A STUDY ON
PITHA KAASAM

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INTRODUCTION

"தலையறையான மண்டலம் பாறை பிரித்தியின் கொரை தெளிப்பனர்
தலையறையான புதுக்குறிக்குச் சிறப்பான விகிதத்திடும்
தலையறையான முன் கரு விளையாட்டு கல்வி பார்வை
தலையறையான குருவியுடன் சேர்ந்து பிப்ரவைண்டி விளையாடும்"

- கமலின் கருணை காஞ்சன

Life is a divine. It’s our duty to achieve the goal of life by healthy way to living. The siddha system of medicine well known for its simplicity and credibility speaks much of healthy life style by promoting physical and mental well being.

"அசார்கள் துண்டாட்டு பிள்ளாயம்
பிள்ளாயம் துண்டாட்டு அசார்கள்
அசார்கள் பிள்ளாயம் துண்டாட்டு
அசார்கள் துண்டாட்டு பிள்ளாயம்"

- சாலாயன் கருணை

So the changes that occur in the universe will affect the physical body also. Hence the body will get upset (or) alter from normal, if there is any adverse change in the universe. Since both of them are formed by the same elements in different proportions.

The origin of the siddha system of medicine is on the ancient lemorian continent and it was invented by the great ancient tamil scientist the siddhars. They developed this unique system of medicine by their supernatural powers from time immemorial.
The fundamental principle of the siddha science involves the five elements namely Mann, Neer, Thee, Kattru and Aagayam. Which are present in both beings - the microcosm and universe - the macrocosm. Therefore all created or evolved in this world fall within the five elemental categories. Of these, the constituents of air, fire and water in the body from the three humours viz. Vaatham, Pitham and Kabam. The three fundamental principles on which the constitution of the human being is based.

The three humors are supposed to be in proportion of in healthy

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<td>Vaatham</td>
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<td>Pitham</td>
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<td>Kabam</td>
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individual, and then they are known as ‘Muthathus’ But when this equilibrium is altered or their proportion are deranged, these are known as ‘Mukkutram’, which ultimately causes illness or disease.

“காத்தேட்டு வேத் வைதான்
நெய் பின்ன் எழுத்துப்பவன்
நெய் காத்தேட்டு அது”
Thus for the maintenance of these three humours in a state of equilibrium a reasonable knowledge in the physiology of the body is essential.

But in the given circumstances the high level of environmental degradation, westernised life styles and scant regard for social and moral values, it is highly impossible to maintain a healthy life. Hence to revert the deranged three humors to its state of equilibrium, material medica plays on important role. In the siddha science, the material medica consists of herbs, minerals and animal products, which are used in 64 types of medicines, of which 32 varieties are internal and 32 varieties, are external forms. There are lakhs of formulation siddha medicines in literatures and the siddhars are considered to be the pioneers in the use of metal and minerals in the treatment of disease.

The knowledge of material medica loses its significance and value, if the quality and quantity of the deranged mukkutrams cannot be assessed or in other words, the disease is not diagnosed accurately. Thus the science of NOI NAADAL, which deals with the approach to the process of diagnosis, plays a monumental role in realising the paramount aim and objective of siddha science, which is to assume a full span of hundred years of healthy life.
Noi Naadal means approach to the disease and Noi Mudhal Naadal denotes the determination of the etiology of the disease. The basic pathology of a disease lies in the alteration of the quality and quantity of the thathus, and the assessment of their various dimension forms the essential part of diagnosing a disease. An effect line of treatment can be formulated, only when the uniqueness of the individual and exact nature of the illness, to the level of their sub classification are understood.

The siddhar’s devised and utilised a special, effective and cost efficient techniques of diagnosis known as “Envagai thervugal”. They are Naadi, Sparism, Naa, Niram, Mozhi, Vizhi, Malam and Moothiram. These eight features play a vital role in finding out the disease and the imbalanced life factors.

The author doing her post graduate in the Dept of “NOI NAADAL” attempts a dissertation on the various aspects of Pitha Kaasam with special emphasis on the changes undergone by the Mukkutram and method of diagnosing this disease by using Envagai thervugal.
SIDDHA PHYSIOLOGY

Physiology means the science of the functions of the living organisms and its components and the physical and chemical factors and processes involved.

Udal Thathuvam (physiology) of Siddha aspect

Composed of

- 96 basic elements – Thathuvas
- 7 Somatic compounds – Udal Kattukal
- 14 reflexial functions – Vegams
- 6 Tastes – Suvaigal
- 4 body fires – Udal thee
- 3 immunities – Udal Vanmai etc.

These basic elements are responsible for the creation, protection of life which is mediated through the Panchapootha and Mukkuttra theory.

96 Thathuvas are,

- The five elements - தொன்மை
- The five organs of Senses - வையிரியிக்க
- The five organs of perception - வைதுலிக்க
- The five organs of action - கொஷ்டிக்கிணி
- The four intellectual faculties - மறகல்கள்
MUKKUTRAM

(I) Vaatham : –

Vaatham is the kinetic energy that effects all movements.

Location of Vaatham : –

Vaatham is located in abana, faeces, idakalai, spermatic cord, pelvic bone, skin, nerves, joints etc.
**Types of Vaatham:**

1) **Piranan**: This controls knowledge mind and five objects of sense which are helpful for breathing and digestion.

2) **Abanan**: This is responsible for all downward movements such as passing of urine, stools, sperms, mensutral flow, ova, foetus etc.

3) **Viyanan**: This responsible for movements of all parts of body.

4) **Uthanana**: This is responsible for all upward visceral movements such as vomiting, eructation and nausea.

5) **Samanan**: This is the neutralizing force for the above four vayus, this aid for proper digestion.

6) **Naagan**: Responsible for opening and closing of eyes and also responsible for yawning and vision.

7) **Koorman**: Responsible for vision yawning and also responsible for higher intellectual function.
8) Kirukaran : Responsible for Salivation, nasal secretion and appetite.

9) Thevathathan : Responsible for laziness, sleeping and anger.

10) Dhananjeyan : Responsible for swelling of body after death, it escape on the third day after death by bursting of cranium.

(II) Pitham : -

Pitham does not essentially mean bile but signifies the function of the thermogenesis of heat production and metabolism. Comprehending in its scope the process of digestion, colouration of blood and formation of various secretion and excretion which are either the mean or the ends of tissue combustion.

Location of Pitham in body: -

Pitham is located in pranan, bladder, molakini, heart, umbilical region, abdomen, stomach, sweat, eyes, saliva, blood etc.

Types of Pitham : -

1) Anarpitham : It gives appetite and helps digestion.

2) Prasagam : It gives complexion to skin.

3) Ranjagam : It is responsible for the colour and content of blood.
4) Alosagam : It brightens the eyes.

5) Sathagam : It controls the whole body.

It has the property of fullfillment

(III) Kabam :
Kabam stabilizes, maintains and lubricate all movements.

Location of Kabam :
Kabam is located in Samanan, Semen, head, tongue, bone marrow, blood, nose, chest, nerves, brain, bones, large intestine, eyes, stomach and pancreas.

Types of Kabam :
1) Avalambagam : Present in lungs, it controls the functions of lungs and heart and other kabas.

2) Kilethagam : Lives in stomach, it gives moisture and softness to the ingested food.

3) Pothagam : Tongue is the centre of pothagam, and responsible for identifying taste.

4) Tharpagam : Present in the head and responsible for coolness of the both eyes.

5) Santhigam : Responsible for the lubrication and free movements of the joints which are situated in joints.
UDAL KATTUGAL (SEVEN SOMATIC COMPONENTS)

The seven Physical constituents

They are as follows.

1) Saaram – Chyle: –
   It is responsible for the growth and development. It keeps the individual in good spirit and it nourishes the blood.

2) Senneer – Blood: –
   Blood imparts colour to the body and nourishes the muscles responsible for the ability intellect of the individual.

3) Oon – Muscle: –
   It gives shape of the body according to the requirements for the physical activity,

4) Kozhuppu – Fat: –
   It helps in lubricating the different organs and maintains oily matter of the body.

5) Enbu – Bone: –
   Support the skeletal system and responsible for the posture and movements of the body.

6) Moolai – Bone marrow: –
   It fills the bone cavity, imparts strength and endurance.

7) Sukkilam (or) Suronitham – Sperm (or) Ovum: –
It is responsible for the reproduction.

**VEGAMS**

In our body, the normal physiology includes 14 urges. They are called Vegangal and it should not be disturbed in any way.

