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INTRODUCTION

In the scramble of appropriate technologies, everything including modern health care, its goal and practice, is being questioned. The World Health Organization defines Health as “a state of physical, mental and social well-being, not merely an absence of diseases or infirmity”. Really speaking, health is not a state, but continuous adjustment to the changing demands of life and environment. Positive health implies perfect functioning of body and mind in a given social milieu.

Scientific aptitude that entered medical profession in the beginning of the 20\textsuperscript{th} century made rapid strides in eradicating various diseases through invention of various medicines. With constantly increasing population, diseases are also parallely increasing day by day. Inspite of various advancements in the field of medical science and technology, the humanity is left with many challenging and life threatening problem. Therefore interest in alternative medicines and medical care system is growing day by day with increased life expectancy.

Siddha System of Medicine as practiced by our ancients has its own philosophy, holistic approach and life style oriented medicare concepts. This system gives importance to the individual body constitution and
customize the treatment. The basic emphasis of Siddha System is on positive health viz, to prevent disease by careful dieting and proper relaxation of mind to achieve a totality of health, that access not only longevity but also immortality.

According to Siddha System of Medicine, 5 elements (Earth, Water, Fire, Air, Ether) develop six tastes (Sweat, Sour, Pungent, Salt, Bitter and Astringent). This six tastes conjugate with one another and build 3 humors, Vali, Azhal, Iyam of the body. Imbalance in these three humors produces the ailments or makes the man susceptible to get disease which are about 4,448 in number.

Moola Noi is one among the 4,448 diseases. Nearly 40% of the people suffer from this malady. “Raththa Moolam” is one among the 21 Moola Noi types.

The current Life Style, Diet, Stress, Pace and Environment all paves way in bringing out this condition. The packaged, Sweatened, Canned foods, Non-veg items, all that might taste good, are thieves that rob the natural vibrant health. As food is medicine and medicine is food is one of the core philosophies of Siddha System of Medicine, change in food habits paves way to disease.
Hence Thiruvalluvar in his kural depicted,

“நீர்குழுக்கு புருஷேந சூரியக்கன்த திகையும்
சமநார எனினும் நிற்கும்.”

Human who do not slaughter animals are considered as divine. Hence Valluvar emphasize everyone to be vegetarian.

The cardinal symptom of “Raththa Moolam” is bleeding which needs utmost care in treatment or else will produce hazardous consequences. This intended the author so much that the author was drawn towards it to find effective cures on hand. This is just a preliminary work on the author’s part and further work will be carried out in due course with blessings of Almighty to explore relative strength of Siddha System of Medicine for better health of the world at large.
AIM AND OBJECTIVES

The modern way of life causes more personal stress than the more deliberate pattern followed in previous decades. Urban living and competition for achievement which produces anxieties and thwartings, unhealthy food habits all of which affected the health and paves way for disease.

Specialization and micro specialization have made medical care very efficient but at the same time unaffordable economically to the common men. As the modern medicine provides surgical treatment as a permanent solution for haemorrhoids the author laid special emphasis on this disease “Raththa Moolam” and intended to find efficacious cure through Siddha System.

Objectives:

🌟 To collect various details about the disease “Raththa Moolam” with the deep observation on the etiology, classification, pathology, diagnosis, complications etc., in both siddha and modern aspects.

🌟 To have an idea about the incidence of the disease with age, occupation, economic status, habits, family history and climatic conditions.
To correlate the signs and symptoms of the disease “Raththa Moolam” with first degree Internal haemorrhoids in modern aspects.

To throw light on well versed diagnostic knowledge mentioned by siddhars, Envagai Thervugal and also to know how the disease manifests due to deranged Mukkuttram, Udal Thathukkal.

To have a clinical study on “Raththa Moolam” with the trial medicine, “Moola Rogangal Gunamaga Ennei” – 2.5 ml, twice daily.

To study pre clinical analysis of the trial medicine – biochemical screening, pharmacological screening.

Every disease has its cause. “The curse causeless shall not come” is a proverb. The main aim is knowing the cause of disease and removing it thus preventing the disease.

