
<thead>
<tr>
<th></th>
<th>1. Kaarkaalam</th>
<th>2. Koothirkaalam</th>
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<tbody>
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<table>
<thead>
<tr>
<th></th>
<th>3. Munpanikaalam</th>
<th>4. Pinpanikaalam</th>
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<table>
<thead>
<tr>
<th></th>
<th>5. Ilavenirkkaalam</th>
<th>6. Muthuvenirkkaalam</th>
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<tbody>
<tr>
<td></td>
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</table>

81. Desam

<table>
<thead>
<tr>
<th></th>
<th>1. Kulir</th>
<th>2. Veppam</th>
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<tbody>
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82. Vayathu

<table>
<thead>
<tr>
<th></th>
<th>1. 1-33yrs</th>
<th>2.34-66yrs</th>
<th>3. 67-100yrs</th>
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<tbody>
<tr>
<td></td>
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83. Udal Vanmai

<table>
<thead>
<tr>
<th></th>
<th>1. Iyyalbu</th>
<th>2. Valivu</th>
<th>3. Melivu</th>
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</thead>
<tbody>
<tr>
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84. Vanmai

<table>
<thead>
<tr>
<th></th>
<th>1. Vanmai</th>
<th>2. Menmai</th>
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<tbody>
<tr>
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</table>

85. Panbu

<table>
<thead>
<tr>
<th></th>
<th>1. Thannadai</th>
<th>2. Puranadai</th>
<th>3. Illaitthal</th>
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<thead>
<tr>
<th></th>
<th>13. Pakkanokku</th>
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</table>

86. Naadi nadai

<table>
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<tr>
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<tbody>
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</tbody>
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87. MANIKADAI NOOL ( Viral Kadai Alavu )
<table>
<thead>
<tr>
<th>IYMPORIGAL / IYMPULANGAL</th>
<th>1.Normal</th>
<th>2.Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>88.Mei</td>
<td></td>
<td></td>
</tr>
<tr>
<td>89.Vaai</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90.Kan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>91.Mookku</td>
<td></td>
<td></td>
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<tr>
<td>92.Sevi</td>
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</table>

<table>
<thead>
<tr>
<th>KANMENTHIRIYANGAL / KANMAVIDAYANGAL</th>
<th>1.Normal</th>
<th>2.Affected</th>
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</thead>
<tbody>
<tr>
<td>93.Kai</td>
<td></td>
<td></td>
</tr>
<tr>
<td>94.Kaal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.Vaai</td>
<td></td>
<td></td>
</tr>
<tr>
<td>96.Eruvai</td>
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<tr>
<td>97.Karuvaai</td>
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</table>

98. **YAAKAI**


99. **GUNAM**


**UYIR THATHUKKAL**

1. **VALI**

<table>
<thead>
<tr>
<th>1. Normal</th>
<th>2. Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>100.Uyirkkaal (Praanan)</td>
<td></td>
</tr>
<tr>
<td>101.Keelnokkuvaal (Abaanan)</td>
<td></td>
</tr>
<tr>
<td>102.Melnookkuvaal (Udhaanan)</td>
<td></td>
</tr>
<tr>
<td>103.Paravukaal (Viyaanan)</td>
<td></td>
</tr>
<tr>
<td>104.Nadukkaal (Samaanan)</td>
<td></td>
</tr>
<tr>
<td>105. Vanthikkaal (Naagan)</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>---</td>
</tr>
<tr>
<td>106. Vizhikkaal (Koorman)</td>
<td></td>
</tr>
<tr>
<td>107. Thummikkaal (Kirukaran)</td>
<td></td>
</tr>
<tr>
<td>108. Kottavikkaal (Devathathan)</td>
<td></td>
</tr>
<tr>
<td>109. Veengukkal (Dhananjeyan)</td>
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**II. AZHAL**

<table>
<thead>
<tr>
<th>110. Aakkanal (Anala pitham)</th>
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</thead>
<tbody>
<tr>
<td>111. Olloliththee (Prasaka pitham)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>112. Vannayeri (Ranjaka pitham)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>113. Nokkazhal (Aalosaka pitham)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>114. Aatralangi (Saathaka pitham)</td>
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</tbody>
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**III. KABAM**

<table>
<thead>
<tr>
<th>115. Ali Iyam (Avalambagam)</th>
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</thead>
<tbody>
<tr>
<td>116. Neerppi Iyam (Kilethagam)</td>
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<td></td>
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<tr>
<td>117. Suvaikaan Iyam (Pothagam)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>118. Niraivu Iyam (Tharpagam)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>119. Ontr Iyam (Santhigam)</td>
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**UDAL THATHUKKAL**

<table>
<thead>
<tr>
<th>120. Saaram</th>
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</thead>
<tbody>
<tr>
<td>121. Senneer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>122. Oon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>123. Kozhuppu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>124. Enbu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>125. Moolai</td>
<td></td>
<td></td>
</tr>
<tr>
<td>126. Suronitham/Sukkilam</td>
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<td></td>
</tr>
</tbody>
</table>
### Mukkutra Migu Gunam