1) Vaatham – Flatus
2) Thummal – Sneezing
3) Siruneer – Urine
4) Malam – Stool
5) Kotavi – Yawning
6) Pasi – Hunger
7) Neer vetkai – Thirst
8) Kaasam – Erumal
9) Elaippu – Fatigue
10) Nithirai – Sleep
11) Vaanthi – Vomit
12) Kanneer – Tear
13) Sukkilam or Suronitham
14) Suvaasam – Respiration

**TASTES**

1) Ennippu – Sweet
2) Pilippu – Sour
3) Uppu – Salty
4) Kaippu – Bitter
5) Karppu – Pungent
6) Thuvarppu – Astrigent

**UDAL THEE**

That is body fire, it helps in digestion.

1) Samakini – To maintain the normal complete digestion
2) Mandhakini – Delayed digestion
3) Deekshanakini – Quick fast digestion in an earlier Period.
4) Vishamakini – Incomplete digestion leading to toxicity

**UDAL VANMAI**

It means strength and vitality of the body.

1) Eyarkai Vanmai – Inherited immunity
2) Kala Vanmai – Age, Season and time
3) Cheyarkai vanmai – Improvements of 3 vitality obtained by diet, day today habits and physical exercise.
SIDDHA PATHOLOGY

Pathology = Pathos + logos

Patho = Suffering

Logos = Study

Pathology is the study of disease, that is study of structure and function of the body in disease, it deals with causes, effects, mechanisms and nature of disease.

Disease is opposite of health, but the terms health and disease are difficult to define. Health is a condition when the individual is in complete accord with the surrounding, while disease is loss of ease to the body(dis–ease).

Without knowing pathology we cannot do the proper treatment, it is important to understand the complete detail of the disease.
UYIR THATHUKAL

I. Vaatham

Abnormal functions of Vaatham :

Pain all over the body, piercing pain, inflammation and redness of complex, also roughness of the skin, hardness of the limbs, astringent taste in the mouth, tastelessness, sweating, sleep, contraction and numbness or paralysis of the limb, tremors, muscular wasting, decreased excretion of stools and urine, thirst, blackish discolouration of skin, stool and urine.

In Increased condition: –

- Distended abdomen
- Constipation
- Weakness
- Insomnia
- Tremors
- Breathlessness
- Blackish discolouration of skin

In Decreased condition: –

- Body pain
- Feeble voice
- Syncope
- Diminished capability of brain
II. Pitham

Abnormal functions of Pitham:─
Indigestion, acidity, burning sensation in the heart, throat and stomach.

In Increased condition:─
- Yellowish discolouration of eyes, skin, urine and motion.
- Polyphagia.
- Burning sensation all over the body.
- Sleeplessness

In Decreased condition:─
- Cold
- Pallor
- Decreased appetite
- Symptoms associated with growth of kabam.

III. Kabam

Abnormal functions of Kabam:─
Whiteness of complexion, cold, itching, dullness, heaviness, oilyness, loss of sensation, a sense of sweetness in the mouth.

In Increased condition:─
- Loss of appetite
- Excessive salivation
- Heaviness
- Dyspnoea
- Excessive sleeping
- Whiteness of complexion
- Diminished activity
In decreased condition: –
  ❖ Prominence of bony edges
  ❖ Dry cough
  ❖ Lightness
  ❖ Profuse sweating
  ❖ Palpitation
  ❖ Giddiness
  ❖ Dryness of the joints

**UDAL KATTUGAL**

1) Saaram
   *Increased conditions* – Leads to disease identical to the increase in kaba like loss of appetite, excessive salivation.

   *Decreased condition* – Loss of weight, tiredness, dryness of skin, laziness, diminished activity of the sense organs.

2) Senneer
   *Increased condition* – Boils and tumours in the different parts of the body, splenomegaly, colic pain, increased blood pressure, reddish eye and skin, jaundice, leprosy, haematuria etc.,

   *Decreased condition* – Tiredness, lassitude and pallor.
3) Oon
   **Increased condition**      - Tumours or extra growth around the neck, face, abdomen, thigh, genitalia etc.
   **Decreased condition**     - Muscle wasting

4) Kozhuppu
   **Increased condition**      - Identical to that of increased oon associated with dyspnoea and loss of acivity.
   **Decreased condition**     - Pain

5) Enbu
   **Increased condition**      - Strong bones and teeth.
   **Decreased condition**     - Weak bones, teeth, nails and hairs.

6) Moolai
   **Increased condition**      - Heaviness, swollen eyes, swollen phalanges, oliguria and non-healing ulcers.
   **Decreased condition**     - Osteoporosis and Shunken eyes.

7) Sukkilam or Suronitham
   **Increased condition**      - Increased sexual activity and signs identical to urinary calculi.
   **Decreased condition**     - Failure to reproductive, pain in genitalia etc.
AIM AND OBJECTIVES

Siddha system is considered to be the most ancient therapeutic science in the world. Siddhars have identified four thousand four hundred and forty eight disease and Scientifically arranged eighty type of Vaatha diseases, forty types of Pitha diseases and twenty types of Kaba diseases and so on.

Among all the forms of treatment Noi Naadal (or) Identification of disease and Noi muthal naadal (or) the determination of the aetiology of the disease are the most important aspects. Once the diagnosis is accurate the treatment may be easily fulfilled.

In “Chikicharathna deepam”

“ஆனிழிக்கை குறுகை வக்கைக்கு
மாரவான பிள்ளைக்கை
குணித்தில் வாணந்தது கொஞ்சும்
தாங்குனம் பிள்ளைக்கை டாண்டும்
பார்கிலி வழக்கங்கள் தாதும்
பாசா வாணாந்த காலாணிகள்
பிள்ளைக்கை பிள்ளைக்கைகள்
பிள்ளைக்கை பிள்ளைக்கைகள்”

Super intellectual siddhars, devised and utilized a special cost effective technique for diagnosing a disease know as Envagai thervugal. They are Naadi, Sparisam, Naa, Niram, Mozhi, Vizhi, Malam and Moothiram.
The following specific objectives have been drawn to achieve the above aim,

- To collect the ancient Siddha literatures about Kaasa disease in general and Pitha Kaasam in particularly.
- To study the clinical course of the disease Pitha Kaasam with clean observation on the actiology, clinical fetures and diagnosis.
- To evaluate the siddha basic physiology and Pathology.
- To make a thorough physical examination of the patient.
- To find out the changes that occur in Uyirthadukkal, Udalthadukkal and in Naadi.
- To support the study of Pitha Kaasam by using envagai thervugal, mentioned in siddha literatures with modern parameters.
- To discuss the clinical features and complications associated with pitha kaasam.
ELUCIDATION ABOUT PITHA KAASAM

According to the literature Yugi Vaithiya Sinthamani, Pitha Kaasam has been mentioned as

“சேருவு தில்லுமேற்கும் பால் நாய்
தீர்த்திரிய குருங்கள் கால் பால் நாய்
கார்குகள் கூ பழங்கள் கால் நீதின்
நீதிகள் கார்குகள் பழங்கள் நீதின்
அரங்கக பால்களில் பிள்ளை வண்ணம்
நெற்றுத்திருந்து சொந்தப் பந்துத்திருக்காது
மாற்றமைத் கார்குகள் பால்
பொய்யுற்றும் பிள்ளை தீர்த்திருத்தின் பால்”

பொய் நோக்க் - 697 – Yugi Vaithiya Sinthamani

Meaning of the words : –

உடல் : -

* கால்மா - Cough

** கால்மா

புரூபம் :-

*செப்பித்

*பானுக்குத் தில்லுமேற்கும், தில்லுமேற்கும் - Repeat

**வெளியும் புரூபம் - A sensation felt in the abdomen as in vomiting

திதிகுறிகள் : -

*திதிகுறிகள் - To be sweet

**திதிகுறிகள், கால்மா
செப்பு:

*சந்திரன் - Salt

**சியலும், செம்பு, செம்பு

செட்டியி:

*சார்களெரிகள் - Vomiting

**செம்பு, செம்பு, செம்பு

துளை:

*செய்தில் - Head

*செம்புப்பிடி - Hair

**செம்பு, செம்புப்பிடி

சூயுப்:

*செய்தில் - Body

**சையாடல் - Gold

முனறிகுறி:

*சந்திரன் மண்ணைக் கொண்டிருந்தால், மண்ணைக், மண்ணைக் கொண்டிருந்தால்

**சேர்க்கு - Pain

காசிகுறி:

*தீர்மானத்தை உண்ணலாம் - To be thirsty

**சார்களெரிகள், சார்களெரிகள் - Capability of burning.
**A disease of the larynx due to dryness and the consequent inability to talk except with hoarse voice – hoarseness.**

**Haemoptysis**

Blood

To come out

To descend, to fall.

**A part of body**

The portion of the main body without the limbs.