To use modern parameters to confirm the diagnosis and prognosis of the disease.
ABSTRACT

In fast paced modern world people have switched to inappropriate life styles and unhealthy food habits and this resulted in wide array of disease. Hence a search for universal systems and practices for human health and cure from every available source irrespective of its labels is in progress. This fascinated the author so much that he was very much attracted towards the disease Raththa Moolam from the various materials mentioned in siddha literature, the author correlated the disease with 1st degree Internal Haemorrhoids. The diagnosis was made by means of siddha parameters and the study was done on 20 Out patients and 20 In patients with the administration of trial drug Moola Rogangal Gunamaga Ennei – 2.5ml (Ref: Theraiyar Aruliya Vaithya Saaram).

Preclinical screenings viz, bio chemical analysis, pharmacological analysis were done using the trial drug. At the end of study most cases showed very good result.
REVIEW OF LITERATURE

SIDDHA ASPECT

Siddha system of medicine highlights the practice of medicine as the art of restoring the sick to health. Siddha medicine maintained the respectability in keeping the society in normal health and relieving people from common diseases. This system essentially leads towards a new dimension of life helping in the process of flowering of human personality.

According to this system the physiological function of human body is regulated by the three vital humours namely,

- Vaatham
- Pittham
- Kabham.

Derangement of these three humors causes disease. This is what Thiruvalluvar says,

“திருவள்ளுவருக்கு என்ளை காய்ம்ம காவாக
தருமதியர் கருமரத்திய குலம.”

- பாடல் கைலாச் 941, ம்யுடக்காலை
According to Yugi Vaidhya Chinthaamani, Raththa moolam is one among the twenty-one types of Moola Noi.

The world “Moolam” means Principal or Important one. In Siddha, “Moolam” means the area Moolaathaaram, one of the six psychic centers in the human body. These centers are considered as six pillars of life.

**MOOLAATHAARAM:**

Moolaathaaram is the first and important psychic center, situated at the base of spinal column between the anus and genitalis. It has the control of the excretory organs the penis, the anus and the colon.

The moolaathaaram area is the seat of coiled kundalini, the vital sakti or energy force. This center is the root of all growth and awareness of the divinity. The ascent of kundalini sakti from the moolaathaaram area through the other psychic centers ends at chandra mandalam (fontanelle region or crown of head). As the union of sakti and siva takes place here, the aspirant enjoys the heavenly bliss (Siva Yogam). This is mentioned in the verse as follows,
"பார்வா குண்கலியில் விகார்கங்கள்

பிரித்தல் குண்கலியில் விகார்கங்கள்

அங்கு புரட்சில் விகார்கங்கள்

அங்கு புரட்சில் விகார்கங்கள் விகார்கங்கள்

இவ்வாறு வேலியாகவே கூறப்படுகிறது

தனியே கூறப்படுகிறது கல்பத்திக்

கங்காற் முப்புறாக புலியிச்சிக்கும்

குறிப்பிட்டு வருவதில்லை குடும்புக்காகி.

- பாறைத் தலை: 7,8, மக்கல்: 183, வி பாறைத் தலை: - 500

These verses implies about the state of supreme peace, bliss and divinity by arousing kundalini sakti from moolaathaaram area.

THATHUVAM ASPECT:

Moolaathaaram area is situated in akkini mandalam. Akkini mandalam is the portion or region extending from the sacral plexus to the hypogastric center (navel region). Vaatham area is below the navel. So predominating boothams out of pancha boothams are vaayu, aahaayam and theyu. Theyu is for akkini mandalam and rest for the vaatha area. This structure makes this area more kinetic (due to vaayu) and thermal energies (due to theyu) facilitate the normal act of micturition, defaecation and parturition. The bootham involved for these normal action is neer.
Vaayu and aahayam together constitute Vaatham. Vaatham manifests as ten types in the body. The various types of Vaatham which are concerned with moolatharam are,

- Abaanann
- Samaanan
- Praanan
- Devadhathan

Abaanan is vaayu having theyu predominance in its structure. In relation to malaasayam it effectively expels faeces since it has both kinetic (due to being a vaayu) and metabolic thermal energies (due to theyu). Samaanan lies equally from navel to foot and controls other vaayus and helps in digestion and absorption. Praana vaayu takes its course via moolaathaara area and it takes saaram from here and disperses to all the tissues of the body, in addition to its main function of respiration. Dhevadhatthan is related with the mental state of a human being. It normally resides in the rectum and is responsible for anxiety, quarrelling and laziness.