#### I. Vali Migu Gunam

<table>
<thead>
<tr>
<th></th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>127</td>
<td>Emaciation</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>Blackish colouration of body</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>Desire to take hot food</td>
<td></td>
</tr>
<tr>
<td>130</td>
<td>Tremors</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>Abdominal distension</td>
<td></td>
</tr>
<tr>
<td>132</td>
<td>Insomnia</td>
<td></td>
</tr>
<tr>
<td>133</td>
<td>Constipation</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>Weakness</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>Weakness of sense organs</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>Giddiness</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>Sluggishness</td>
<td></td>
</tr>
</tbody>
</table>

#### II. Azhal Migu Gunam

<table>
<thead>
<tr>
<th></th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>138</td>
<td>Yellowish discolouration of the skin</td>
<td></td>
</tr>
<tr>
<td>139</td>
<td>Yellowish discolouration of the eye</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>Yellowish discolouration of urine</td>
<td></td>
</tr>
<tr>
<td>141</td>
<td>Yellowish discolouration of faeces</td>
<td></td>
</tr>
<tr>
<td>142</td>
<td>Increased appetite</td>
<td></td>
</tr>
<tr>
<td>143</td>
<td>Burning sensation in the body</td>
<td></td>
</tr>
<tr>
<td>144</td>
<td>Insomnia</td>
<td></td>
</tr>
</tbody>
</table>

#### III. Iyam Migu Gunam

<table>
<thead>
<tr>
<th></th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>145</td>
<td>Excessive salivation</td>
<td></td>
</tr>
<tr>
<td>146</td>
<td>Reduced appetite</td>
<td></td>
</tr>
<tr>
<td>147</td>
<td>Heaviness of the body</td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------------------</td>
<td>------------</td>
</tr>
</tbody>
</table>

### 154. NOI UTRA KAALAM

1. Kaarkaalam
2. Koothirkaalam
3. Munpanikaalam
4. Pinpanikaalam
5. Ilavenirkaalam
6. Muthuvenirkaalam

### 155. NOI UTRA NILAM

1. Kurinji
2. Mullai
3. Marutham
4. Neithal
5. Palai

### 156. Date of Birth

### 157. Time of Birth

### 158. Place of Birth

### 159. NATCHATHIRAM

1. Aswini
2. Barani
3. Karthikai
4. Rohini
5. Mirugaseeridam
6. Thiruvathirai
7. Punarpoosam
8. Poosam
9. Aayilyam
10. Makam
11. Pooram
12. Utthiram
13. Astham
14. Chithirai
15. Swathi
16. Visakam
17. Anusam
18. Kettai
19. Moolam
20. Pooradam
21. Utthiradam
22. Thiruvonam
23. Avittam
24. Sadayam
25. Poorattathi
26. Utthirattathi
27. Revathi

00. Not known
160. RAASI

00. Not known □

Examination:

1. Normal 2. Affected

161. Frowning of eye brows □ □
162. Whistling □ □
163. Close the eyes tightly □ □
164. Blow out the cheek □ □
165. Hearing test □ □
166. Corneal reflex □ □
167. Corneal conjunctiva reflex □ □
168. Taste sensation of anterior 2/3 of tongue □ □

INVESTIGATION

BLOOD

169. TC (Cells/cu.mm) : □ □ □ □ □
170. DC (%) : 1.P □ 2.L □ 3.E □
               4.B □ 5.M □
171. Hb (gms%) : □ □
172. E.S.R. (mm/hr) : 1.1/2hr □ 2.1hr □
173. Blood Sugar (R) (mgs%) : □ □
URINE
174. Albumin : 0.Nil □ 1.Trace □ 2.+ □ 3.++ □ 4.+++ □
175. Sugar : 0.Nil □ 1.Trace □ 2.+ □ 3.++ □ 4.+++ □

Deposits
176. Pus cells □ □ __________
177. Epithelial cells □ □ __________
178. RBCs □ □ __________
179. Crystal and cast □ □ __________
180. Urine culture □ □ __________

MOTION TEST
171. Ova □ □ __________
172. Cyst □ □ __________
173. Occult blood □ □ __________

184. X-ray -skull
(If necessary)
.................................................................

185. Nerve conduction study
.................................................................
.................................................................
<table>
<thead>
<tr>
<th>Feature</th>
<th>1. Yes</th>
<th>2. No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulling of face</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deviation of mouth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heaviness over the face</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disuse atrophy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shyness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inability to close the eye</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excessive sweating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excessive salivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involuntary facial movement</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY

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- Noi Naadal Part I and II
- Siddha Maruthuvaagan Surukkam
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- Therayar Vagadam
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- Agathiyar Gunavagadam
- Thanvanthiri Kaappiyam
- Maanmurugium
- Kannusamiyam
- Thirukural
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