**Distress, dyspnoea, Lassitude, Loss of Power, To be fatigued**

**Food, boiled rice**

**Refined gold**
*புறிகுறிக்கேற்கு - To turn sour, to ferment

**புறிகுறிக்கேற்ற - புறிகுறிக்கேற்ற
**காளிடம் கிறித்தை, ஓருறுத்துப் புறக்க

*புறிகுறிக்கேற்கு - Rising of the hairs of the body.

**புறக்க - Horripilation.

*காய்ப் - Fever

**பாலகம் சித்து, சாத்து, சித்து.

*புறக்க மன்னாம் - Confusion

**புறக்க மன்னாம்

*காய்ப் - Phlegm

**கால்குப்பு, கால்குப்பு குளை கைண்டு புக்கா

[* Denote – Tamil lexicon Dictinoray

** Denote – T.V.Sambasivam pillai Dictionary]
Meaning of the lines

"சிறுமை துவங்கத்தில் புரட்சி வருகிறது"
- சுடு சுடும் காலம், சுடுயல் கொள்ளும் வருகிறது
- Repeated cough or persistent cough

"சமநிலை பினுக்குவதற்கு நோய் பலன்"
- சமநிலையப்பிள்ளை வயதாக வளர்ந்து, மாதிரி புலனவலம்.
- Sensation of sweet and salt taste in the tongue and vomiting.

"சாகாகத் கலந்துப்போயிய கால்முறை விளக்கம்"
- சிறு குழந்தை கூடுதல் மாடு வலம்
- Headache and body pain

"சுற்றுக்குத் தற்கொலை புரட்சியற்று விளக்கம்"
- சுற்றுக்குத் தற்கொலை, காலம் கூடுதல் புரட்சி விளக்கம்
- Burning sore throat and Haemoptysis.

"சுற்றுக்கு மீண்டுக்கொண்டு பிள்ளை வந்தும் விளக்கம்"
- பசை திறனினை
- Dyspnoea

"அத்தன்முறையின் சூழல் புரட்சிக் கால்முறை"
- அத்தன்முறையின் சூழல் புரட்சிக் கால்முறை
- Anorexia with sour taste regurgitation
“பாத்தியில் கல்குள் கல்குளுக்குள் என்று”
- பாத்தியில் கல்குள் கல்குளுக்குள் என்று தென்று
- Horripillation and Fever

“புதியும்போது பிற்கால குறுத்து வெள்ளையர”
- புதியும்போது
- State of Confusion.

The poem clearly depicts,

- Presistent Cough
- Sensation of sweet and salt taste in the tongue.
- Vomiting.
- Headache
- Body pain
- Burning sore throat
- Haemoptysis
- Dyspnoea
- Anorexia with sour taste regurgitation
- Horripillation
- Fever and
- State of Confusion
REVIEW OF LITERATURES

According to many literatures, kaasa noi has classified into different types, Pitha kaasam has come under this classification. But in some literatures, the pitha kaasam has not been described.

The literatures that describes the pitha kaasam are,

- Yugi Vaithiya Sinthamani
- Agathiyar – 2000
- Thanvanthri Vaithiyam – Part I
- Pararasasekarn – Part IV
- Sarabainthra Vaithya Muraigal.
- Noi Naadal Noi mudal Naadal Thiratu – Part II
- Anubava Vaithya deva Ragasiyam.
- Roga Nirnaya Sarum.
- T.V.Sambasivam pillai Dictionary.

Description about this concept

1) According to Agathiyar – 2000

Inspite of the types of kaasam, only the symptoms of the pitha kaasam have been described.
- Vaatha Kaasam
- Pitha Kaasam
- Kaba Manthara Kaasam
- Pakka Manthara Kaasam
- Suthika Kaasam
- Maruntheedu Kaasam
Symptoms of Pitha Kaasam

“பிதாகாசம் விலங்கம் விளைந்து வெய்லறிந்து வார்த்து கற்று லிபிக்கும் பிரிவுள்ளார் கல்லுய்பது காரணத்திற்குள் கற்று பிள்ளை வாக்கும் காரணமாக புங்களிக்கும் கிரித்திகுருவத் தம் தீர்த்த கரசை.”

- Persistent cough
- Sensation of salt taste in the tongue
- Vomiting
- Headache and body pain
- Sore throat
- Weight loss
- Sensation of Sweet taste in Saliva
- Haemoptysis

2) According to Thanvanthiri Vaithiyam – Part I

Under the heading of Kaasa nithanam 5 types of Kaasam are described.

1) Vaatha Kaasam

2) Pitha Kaasam

3) Kaba Kaasam

4) Shatha Kaasam

5) Shaya Kaasam

Besides the above 5 types of Kaasam the symptoms of 5 thondha Kaasam, signs of Manthara kaasam, vega kaasam, Jwara kaasam and Pakka manthara lakshanangal are described as 10 types
Symptoms of Pitha Kaasam

“பித்தா காசம் பிட்டா காசம் வாய்ந்ததை விளக்கம் குறுக்குச்சாதனம் பிரித்து விளக்கம் மற்றும் சாத்தியாக பிள்ளாள் சாம்கள் மற்றும் சுக்கள் தூக்குவதற்குப் பாறை விளக்கம் காசம் விளக்கம் விளக்கம் விளக்கம்

- Dryness of the mouth
- Sensation of bitter taste in the tongue
- Vomiting
- Fever
- Anaemia

3) According to Therayar Vaakadam

“தெராயர் வாகடம் பாரதி விளக்கம் ஆர்வமாக காசம் அங்கீகாரம்”

He described the nature of kuruthi kaasam along with the medicine for pitha kaasam. Such as ennai and chooranam

4) According to Pararasasekaram – Part I

(Silarpana Roga Nithanum)

Kaasam – 10

1) Vatha Kaasam 6) Ratha Kaasam
2) Pitha Kaasam 7) Athisara Kaasam
3) Silarpana Kaasam 8) Soga Kaasam
4) Sura Kaasam 9) Manthara Kaasam
5) Sanni Kaasam 10) Pakka Manthara Kaasam

Symptoms of 10 kaasam are described, in this
Symptoms of Pitha Kaasam

- Fever
- Dryness of the tongue
- Confusion
- Cough
- Yellowish discolouration of urine and eyes
- Haemoptysis
- Sore throat
- Shoulder & chest pain
- Vomiting
- Thirsty

Kaasam – 5
1) Vaatha Kaasam
2) Pitha Kaasam
3) Silarpana Kaasam
4) Suvatha Kaasam
5) Shaya Kaasam

The Symptoms of 5 kaasam are described, in this
Symptoms of Pitha Kaasam

- Thirsty
- Sensation of bitter taste in the mouth
- Dryness of the mouth
- Fever
- Anaemia
- Vomiting

5) According to Sarabainthira Vaithiya Muraigal (Kaasa, Suvasa Sikichai)

Kaasam 5
1) Vaatha Kaasam
2) Pitha Kaasam
3) Kaba Kaasam
4) Shatha Kaasam
5) Shaya Kaasam

Symptoms of Pitha Kaasam

“இனிக்கின்ற மீத்தும் மீனும்
புரட்ட புத்தக பொய்யன்றுத்து
சத்துமின்றி பிலங்கு சாட்டு
கலாம் பல்தா் காவல்லியா்
சதுமின்றி சூண்டுக கூட்டு
கலாம் கிருஷ்ண கியாக்கா்
சதுமின்றி சூண்டு மூக்கு
சிற்றுத் திரும்காக்கல்”
- Persistent cough
- Sensation of salt taste in the tongue
- Vomiting
- Headache & body pain
- Sore throat
- Weight loss
- Sensation of sweet taste in the saliva
- Haemoptysis

6) According to Noi Naadal Noi Muthal Naadal Thiratu – Part 2

12 types of kaasam under the heading “Erumal”, according to yugi vaithiya sinthamani and 12 types of kaasam under the heading “Kai Ezhuthu Pirathi” are described

Symptoms of Pitha Kaasam

“குட்டி பிளவிக் தோன் கம்பிக் 
சோகமுற கடவு பால்கர்கிக்
குட்டி திட்டத்து மார்கட்டப்பட்டிக்
சோகமுற கடவு பால்கர்கிக்
பூர்க்க குட்டி பால்கட்டப்பட்டிக்

பெழுத்துப் பால்கட்டப்பட்டிக் பால் பால்கட்டப்பட்டிக்
பூர்க்க குட்டி பால்கட்டப்பட்டிக்
சோகமுற குட்டி பால்கட்டப்பட்டிக்
பூர்க்க குட்டி பால்கட்டப்பட்டிக்
சோகமுற குட்டி பால்கட்டப்பட்டிக்

தியல்விகை பிளவிக் குட்டி

31
The 5 types of Kaasam described separately also come under the heading “Erumal” according to yugi Vaithya Sinthamani.
7) According to Anubava Vaithiya Deva Ragasiyam – Part IV
   – J. Seetharam Prasath

5 Kaasam
   1) Vaatha Kaasam
   2) Pitha Kaasam
   3) Kaba Kaasam
   4) Ratha Kaasam
   5) Shaya Kaasam

Symptoms of Pitha Kaasam

   Yellowish eyes, Yellow colour sputum, Haemoptysis, Confusion, Thirsty, Sore throat and Persistent cough.