Theyu in malaasayam manifests as moolaakini. Moolaakkini, a kind of akkini in the body gives the required metabolic thermal energy to malaasayam and facilitate the normal act of visarkkam. Neer bootham carries out the act of visarkkam in the kanmenthriyam, eruvaaai. The action
of neer bootham is very essential since uncontrolled action by vaayu, aahaayam and theyu may result in pathology.

In the ten Naadis, the malaasayam naadi is Ghu. Suzhumunai naadi also has its base in the moolaathaaram. These naadis carryout coherent action of other systems in normal acts of digestion, absorption and defaecation. This is given in Siddha text as,

```
“இவ்வியாணத்தில் கதிரவீர் நோய்ப் கருத்தே
இந்தப் பாதுகாப்பு (சுந்தரபசுத்தியா விகர்த்தே)
நாகாக அல்லது நிலையது நாய் வைரோ நோய்ப்பே
நிகாரமானது அல்லது விற்புழாமாக
அப்பதில் மாற்றாவடையது அல்லது கின்றே
நாய்கள் சும்பியம் நற்சூழ்விதே
நாய்களில் மாற்றமானது திறமையாக
மார்காம் விற்புழாமாக இல்லத்தே
அயிரகரும் மாற்றாக சிகப்பற்றே”
```
- பாகம்: 18, பக்கம்: 32,சுத்த வெறும் குடையே - 150

CONTROL BY NARAMBU:

In Therayar narambu soothiram, nine narambugal are held responsible for deglutination, digestion, absorption and defaecation. Out of these one narambu is solely responsible for the purpose of visarkkam. This narambu divides into four branches in the moolaathaaram and supplies large intestine, urinary bladder, Spleen (kaariral), Uterus (pavalappai), Lungs (suvaasapai).
This nambbu in association with other thathuvams such as, ten vaayus carrys the act of Visarkkam. It is mentioned in the following verse,

"காண்டல் வம்பத்தியருள்வோ முமு காண்டல் கேந்து குரை
சுந்தனுசுந்தனுசுந்தனுசுந்தனுசுந்தனு
சுந்தனுசுந்தனுசுந்தனுசுந்தனுசுந்தனு

Moola noi, a disease that occurs in and around Moolaathaaram.
The word, Moolam means Principal or Important one, as already mentioned. So, disease of the Moolam or Moolaathaaram area is also principal disease to be treated first. In Moolaroga sigitcha bodhini, the term “Moolam”
implies root, out growth which describes tuber like out growth or root like structures around the anus. Of all the diseases, Moola Noi is the subtle disease, that needs special medication. This is explained in the following verse as,

"அம்மின்றி வீரரங்கனை மேலங்கம் பகலா
பார்வீன் பம்மின்ஷு பாலகாஞ் கும்பிலிக
பாலவன் மையில் பழிக்கத்து குறிப்பிட்டேக்
சம்஭ர் உறுப்புவார்த்தி வாத்பா வாக்காடுவே.

- பாகம்: 247, சிதைவுப்பத்திக்கர்.

Moola Noi includes a wide variety of ano rectal diseases. It is also called as Adimulai noi, Arippu noi or Mulai noi.

**TYPES OF MOOLAM:**

Moola Noi has been classified into various types by different authors, some of the types are tabulated below.