8. According to Roga Nithana Saram
   – T.R.Mahadeva Pandither

Kaasam 5
   2) Vaatha Kaasam
   2) Pitha Kaasam
   3) Kaba Kaasam
   4) Ratha Kaasam
   5) Shaya Kaasam

Symptoms of Pitha Kaasam

   Yellowish eyes, Yellow colour Sputum, Haemoptysis, Thristy and confusion.
9. According to T.V. Sambasiva Pillai Dictionary

**Kaasam 20**

1) Suvasa Kaasam       11) Kolai Kaasam  
2) Manthara Kaasam     12) Thontha Kaasam  
3) Ratha Kaasam        13) Pakka Kaasam  
4) Neela Kaasam        14) Pakka Manthara Kaasam  
5) Silathuma Kaasam    15) Sudar Kaasam  
6) **Pitha Kaasam**     16) Peenisa Kaasam  
7) Vaatha Kaasam       17) Naatha Kaasam  
8) Bala Kaasam         18) Vali Kaasam  
9) Virana Kaasam       19) Adaipu Kaasam  
10) Karba Kaasam       20) Gunma Kaasam  

Pitha Kaasam is given as one of the type among the 20 types of Kaasam. But the symptoms are not given.

10) According to Segarasa Sekara Vaithiyam

Under Kaasa disease,

- Vala Manthara Kaasam
- Pakka Manthara Kaasam
- Manthara Kaasam
- Ushana Kaasam
- Elai Kaasam

The Signs and symptoms along with the treatment of above 5 kaasam are described except for pitha Kaasam.
DETAILED PATHOLOGICAL VIEW OF PITHA KAASAM

INTRODUCTION ABOUT DISSERTATION TOPIC

Pitha Kaasam

It is one of the type of Kaasa disease under kaba noigal.

Types of Kaasam

According to yugi vaithya cinthamani, types of kaasm is 12.

“காசா காசம் சமானம் பிரவையுண்டு பாதுக
நூற்றாண்டு பாதுகாப்பு காசம் நோக்கு
பாதுகாப்பு பாதுகாப்பு காசம்
பாதுகாப்பு காசம் காசம்
பாதுகாப்பு பிள்ளையரும் காசம் நோக்கு
பாதுகாப்பு வேளாண்மை காசம் நோக்கு
பாதுகாப்பு வேளாண்மை காசம் நோக்கு
பாதுகாப்பு வேளாண்மை காசம் நோக்கு
பாதுகாப்பு வேளாண்மை காசம் நோக்கு
பாதுகாப்பு வேளாண்மை காசம் நோக்கு
பாதுகாப்பு வேளாண்மை காசம் நோக்கு
பாதுகாப்பு வேளாண்மை காசம் நோக்கு

- Yugi Vaithiya Chinthamani

The types are

1. Manthara Kaasam
2. Pakka Manthara Kaasam
3. Sundar Kaasam
4. Vatha Kaasam
5. Pitha Kaasam
6. Suvasa Kaasam
7. Ratha Kaasam
8. Kaba Kaasam
9. Peenisa Kaasam
10. Valiazhhal Kaasam
11. Azhaliya Kaasam
12. Mukkutra Kaasam

In above, pitha kaasam is one of the fifth type of kaasam.

**CAUSES FOR PITHA KAASAM**

According to Yugi vaithiya Sinthamani

“சுமாசியும் வந்தியால் புதிது செய்யும்
மீதும் பாசாத்தூர் பிக்கும் காலா”

“பாசாத்தூர் பொருட்களை பிக்கும் பாதும்
பாதும் மாற்றமாக பிக்கும் பாதும்
காலாக் குறைந்து குறைந்து பாதும்
சிற்பமாய் பாதுக்காட்டினால் பிக்கும் பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
பாசாத்தூர் பாதுக்காட்டின் குறைந்து பாதும்
பாசாத்தூர் பாதுக்காட்டின் குறைந்து பாதும்
பாசாத்தூர் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்
சிற்பாக் பாதுக்காட்டின் குறைந்து பாதும்

36
1) Environmental Causes

- Inhalation of smoke

2) Food Habits

- Intake of cool drinks
- Excess intake of non-vegetarian food
- Intake of allergic food

3) Suppression of 14 reflexes

- Starvation

4) Activities

- Increased body heat in certain condition
- Less activity
- Excess sexual desire

5) Mental and social causes

- Sorrow
- Stealing prasatham from God.
- Psychological factors
- Forgetting good things done by others

The author consider, the causes for the kaasam given in the literature yugi as the causes for pitha kaasam

Introduction about Kabam: –

“கப்பியியென்று கச்சம்பாளியாள் கரச்சக்கை”
- இவர்க்கில்

Kaba disease also denotes “Silathuma Noi”

“சைலாது பிளியை காட்சிலேட்டுபொறுபாகை பல்லை
நூற்றுக்கணவு வாந்திலேச்சியாளியாள் கவிதை மூலிகா
புரோஹம் போல் கரை பழையை செய்யும்போது வைரப்போர்ச்சே நற்சாதனை
கிளேடா வையிலியா மைத்தான் சொல்கினால் செம்பாளியை கொண்டு செய்துடுகின்றன”
- அகத்தம்பர் 2000

Types of kabam produced diseases are 1483. These are occur due to cooling and poorva kanmam and it produce emaciation of the body.

“செம்பாளியே கரச்சக்கை”

So Kabam is “Neer Bootha” amsam.

➢ Enippu = Mann + Neer
- **Uppu = Thee + Neer**

In 6 tastes, Enippu and Uppu are “Neer Bootha” amsam.

- **Vatham = Aakayam + Kaatru**
- **Pitham = Thee**
- **Kabam = Mann + Neer**

Mann and Neer are combined to produce "kaba Thathu". If any one or two bootha increase, it produces diseases of kaba.

At the same time, increased intake of Enippu or Uppu, it also altered kaba thathu and produce kaba diseases.

In our body. Place of Kabam is neck to head.

Kabam stabilizes, maintains and lubricates all movements.

**Locations of Kabam:**

Kabam is located in

- **Samanan** | **Blood** | **Bones**
- **Semen** | **Nose** | **large intestine**
- **Head** | **Chest** | **Eyes**
- **Tongue** | **Nerves** | **Stomach**
- **Bone Marrow** | **Brain** | **Pancreas**

**Character of Kabam:**

Kabam is responsible for

1) Stability
2) Smoothness
3) Lubrication
4) It fixes the joints

5) It gives ability to cope with hunger, thirst and heat, etc.

**Functions of Kabam:**

- Itching, dullness, cold, heaviness, oiliness, loss of sensation.
- White complexion.
- Indigestion
- Excess sleep
- Sweetness in mouth
- Whitish discolouration of skin, eyes, urine and motion.

**Classification of kabam:**

1) Avalambagam : Present in lungs, it controls the functions of lungs and heart and other kabas.

2) Kilethagam : Lives in stomach, it gives moisture and softness to the ingested food.

3) Pothagam : Tongue is the centre of pothagam, and responsible for identifying taste.

4) Tharpagam : Present in the head and responsible for coolness of the both eyes.

5) Santhigam : Responsible for the lubrication and free movements of the joints which are situated in joints.
In Increased condition

- Loss of appetite
- Excessive salivation
- Heaviness
- Dyspnoea
- Excessive sleeping
- Whiteness of complexion
- Diminished activity

In decreased condition

- Prominence of bony edges
- Dry cough
- Lightness
- Profuse sweating
- Palpitation
- Giddiness
- Dryness of the joints

Six qualities of Kabam

1) Cold - கலுவான்
2) Heavy - புராம்
3) Immobile - அமற்சித்து
4) Sweet - துணிப்பு
5) Unctuous – கவுன்று
6) Viscid – குயர்குழப்ப

Seven Udal Kattugal – Kabam (Relation)

Saaram: –

This is the extract of digested food. It keeps the individual is good spirit and it nourishes the body. It is responsible for growth and developments.

Saaram increase condition:

Features identical to those encountered in increased kabam occurs.

(eg) Loss of appetite

Thinai – Kabam (Relation)

In kurunji nilam, Kaba diseases occur.

Kaalam (month) – Kabam (Relation)

Kabam

Accumulation – Pinpani Kaalam – Maasi, Pankuni
Aggrevation – Elavenir Kaalam – Chithirai, Vaikasi.
Normal – Muthuvenir Kaalam – Aani, Aadi

In Maasi to Vaikasi month, kabam is increased in nature.