In **Yugi Vaidhya Chinthaaamani**, Yugi munivar describes twenty-one types of Moola noi, of which Raththa moolam is one among them. The verse is,

"சரிப்பார் சுமார்க்கிறே தம்பே காலந்தே
சேவேற்று பாதையாங் நாயச்சிளிக பூத்தே
சேரிப்பார் மலர் குறும் கிளையும் பூத்தே
சன்னாவ்வே வருண்ணே முக்கியவும் குருக்கும்"
21 types are


- பக்கம்: 141, புத்தி சாமியம் சிங்காரன்கிரி
Of this, nine are Asaathiyan (Incurable) and twelve are Saathiyan (Curable). Raththa moolam is included one among the curable moola noii.

**Agathiyar Aayoolvedham-1200** describes six types of moola noii, of which Raththa moolam is included one among them. The types are described as

"புடும்பைல்லன் வாரம் ஒலிவாயிட்டுரோள் பல்கா
புடும்பைல்லன் வாரம் ஒலிவாயிட்டுரோள் பல்கா
புடும்பைல்லன் வாரம் ஒலிவாயிட்டுரோள் பல்கா
புடும்பைல்லன் வாரம் ஒலிவாயிட்டுரோள் பல்கா"

- பாடல் மூலம்: 621,

Agathiyar in his book Agathiyar Aayool Vedham 1200, classified Moolam into three types according to the nature and appearance of the pile mass.

i. Pile mass which resembles cotton seeds in appearance

ii. Pile mass which resembles the young flower buds of pomegranate.

iii. Pile mass which resembles leech.

Also he classified Ulmoolam into two types. In the case of males it occurs in right side and in females it occurs in left side which is depicted in the following versions.

"அல்லாம் முக்தங்களத் தமக்கு மாற்றியுமாட்டுக் கேசூட்டுறை மாற்றியுமாட்டுறை புத்தந்தான் புத்தந்தான்"

- பாடல் மூலம் 624
In *Anubava Vaidhya Deva Ragasiyam* moola noi are classified into 6 types. Raththa moolam is included one among these types.

1. Vaatha Moolam
2. Pittha Moolam
3. Siletthuma Moolam
4. Thontha Moolam
5. Tridosha Moolam
6. Raththa Moolam

*Agathiyar Paripooranam* describes nine types of moola noi. It includes Raththa Moolam one among them.

1. Ul Moolam 6. Moola paandu
2. Pura Moolam 7. Vali Moolam
5. Mulai Moolam

*Aaviyalikkum Amutha Murai Churukkam* also accept this type of classification.

*Jeeva Ratchaamirtham* describes moola noi into 4 types. It does not classify on the basis of Mukkutra theory, rather it classifies on the basis of heredity etc. the four types are,
1. Sagasa Moolam:

Congenital types of moola noi, i.e., due to Karma, moola noi is inherited even before birth.

2. Uttharasa Moolam:

Moola noi due to excess indulgence in sexual intercourse, taking too much quantity of hot or pungent and saltish substances and heated condition of the brain (or) mental strain. [utthara-higher].

3. Sutka Moolam:

A kind of moola noi, in which the tumour of the vein outside the anus is shrunken or decreased in size and dried.

4. Aartthira Moolam:

A kind of moola noi, characterized by constant oozing of matter accompanied with blood.

MURKURIGAL [PRELIMINARY SIGNS & SYMPTOMS]:

"கன்றப்பா மண்பாணிக்க தன்றாய் வேர்ந்தல்நிலையாக 
தோரும் சுமாவிக்க மட்பு பெரியம்பத்து குற்றிக்குறை 
தகரசம்பா முக்கலையை விளக்க கத்திக்கு மட்டு அருங்கள் வின் 
தங்கம்ப முக்கழக்கல்கா ஆய்மையை விளையாட்டும் பரிசா.”

- பட்டவ் நாள்: 45, புகழ்: 26, விதை முருகம்

"பெருமாறுகாயன் முழுவதாக விளங்கும்
பெருமாறுகாயன் முழுவதாகும் விளக்கம்
பெருமாறுகாயன் முழுவதாக விளங்கும் விளக்கம்
பெருமாறுகாயன் முழுவதாக விளங்கும்.”