Fourteen vagam – Kasam (Relation)

"நான்காண்டுவத்தில் காணக்கான
காயங்கள் விளையாட வேண்டும்
மாயைக்காக உண்டு இவர்களும்
வண்டையும் சூடு செய்கிறோம்"
The person who is trying to control the kaasam, increased cough, bad breathe, heart disease will occur.

**Pathogenesis of Pitha Kaasam**

The diagram illustrates the pathogenesis of Pitha Kaasam, showing the progression of symptoms from the initial control attempt to various conditions such as cough, bad breathe, heart disease, and fever. The steps are as follows:

1. Attempt to control
2. Cough
3. Bad breathe
4. Heart disease
5. Indigestion (Digestive problems)
6. Body pain
7. Horripillation
8. Fever

Each step in the diagram represents a progression in the pathogenesis of Pitha Kaasam, leading to various symptoms that are associated with the condition.
It means increased pitham produce vomiting.
Any alteration in the food habits (or) seasonal variations (or) changes in the activities affected kaba thathu that produce increased kabam (Thannilai Valarchi), then the kaba kutram affect pitha thathu and produce increased pitham (vetrunilai valarchi), these two kutrams also affect vaatham to decreased in condition respectively, to produce pitha kaasam.

In this disease pitha kaasam following alterations are takes place.

I. Alterations in Mukkutra Nilaigal

Iyam
1. Avalambagam – Cough with expectoration.
2. Kilethagam – Anorexia.
3. Bothagam – Sensation of sweet and salt taste in the tongue.
4. Tharpagam – Headache
5. Santhigam – Pain in the knee joint.

Azhal
1. Anar pitham – Anorexia
2. Ranjaga Pitham – Pallor of the conjunctiva and tongue.

Vali
1. Pranan – dyspnoea.
2. Abanan – constipation.
4. **Udhanan** – Cough with expectoration, vomiting.

5. **Samanan** – Anorexia.


7. **Koorman** – Decreased vision.

8. **Kirukaran** – Cough, anorexia.

9. **Devathathan** – Irritability.

**Inference**

**Iyam (Increased)** – Avalambagam, Kilethagam, Bothagam and santhigam are affected.

**Azhal (Increased)** – Anar pitham, Ranjaga pitham, Sadhaga pitham and Aalosaga pitham are affected.

**Vali (Decreased)** – Pranan, Abanan, Viyanan, Udhanan, Samanan, Nagan, Kooraman, Kirukaran and Devathathan are affected.

**II. Alterations in Udal Thathugal**

1. **Saaram** – Tiredness.

2. **Senneer** – Pallor in the conjunctiva and tongue.

3. **Oon** – Swelling around the knee joints.


5. **Enbu** – Excess falling of hair in the scalp.

6. **Moolai** – Decreased vision.

**Inference**

All six Udal Thathugal are affected except Sukkilam/Suronitham.
Curable types of kaasam are seven, these are

1. Manthara Kaasam
2. Pakka Manthara Kaasam
3. Sudar Kaasam
4. Pitha Kaasam
5. Suvasa Kaasam
6. Ratha Kaasam
7. Peenisa Kaasam

Pitha Kaasam is one of the curable disease, when the proper treatment is taken along with pathiyam (management).
THEORETICAL VIEW OF DISSERTATION TOPIC
ANATOMY

Respiratory system

The interchange of gases between an organism and the medium in which it lives called respiration.

In human the organs of respiration consists of the respiratory passage and lungs.

Anatomy of the Respiratory System:

For the descriptive purpose, the organs of respiration divided into the upper and lower respiratory tracts. The cricoid cartilage is at the level of the lower border of the 6th cervical vertebra is the dividing line of the upper and lower respiratory passage.

The respiratory system is made up of the nose, pharynx, larynx, trachea, bronchi, lungs and pleura.

The upper Respiratory tract includes → the nose, Pharynx and larynx.

The lower Respiratory tract contains → Trachea, bronchi, lungs and Pleura.

LUNG:

The lungs are a pair of respiratory organs situated in the thoracic cavity.
The right lung weight about 700g, it is about 50 –100g heavier than the left lung.

**Features:**

Each lung is conical in shape, it has

1. An apex at the upper end.
2. A base resting on the diaphragm.
3. Three borders ie. Anterior, posterior and inferior
4. Two surfaces ie. Costal and medial.

The medial surface is divided into vertebral and mediastinal parts.

**Apex:**

Is blunt and lies above the level of the anterior end of the first rib.

**Base:**

Is semilunar and concave. It rests on the diaphragm.

**Anterior border:**

Is very thin, is shorter than the posterior border. The anterior border of the left lung shows a wide cardiac notch.

**Posterior border:**

Is thick and ill defined. It extends from the level of the seventh cervical spine to the tenth thoracic spine.

**Inferior border:**

Separates the base from the costal and medial surfaces.
**Costal surfaces:**

Is large and convex. It is in contact with the costal pleura and the overlying thoracic wall.

**Medial surfaces:**

Is divided into a posterior or vertebral part, and an anterior or mediastinal part.

**Fissures and lobes of the lungs:**

- The right lung is divided into 3 lobes (upper, middle and lower) by two fissures (oblique and horizontal).
- The left lung is divided into 2 lobes (upper and lower) by the oblique fissure.
- The oblique fissure cuts into the whole thickness of the lung, except at the hilum.
- In the right lung, the horizontal fissure passes from the anterior border up to the oblique fissure and separates a wedge-shaped middle lobe from the upper lobe.
- The tongue-shaped projection of the left lung below the cardiac notch is called “Lingula”

**Root of the lung:**

- Is short, broad pedicle which connects the medial surface of the lung to the mediastinum.
- It is formed by structures which either enter or come out of the lung at the hilum.
The roots of the lungs lie opposite the bodies of the T₅, T₆ and T₇ vertebrae.

**Arterial supply of the lung:**

The bronchial arteries supply nutrition to the bronchial tree and to the pulmonary tissue.

**Venous drainage of the lung:**

- The venous blood from the first one or two division of the bronchi is carried by bronchial veins. The right bronchial veins drain into the azygos vein. The left bronchial veins drain into the left superior intercostal vein or into the hemiazygos vein.
- The greater part of the venous blood from the lung is drained by the pulmonary veins.

**Lymphatic drainage of the lungs:**

There are two sets of lymphatics, both superficial and deep lymphatics of which drain into the broncho pulmonary nodes.

**Nerve supply:**

1. Para sympathetic nerves are derived from the vagus.
2. Sympathetic nerves are derived from second to fifth spinal segments.

**Bronchial Tree:**

The trachea divides at the level of the lower border of the T₄ into 2 primary principal bronchi, one for each lung.
The right principal bronchus is 2.5 cm
The left principal bronchus is 5 cm.

Each principal bronchus enters the lung through the hilum and divides into secondary lobar bronchi, one for each lobe of the lungs. Thus there are three lobar bronchi on right side and only two on the left side. Each lobar bronchus divides into tertiary or segmental bronchi, one for each broncho pulmonary segment, which are 10 on the right side and 10 on the left side. The segmental bronchi divide repeatedly to form very small bronches called terminal bronchioles. Still smaller branches are called respiratory bronchioles.

Each respiratory bronchiole aerates a small part of the lung known as pulmonary unit. The respiratory bronchiole ends in microscopic passages which are termed.

(1) Alveolar ducts
(2) Atria
(3) Air Sacules
(4) Pulmonary alveoli

Gaseous exchanges take place in the alveoli.

**Broncho Pulmonary segments:**
These are well-defined sectors of the lung, each one of which aerated by a tertiary or segmental bronchus.
<table>
<thead>
<tr>
<th>Lobes</th>
<th>Segments</th>
<th>Lobes</th>
<th>Segments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Upper</td>
<td>A.</td>
<td>Upper</td>
</tr>
<tr>
<td></td>
<td>1. Apical</td>
<td>1.</td>
<td>Apical</td>
</tr>
<tr>
<td></td>
<td>2. Posterior</td>
<td>I.</td>
<td>Upper division</td>
</tr>
<tr>
<td></td>
<td>3. Anterior</td>
<td>2.</td>
<td>Posterior</td>
</tr>
<tr>
<td>II.</td>
<td>Lower division</td>
<td>3.</td>
<td>Anterior</td>
</tr>
<tr>
<td></td>
<td>4. Superior lingular</td>
<td>5.</td>
<td>Inferior lingular</td>
</tr>
<tr>
<td>B</td>
<td>Middle</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Lateral</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Medial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.</td>
<td>Lower</td>
<td>B.</td>
<td>Lower</td>
</tr>
<tr>
<td></td>
<td>1. Superior</td>
<td>1.</td>
<td>Superior</td>
</tr>
<tr>
<td></td>
<td>2. Anterior basal</td>
<td>2.</td>
<td>Anterior basal</td>
</tr>
<tr>
<td></td>
<td>4. Lateral basal</td>
<td>4.</td>
<td>Lateral basal</td>
</tr>
<tr>
<td></td>
<td>5. Posterior basal</td>
<td>5.</td>
<td>Posterior basal</td>
</tr>
</tbody>
</table>

**Histology of Trachea and lung:**

**Trachea and extra pulmonary bronchi:**

- Have pseudo stratified ciliated columnar epithelium with goblet cells. Lamina propria contains connective tissue and ducts of glands present in sub mucosa.

- No muscularis mucosa is present.

- Submucosa contains mucous and serous acini, outer most is musculo cartilaginous layer with ‘c’ – shaped hyaline cartilage and Smooth muscle fibres joining the two ends of ’c’ – shaped cartilage, outer– most is connective tissue.
**Intra pulmonary bronchus:**

Epithelium is same as in trachea. The epithelium is thrown into folds. Lamina propria is surrounded on all sides by thin sheet of smooth muscle fibres. Outside the muscle layer are small pieces of cartilage with glands in between these pieces outermost is the connective tissue.

**Terminal bronchiole:**

Is lined by columnar epithelium with no cilia or goblet cells. Smooth muscles surround it all around. No cartilage or glands are seen. Connective tissue is seen outside.

**Respiratory bronchiole:**

Is lined by cuboidal cells. No glands or cartilage is seen. Alveoli are lined by squamous cells. Few cuboidal cells producing surfactant are seen. No muscle, no gland, no cartilage seen.
PHYSIOLOGY

MECHANISM OF RESPIRATION:

During normal quiet breathing, inspiration is the active process and expiration is the passive process. During inspiration, thoracic cage enlarges and lung expand. During expiration, the thoracic cage and lungs decrease in size and attain the preinspiratory position.

Movements of the thoracic cage:

Inspiration causes enlargements of thoracic cage. The size of the thoracic cage is increased in all diameters. Increase in anteroposterior and transverse diameters occurs due to the elevation of ribs. The vertical diameter of thoracic cage is increased by the descent of diaphragm.

In general, the change in the size of thoracic cavity occurs because of the movement of four units of structures.

(1) Thoracic lid
(2) Upper costal series.
(3) Lower costal series.
(4) Diaphragm.
** Movements of the lungs:  
During inspiration, due to the enlargement of thoracic cage, the negative pressure is increased in the thoracic cavity. This causes expansion of the lungs.

During expiration, the thoracic cavity decreases in size to the preinspiratory position. The pressure in the thoracic cage also comes back to the preinspiratory level. This compresses the lung tissue. So that, the air is expelled out of lungs.

The lungs also have some tendency of recoiling still, the lungs do not collapse.

**EXCHANGE OF RESPIRATORY GASES:**

The exchange of gases between blood and alveoli occurs only in the respiratory unit. It includes respiratory bronchioles, alveolar ducts, atria, alveolar sacs and alveoli. The membrane through which the exchange occur is called the respiratory membrane.

**DIFFUSION OF OXYGEN:**

- **From atmosphere to the alveoli:**

    The partial pressure of oxygen in the atmosphere is 159 mm Hg and in the alveoli, it is 104 mm Hg. Because of the pressure
gradient of 55 mm Hg, Oxygen easily enters the alveoli from atmospheric air.

- **From alveoli in to the blood:**

  The partial pressure of Oxygen in the pulmonary capillary is 40 mm Hg and in the alveoli, it is 104 mm Hg. The pressure gradient is 64 mm Hg. This facilitates the diffusion of Oxygen from alveoli in to blood.

  In the venous blood, the volume of Oxygen is 14ml%. The content of Oxygen in arterial blood is 19ml%. Thus diffusion of Oxygen from alveoli to blood is 5ml / 100 ml of blood.

**DIFFUSION OF CARBON DIOXIDE:**

- **From blood in to alveoli**

  The partial pressure of carbon dioxide in alveoli is 40mm Hg whereas in the blood, it is 45mm Hg. The pressure gradient of 5mm Hg is responsible for the diffusion of carbon dioxide from blood into the alveoli.

  The carbon dioxide content in the venous blood in 52ml% and in arterial blood, it is 48ml%. So, the diffusion of carbon dioxide from blood to alveoli is 4ml/100ml of blood.

- **From alveoli in to the atmosphere**
In the atmospheric air, the pressure gradient of carbon dioxide is very insignificant and is only about 0.3mm Hg whereas, in the alveoli, it is 40mm Hg. So carbon dioxide leaves alveoli easily.

**LUNG DEFENSE MECHANISM:**

The normal lung is free from bacteria. A number of potent defense mechanism clear or destroy any bacteria inhaled with air or fortuitously deposited in the airway passages as follows.

(1) **Nasal clearance:**

Particles, including aerosolized droplets carrying microorganisms deposited near the front of the airway on the non ciliated epithelium, are normally removed by sneezing and blowing, whereas those deposited posteriorly are swept over the mucus-lined ciliated epithelium to the nasopharynx, where they are swallowed.

(2) **Tracheobronchial clearance:**

This is accomplished by mucociliary action. The beating motion of cilia moves a film of mucus continuously from the lung toward the oropharynx. Particles deposited on this film are eventually either swallowed or expectorated.

(3) **Alveolar clearance:**
Bacteria or solid particles deposited in the alveoli are phagocytosed by alveolar macrophages. A particle is either digested or carried to the ciliated bronchioles. From here the macrophage is propelled to the oropharynx and then swallowed. Alternatively, the particle–laden macrophage may move through the interstitial space and either re-enter the bronchioles or enter lymphatic capillaries. If the particle load is heavy and macrophages transport to the surface and alveolar pathway is overwhelmed, some particles may eventually reach the regional lymphnodes and, via the bloodstream, be carried elsewhere in the body.
**PNEUMONIA**

**Synonym**

Pneumonitis

**Definition**

An acute inflammation of the lung parenchyma, distal to terminal bronchioles which consist of the respiratory bronchiole, alveolar ducts, alveolar sacs and alveoli.

**Causes**

I) **Bacteria**

- Streptococcus Pneumoniae.
- Staphylococcus Pyogenes.
- Mycobacterium tuberculosis

II) **Mycoplasma**

- Mycoplasma Pneumoniae

III) **Viruses**

- Myxo Virus → Influenza
  - Para – Influenza
  - Respiratory syncytial virus
- Adeno virus
- Measles virus
- Picorma Virus
**Etiological Classification**

A) **Bacterial Pneumonia**
   1) Lobar Pneumonia.
   2) Lobular Pneumonia (Broncho Pneumonia).

B) **Viral and Mycoplasmal Pneumonia**
   (Primary Atypical Pneumonia)

C) **Other types of Pneumonias**
   1) Legionella Pneumonia
   2) Aspiration Pneumonia (Inhalation Pneumonia)
   3) Hypostatic Pneumonia
   4) Lipid Pneumonia

**Pathogenesis**

The microorganisms gain entry into the lungs by one of the following four routes

1) Inhalation of the microbes present in the air.
2) Aspiration of organisms from the nasopharynx or oropharynx.
3) Haematogenous spread from a distant focus to infection.
4) Direct Spread from an adjoining site of infection.

The normal lung is free of bacteria because of the presence of a number of lung defense mechanism at different levels, such as
Nasopharyngeal filtering action,

Mucociliary action of the lower respiratory airways and,

Immunoglobulins.

Failure of these defense mechanisms and presence of certain predisposing factors result in pneumonias. These conditions are as under

1. Altered consciousness
   
The oropharyngeal contents may be aspirated in states of unconsciousness.
   
E.g. In coma, cranial trauma, seizures, cerebrovascular accidents, drug overdose, alcoholism etc.

2. Depressed cough and glottic reflexes
   
Depression of effective cough may follow aspiration of gastric contents.
   
E.g. In old age, pain from trauma or thoraco abdominal surgery, neuromuscular disease, Weakness due to malnutrition, kyphoscoliosis, severe obstructive pulmonary disease and tracheostomy.

3. Impaired Mucociliary transport
   
The normal protection offered by mucus-covered ciliated epithelium in the airways from the larynx to the terminal
bronchioles is impaired or destroyed in many conditions favouring passage of bacteria into the lung parenchyma.

E.g. Cigarette smoking, Viral respiratory infections, immotile cilia syndrome, inhalation of hot or corrosive gases and old age.