- பட்டவ் நாள்: 74, புகழ்: 13, விதைனார் குருக்கிருந்த வேறுப்புண்ணல் - 600
Due to the causative factors mentioned above, the Abaana vaayu gets vitiated and affects the usual nature of faeces and it becomes hard and dark brown, unable to pass the motion and cause constipation, flatulence, spermatorrhoea, abdominal discomfort, loss of appetite, belching, borborygmus, diarrhoea, etc. These symptoms occurs before the actual disease sets in.

POTHU KURI GUNANGAL (GENERAL SYMPTOMS AND SIGNS):

"அய்தநீரிகர்த்த குதுநீண்டு கழிந்த காலத்திற்கு
மீன்வீசியமாக அதுகன்று தங்குவிப்பாக
மணிவிழா நீர்விளச்சு பாகாள் கருதுபிற
சுட்டு பொகும் நிமிக்கமையும் பராட்டு போற்றக
சவுக்கு பார்க்கு கொண்டு திண்ணச்சூர் பாகாளகு
சன்னதியாக மறநிலியும் தங்கமுன்னுச்சர்
சவுக்கு திண்ணச்சூர் முதுநு ட்யூம்
சுட்டு பொகும் நிமிக்க நிமிக்க குறைவு"

- பாலம் எணம்: 255, பாகம்: 246, கோட்டை எண்: 255

This verse explains that, the faeces gets hard consistency, which becomes white in colour and their passage in the anus gets blocked as if there is a bud of lotus. Then the pile mass protrudes like a lotus flower with the active play of vaayu. Bleeding per rectum occurs like honey drops from the lotus flower. General malaise, physical and mental fatigue also develops.
In brief, the symptoms include,

- Hard consistency and white coloured faeces
- Constipation
- Protruding pile mass
- Bleeding per rectum
- Malaise
- Physical and mental fatigue

According to Agathiyar 2000,

"Constipation, bleeding associated with indigestion, passage of stools with severe unbearable pain and deterioration of general health."
The disease is an irritating cruel disorder of human being and the affected persons looks like an afraid serpent which is terrified by thunder. The above verse, “Kodiya Pollaatha” describes the severity of the disease.

**RATHTHA MOOLAM:**

Many Siddhars have dealt about Raththa moolam. Among them the author has taken Raththa moolam for dissertation study from “Yugi Vaidya Chinthaamani.”

**SYNONYM:**

Kuruthi Moolam

**DEFINITION:**

Literally Raththa means blood and Moolam means the ano rectal region. To say it correctly Raththa Moolam is a disease characterised by bleeding per rectum during defaecation, constipation, weakness, headache, giddiness and palpitation.

**AETIOLOGY:**

The causes for moola noi are elaborately described by many Siddhars. According to **Yugi Vaidhya Chinthaamani,**

"ஏற்கனேற்ற நீக்கம் குணகிகற்று
குறிக்கும் முற்றார்கள் குண்டுற்று
புருட்குர நோயங்கள் மொச்சநற்று
பொள்ளையன் தென்புற்று மீண்டுற்று"
- Due to very cold climate
- Due to heat
- Due to sexual extravagance
- Due to anger & sadness
- Due to pungent & sour foods
- Due to heavy loss of wealth
- Due to evil doings
- Due to selfishness
- Due to mental illness
According to Pathinen Siddargal Aruli Cheitha Naadi Saasthiram

“கன்றத்தின் அணுக்குரும் கல்லூரியின் விளக்கத்தால் இந்துலைஞர் பெற்று
பாரபொட்டி குண்ணூரை பயன்படுத்தும் வழியுடன்
அன்று என் குண்ணூர் பயன் செய்யும் பட்டுக்குப்போன்
நுழைந்த கண்ணூரை அன்று பயன்படுத்தினாள்.”

- பாடல் எண்: 45, பக்கம்: 53

🌟 Due to loss of appetite

🌟 Due to fasting

🌟 Due to suppression of excretion

Abaanan gets affected and produces moola noi.