4. Impaired alveolar macrophage function

Pneumonias may occur when alveolar macrophage function is impaired.
E.g. Cigarette smoking, hypoxia, starvation, Anaemia, pulmonary oedema and viral respiratory infections.

5. Endobronchial obstruction

The effective clearance mechanism is interfered with in endobronchial obstruction.
E.g. Tumour, foreign body, cystic fibrosis and chronic bronchitis.

6. Leucocyte dysfunctions

Disorders of lymphocytes including congenital and acquired immuno deficiencies.
E.g. AIDS, immuno suppressive therapy and granulocyte abnormalities.
Pathology

- Organism
- Upper Respiratory Tract
- Lower Respiratory Tract
- Exudation of fluid into the alveoli
- Adjacent acini and segment
  - 1-2 days: Stage of Congestion (The fluid is invaded by neutrophils and red cells)
  - 2-4 days: Red Hepatization (or) Early consolidation (alveoli are filled with red cells and fibrin)
  - 4-8 days: Grey Hepatization (or) Late consolidation (Red Cells are replaced by neutrophil leucocytes)
- Resolution 1-3 weeks
- Spread to Pericardium (Less)
- Invade the pleura (Common)
The pneumonic process may be confined to a segment or lobe or may be patchy. The distribution is not characteristic of any particular micro-organism. The initial acute inflammatory process may be associated with bacteraemia which is more common with pneumococal pneumonias than with others.

Pneumonia causes a restrictive defect of ventilation with a reduction in vital capacity and lung compliance. The work of breathing is diminished by a small tidal volume and rapid rate of breathing. This pattern of breathing is encouraged by pleuritic pain if it is present. Ventilation of the alveoli is also grossly impaired by inflammatory oedema. On the other hand, the blood flow is maintained. Physiological shunting ensues and is the cause of the reduction in arterial PO₂. If this is considerable then the arterial oxygen saturation is reduced with development of cyanosis. The arterial PCO₂ usually remain normal unless the pneumonia complicates a disorder associated with severe airways obstruction.

**Clinical features**

**Symptoms**

- Fever with rigor.
- Cough at first is usually dry and irritating and may cause distress because it aggravates the pain.
- Sputum is scanty and tenacious (or) may appear rusty.
- Often frankly blood –stained, (haemoptysis).
- Sleeplessness.
- Headache.
- Delirium.
- Confusion.
- Pleuritic chest pain – dyspnoea.
- Body pain.
- Vomiting.
- Anorexia.

**Signs**
- Temperature as high as 102° – 105° F (38.9° – 40.6° C)
- The skin tends to be hot and moist and may be pale due to peripheral vasoconstriction with systemic hypotension.
- Central cyanosis. (Due to hypoxaemia)
- Tachycardio and tachypnoea.
- Herpes simplex and jaundice may appear in younger people.
- Diminished chest movement on the affected side.
- Localised crepitaions appear on the affected side.
- An impaired percussion note.
- Bronchial breathing
- Bronchophony.
- Pleural friction rubs.
Complications

1) Pulmonary
   - Spread to other lobe.
   - Lung abscess
   - Delayed resolution.

2) Pleural
   - Sterile pleural effusion
   - Empyema

3) Cardiovascular
   - Peripheral circulatory failure
   - Acute pneumococcal endocarditis
   - Acute pneumococcal pericarditis.
   - Venous thrombosis in the lower limbs.

4) Neurological
   - Pneumococcal meningitis.
   - Brain abscess.
   - Meningism.

5) Others
   - Otitis media.
   - Mastoiditis.
   - Purulent arthritis.
Investigation

- Neutrophilic leucocytosis.
- Blood culture
- Sputum to be examined by microscopy and culture.
- Chest radiograph may reveal consolidation.

Differential diagnosis

- Pulmonary infarction
- Pulmonary tuberculosis
- Acute bronchitis.
EVALUATION OF DISSERTATION TOPIC

MATERIALS AND METHODS

The clinical study on Pitha Kaasam has been taken in the post graduate department of Noi Naadal.

The clinical study was done in 30 cases, of them 21 cases were selected. In which I had selected 21 cases to evaluate typical picture by siddha parameters along with modern parameters.

The detailed history of the present and past illness and family history were observed.

EVALUATION OF CLINICAL PARAMETERS

- The detailed history and clinical features of the patients were taken carefully.
- The clinical history.
- Detail history of present and past illness.
- Personal and family history.
- Diet habits.
- Exposure to cold weather.

Clinical features for Pitha Kaasam are

- Presistent Cough
- Sensation of sweet and salt taste in the tongue.
- Vomiting
- Headache
- Body pain
- Burning sore throat
- Haemoptysis
- Dyspnoea
- Anorexia with sour taste regurgitation
- Horripillation
- Fever and
- State of Confusion

**STUDY ON SIDDHA CLINICAL DIAGNOSIS**

Siddha diagnosis was also made by the following methods.

1. Poriyal arithal
2. Pulanal arithal
3. Vinathal
4. Mukkutra nilaigal
5. Udal Kattugal
6. Envagai thervugal (Including Neerkuri, Neikuri)
7. Nilam
8. Kaalam

**THE CLINICAL INVESTIGATION**

For further detailed study about the disease the following laboratory investigation was done in all cases.

**Blood**

- Total count – WBC
- Differential count – WBC
Haemoglobin

Erythrocyte Sedimentation Rate

Blood sugar

Blood urea

**Urine**

Albumin

Sugar

Deposit

**Motion**

Ova

Cyst

**Other test**

Chest X-ray
OBSERVATION AND RESULTS

Results were observed with respect to the following aspects.

1. Age and Sex reference
2. Nilam
3. Seasonal variations
4. Socio-economic status
5. Mukkuttram
6. Udal Kattugal
7. Signs and Symptoms
8. Envagai thervugal
9. Laboratory Investigation
10. Chest X-ray

Table 2: Age reference

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Age</th>
<th>No.of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Upto 10 yrs</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>10 – 30 yrs</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>30 – 50 yrs</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>50 – 70 yrs</td>
<td>2</td>
</tr>
</tbody>
</table>

Out of 21 cases, 10 cases were affected in the age groups of Upto 10 years (48%).
Table 3: Sex reference

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Age</th>
<th>No.of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Female</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Female Children</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Male</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Male Children</td>
<td>8</td>
</tr>
</tbody>
</table>

Out of 21 cases, males are more affected.

Table 4: Lung affected

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Lung</th>
<th>Lobe</th>
<th>No.of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Right Lung</td>
<td>Upper</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Middle</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Left Lung</td>
<td>Upper</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower</td>
<td>8</td>
</tr>
</tbody>
</table>

Left lower lobe lung is more affected (38%).

Table 5: Nilam

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Nilam</th>
<th>No.of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kurunji</td>
<td>13</td>
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<tr>
<td>2</td>
<td>Marutham</td>
<td>8</td>
</tr>
</tbody>
</table>

Out of 21 cases, 13 cases were affected under kurunji nilam (61%).
### Table 6: Seasonal variation

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Paruvakaalam</th>
<th>No.of cases affected</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Kaarkaalam</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Koothirkaalam</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Munpanikaalam</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Pinpanikaalam</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>Ilavenilkaalam</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Mudhuvenilkaalam</td>
<td>2</td>
</tr>
</tbody>
</table>

Out of 21 cases, 7 cases were affected under pinpani kaalam (33%).

### Table 7: Socio-economic status

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Class</th>
<th>No. of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Middle</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>Poor</td>
<td>12</td>
</tr>
</tbody>
</table>

This disease occur common in poor socio economic status (57%)
### Table 8: Derangement of Iyam

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Kabam</th>
<th>No.of cases</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Avalambagam</td>
<td>21</td>
<td>Cough with expectoration</td>
</tr>
<tr>
<td>2</td>
<td>Kilathagam</td>
<td>21</td>
<td>Anorexia</td>
</tr>
<tr>
<td>3</td>
<td>Pothagam</td>
<td>21</td>
<td>Sensation of sweet and salt taste in the tongue</td>
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<td>Sandhigam</td>
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100% of cases are affected in increased Iyam.

### Table 9: Derangement of Azhal

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<td>Ranjagam</td>
<td>10</td>
<td>Pallor in conjunctiva and tongue</td>
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<td>Saadhagam</td>
<td>21</td>
<td>Difficulty in doing routine work</td>
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<td>4</td>
<td>Aalosagam</td>
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100% of cases are affected in increased azhal.
Table 10: Derangement of Vali

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<td>Viyanan</td>
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<td>Pain during walk</td>
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<td>Koorman</td>
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<td>Kirugaran</td>
<td>21</td>
<td>Anorexia, cough</td>
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<td>Thevathathan</td>
<td>11</td>
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<td>Dhananjayan</td>
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100% of cases are affected in decreased vaatham.

Table 11: Udal Kattugal

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<td>Kozhuppu</td>
<td>6</td>
<td>Restricted movements</td>
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<td>Enbu</td>
<td>6</td>
<td>Excess falling of hair in the scalp</td>
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### Table 12: Clinical Features

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### Table 13: Envagai thervu

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Table 14: Envagai Thervugal

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A – Affected  
NA – Not affected  
RP – Rapid pulsation  
KP – Kabapitham
### Table 15: Laboratory investigation

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<th>ESR mm</th>
<th>Hb g %</th>
<th>B. Sugar mg%</th>
<th>B. Urea mg%</th>
<th>Urine</th>
<th>Motion</th>
<th>Mantoux Test</th>
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</table>

RLL – Right lower Lobe  
RML – Right middle lobe  
P – Pneumonitis  
RUL- Right upper Lobe  
LLL – Left lower lobe  
C – Consolidation  

80
DIFFERENTIAL DIAGNOSIS

In manthara kaasam, even though rhinitis, sneezing, discomfort in the chest, added sounds, body pain, cough with expectoration, associated with sweating are present, but the special symptoms of pitha kaasam such as fever and haemoptysis are not present.

-Yugi Vaithiya Chintamani
In suvasa kaasam, even though cough with expectoration, added sounds, indigestion with abdominal distension, burning sensation in the nose, weight loss, sore throat, associated with excessive salivation are present, but the special symptoms of pitha kaasam such as fever and haemoptysis are not present.

- Yugi Vaithiya Chintamani

In pitha shayam, even though intercostal and neck muscle wasting and emaciation, added sounds, cough with expectoration, chills, haemoptysis, dyspnoea, hoarseness of voice, indigestion, yellowish white body colour associated with yellowish urine are present, but the special symptoms of pitha kaasam such as fever and state of confusion are not present.
<table>
<thead>
<tr>
<th>Diseases</th>
<th>Positive Symptoms</th>
<th>Negative Symptoms</th>
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<tr>
<td>Manthaara Kaasam</td>
<td>Cough, Expectoration, Body Pain</td>
<td>Rhinitis, Sneezing, Added sound, Sweating</td>
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<tr>
<td>Suvaasa Kaasam</td>
<td>Cough, Expectoration, Dyspnoea, Sore throat</td>
<td>Weight Loss, Sneezing, Flatulence</td>
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<tr>
<td>Pitha Shayam</td>
<td>Cough, Expectoration, Haemoptysis, Dyspnoea, Sore Throat</td>
<td>Whiteness of the body, Yellowish Urine, Emaciation</td>
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</table>
DISCUSSION

The functional units of our body are the three vital forces, which are Vali, Azhal and Iyam. Any disturbance in the vital humour will affect the function of the organ. In chronic condition, it may lead to pathological changes in the affected organ.

“In the normal condition, the body is protected against diseases, and its protective mechanism plays a role in removing the unwanted thing from the body.

In the vitiated state, the protective mechanism leads to harm to the body.

The clinical studies on all selected cases were undergone investigation by both siddha as well as modern allied parameters.

INTERPRETATION OF CLINICAL HISTORY

1. Family history

No positive family history of this disease.

2. Age group

Out of 21, 10 cases are below 10 years of age (48%)

3. Sex

Out of 21, 16 cases are males (76%).

4. Occupation

Occupational history was not related to this disease.
5. Clinical features

All the patients depicted the clinical features mentioned in the poem “Pitha Kaasam” in the text book of Yugi Vaithiya Chinthamani.

6. History of previous illness

Out of 21, 11 Pitha Kaasam patients had past history of repeated respiratory disease.

7. Nilam

Out of 21, 13 cases were affected in kurunji Nilam (61%)

INTERPRETATION OF SIDDHA PARAMETERS

I. Interpretation of Envagai thervugal

1. Naadi
   Out of 21, 21 cases having iyaazhal (100%).

2. Sparisam
   Out of 21, 21 cases were affected (100%)

3. Naa
   Out of 21, 10 cases were affected (48%).

4. Niram
   On observations the body colour of 21 cases having their own colour (100%).

5. Mozhi
   Out of 21, 10 cases were affected (48%)

6. Vizhi
   Out of 21, 5 cases were affected (24%)
7. Moothiram
   - Niram: Out of 21, 21 cases were having normal colour (100%)
   - Manam: No abnormal odour.
   - Enjal: Out of 21, 20 cases were affected (95%).

Neikuri
   - Out of 21, 21 patients Neikuri exhibited as the oil, it’s look like pearl (Muthothu nitral) (100%).

III. Interpretation of Mukkutra Nilaigal

Iyam
   - 4. Avalambagam: Out of 21, 21 cases were affected (100%).
   - 5. Kilethagam: Out of 21, 21 cases were affected (100%).
   - 6. Pothagam: Out of 21, 21 cases were affected (100%).
   - 7. Tharpagam: Out of 21, 21 cases were affected (100%).
   - 8. Santhigam: Out of 21, 6 cases were affected (28%).

Azhal
   - 4. Anar pitham: Out of 21, 21 cases were affected (100%).
   - 5. Ranjaga Pitham: Out of 21, 10 cases were affected (48%).
6. Sadhaga Pitham
   Out of 21, 21 cases were affected (100%).

7. Aalosa Pitham
   Out of 21, 5 cases were affected (24%).

Vali
1. Pranan
   Out of 21, 15 cases were affected (71%)

2. Abanan
   Out of 21, 6 cases were affected (28%).

3. Viyanan
   Out of 21, 2 cases were affected (10%).

4. Udhanan
   Out of 21, 21 cases were affected (100%).

5. Samanan
   Out of 21, 21 cases were affected (100%).

6. Nagan
   Out of 21, 21 cases were affected (100%).

7. Koorman
   Out of 21, 5 cases were affected (24%).

8. Kirukaran
   Out of 21, 21 cases were affected (100%).

9. Devathathan
   Out of 21, 11 cases were affected (52%).

IV. Interpretation in Udal Thathugal
1. Saaram
   Out of 21, 21 cases were affected (100%).

2. Senneer
   Out of 21, 10 cases were affected (48%).

3. Oon
   Out of 21, 6 cases were affected (28%).

4. Kozhuppu
   Out of 21, 6 cases were affected (28%).
5. **Enbu**  
Out of 21, 6 cases were affected (28%).

6. **Moolai**  
Out of 21, 5 cases were affected (24%).

7. **Sukkilam/Suronitham**  
Out of 21, 2 cases were affected (10%).

**INTERPRETATION OF ALLIED PARAMETERS**

Suspected cases were subjected to screening test of haematology.

- **Total count WBC**  
  Out of 21, 21 cases having increased TC (100%)

- **Differential count for WBC**  
  Out of 21, 21 cases having increased lymphocytes (100%)

- **ESR**  
  Out of 21, 21 cases having raised ESR (100%)

- **Hb**  
  Out of 21, 10 cases having decreased Hb (48%)

**X-Ray chest**

Out of 21, 13 cases having consolidation in the lung (61%), 8 cases having pneumonitis in the lung (38%).
HIGH LIGHTS OF THE DISSERTATION TOPIC

The disease is characterized by

- Cough with expectoration is due to irritation of respiratory tract result in stimulation of vagal nerve endings.
- Vomiting is due to mechanical stimulation of pharynx.
- Dyspnoea is due to pulmonary insufficiency (inadequately functioning alveolar tissue).
- Anorexia is due to acute fibrile illness.
- Headache and body pain is due to fever.
- Sore throat is due to infection of the larynx.
- Haemoptysis is due to erosion of capillaries in a lung.
- Fever is due to infection of lung parenchyma, Horripillation is due to chill.
- State of confusion is due to cerebral hypoxia, result from filling of alveoli with fluid.

All of these symptoms correlate with “Pitha Kaasam” explained by our great siddhar Yugimuni.
CONCLUSION

Identification of disease and its pathogenesis are pre requisite for medical practice. A detailed history taking, clinical examinations as per siddha guidelines is necessary to arrive at precise diagnosis.

The study on Pitha Kaasam was carried out in the dissertation, giving importance to the characteristics of the disease like Persistent Cough, Sensation of sweet and salt taste in the tongue, Vomiting, Headache, Body pain, Burning sore throat, Haemoptysis, Dyspnoea, Anorexia with sour taste regurgitation, Horripillation, Fever and State of Confusion.

Diagnosis can be carried out by detailed history taking, classical clinical examination of siddha system, Via, Envagaithervugal including Naadi and Neerkuri, and changes in seven physical constituents and three humours.

Whether this disease is curable or not is carried out by examination of siddha system, via, Neikuri and Manikkadai nool.

This study on Pitha Kaasam may be correlates with Pneumonia, which has given relevance to modern clinical entity.
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