According to Agathiyar Paripooranam – 400,

“நூற்றூர் ஹொவேரும் கன்றகாலம்
சின்னநீ அன்றுத்தி கன்றப்போகும்
பானல்களும் அன்றுத்தின் வரும் கன்றமிலும்
மாற்றும் நூற்றூர் கன்றகாலம் கன்றம்
நாதனானவர் அன்றுத்தி வந்து சென்று
திர்நாட்டினர் என்னு கூற்று செய்து
சென்றுகொண்டு வந்து சென்று வந்து
பூநிசாலா பகவதத்தான் வெட்டு வந்து
பூநிசாலா பகவதத்தான் செய்யுமாறுந்து.”

- பாடல் எண்: 213,பக்கம்: 40.

These verses prove that moola noi are due to hereditary or karmic that is having a genetic predisposition.
According to **Raja Vaidhya Bodhini**, 

Increased sexual passion, intake of food rich in pungent taste, irregular food habits, caricaturing the elders, frittering away the money, hurting others by speech, gulping the food when hungry people are around all of this will produce Moola Noi.

According to **Agathiyar 2000**,

"நூற்றமாண்டுகள் கோவல் பர்ச்சைவில் கிளைக்காப்புடன்

பர்ச்சைவுப் புக்கேர்க்காப்புடன் மலர் மூலவுக்கான

மலர்கள் முற்பிரிக்கும் அதிகம் மூழ்கும்"

"சுமாரோருக்கோன்று மிளக்காமல் நூற்றமாண்டுகள்

சுமாரோரின் முற்பிரிக்கும் கோவல் மூழ்குக்கான

கோவலைப் புடச்சுக்கும் சற்றே சுமாரோரிற்று

சுமாரோரில் புடச்சுக்கும் சற்றே சுமாரோரிற்று

சுமாரோரில் புடச்சுக்கும் சற்றே சுமாரோரிற்று"

Increased intake of flesh, intake of milk, sugar candy, ghee, increased sexual passion, dryness of the body, increased intake of food rich in pungent taste, day time sleep, intake of pork, komattikaai etc., all of these play a main role in the causation of Moola Noi.
According to **Siddha Maruthuvam**, 

During practice of Yogaasanas, maintaining prolonged sitting and pelvic straining postures predispose to vitiated Vaatham, Pittham and Moolaakkini leading to moola noi.

**NOI URUVAAGUM VITHAM:**

The human body is made of ninety six thathuvams. Alterations in any thathuvam results in pathological states. Raththa moolam results from derangement of vatham and pitham. This is best illustrated in the verse, 

```
"நிலவின் திருக்குறும்பத்து தம்முடன் வந்து இருந்தே..."
- நெவுகவன் வேதங்கம்.
```

Panchabootham are the initially affected thathuvams in any pathologic state. Moolaathaaram, the area affected in the disease, predominantly has vaayu, aahaayam and thee boothams. The normal structures of these boothams are annihilated by the various aetiological factors of Raththa moolam. If this state is allowed to persist, then the bootham responsible to carry out the kanmavidayam (visarkkam), neer gets deranged in the very long run.

Since vaayu and aahaayam constitute vaatham and thee constitutes pitham, these two humors gets deranged at the very beginning.
Vatham manifests as ten vaayus in the body. Among them those having connections with the anal canal such as Abaanan, Samaanan and Viyaanan get deranged. Simultaneously naadis having connections with the moolaathaaram that is Guhu and Suzhumunai along with other thatthuvams produce systemic manifestations.

Pitham in the body manifests as five types viz Anal pitham, Ranjagam, Praasagam, Aalosagam and Santhigam. Most of the pitha types gets affected in Rattha moolam.

Kabham manifests as five types viz Avalambagam, Kilethagam, Pothagam, Tharpagam and Santhigam. Kilethagam is affected in Raththa moolam.

According to Moola Roga Sigitcha Bodhini,

Kutham is of 4½ inches length. With in this Kutham there are three rings each of which measures 1½ inches. The first of which is known as Piravagani. The centre one is Visarjani and the terminal ring is known as Sanavarani or Krahani.

When the three humors, Vatham, Pitham, Kabham gets affected Udal Thaathus viz, Senneer, Oon, Kozhuppu also gets affected and produces out growth in any one these circles.
1. If the outgrowth is in Sanavarani it is visible (External haemorrhoids).

2. If the outgrowth is in Visarjani it may or may not be visible (2nd degree piles).

3. If the growth is in Piravagani it is not palpable nor visible (1st degree haemorrhoids)

If Vatham, Pitham, Kabham gets affected it also affects the digestion. Due to this Mandhakini, the affected malam gets accumulated in Malaasayam. During this time, increased sexual act, horse riding, long term seating in the chair or floor, exposure of the anal region repeatedly to cold water, suppression of stools and urine, chronic diarrhoea, dysentery, intake of cold food items and bitter food, increased work or sedentary life, wandering in sunlight, worries and anger all of these plays a main role in the causation of Moola Rogangal.

HUMORAL OR MUKKUTRA THEORY:

Panchaboothams are manifested in the body as three Vital forces

🌟 Vatham

🌟 Pitham

🌟 Kabham
Vatham:

Structurally it is the combination of vaayu and aahaaya boothams. Normally it carries out respiration, circulation of blood, locomotion, carrying sensory impulses and motor impulses to and from the brain, micturation, defaecation, parturition, sensation of hearing, sight, taste etc.

It is located in idakalai, abaanan, faeces, spermatic cord and pelvic bones, skin, hairs, nerves and muscles. It is of ten types, viz,

1. Praanan (Uyirkaal)

This controls knowledge, mind and the five sense organs, which are useful for breathing and digestion.

2. Abaanan (Keezh Nokku Kaal)

This is responsible for all downward movements such as passing of urine, stools, semen, menstrual flow etc.

3. Samaanan (Nadukkaal)

This aids in proper digestion

4. Viyaanan (Paravukaal)

This is responsible for the movements of all parts of the body.

5. Uthaanan (Mel Nokkuakaal)

Responsible for all upward visceral movements, such as vomiting, nausea.
6. Naagan

Responsible for opening and closure of eyes.

7. Koorman

Responsible for vision and yawning.

8. Kirukaran

Responsible for salivation, nasal secretion and appetite.

9. Devathatthan

Responsible for laziness, sleeping and anger.

10. Dhananjeyan

Produces bloating of the body after death. It escapes on the third day after death bursting out of the cranium.

In Raththa moolam the primarily affected vaayus are,

- Abaanan
- Samaanan
- Viyaanan

These deranged Vaayus affect seven udal thaathus and malams. Due to this, the symptoms produced in Raththa moolam are,

- Constipation
- Splashing of blood during defaecation
- Loss of appetite
- Feeling of Weakness in the limbs
This is best illustrated in the table below.

<table>
<thead>
<tr>
<th>Abaanan</th>
<th>Samaanan</th>
<th>Viyaanan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constipation,</td>
<td>Loss of appetite</td>
<td>Feeling of Weakness in limbs</td>
</tr>
<tr>
<td>Splashing of blood during defaecation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Raththa Moolam, along with Vaatham, Pitham also gets deranged simultaneously.

**Pitham:**

It is the life manifestation of thee bootham in the body. It is the metabolic thermal life force of the body. It carries out digestion, absorption, metabolism, colouration of blood etc.

Pitham is located in praana vaayu, urinary bladder, moolaakkini, heart, umbilical region, abdomen, stomach, sweat, saliva, blood, eyes and skin.

- **Anal Pitham**
  
  It promotes appetite and helps in digestion.

- **Ranjagam**
  
  It gives colour to the blood.

- **Praasagam**
  
  It gives complexion to the skin.
**Aalosagam**

It brightens the eyes.

**Saathagam**

It controls the whole body. It has the property of fulfillment.

As moolaathaaram is in the akkini mandalam, any pathological condition here can harm moolaakkini and eventually pitham. In Raththa moolam Anal Pitham, Ranjagam, Praasagam and Saathagam gets affected.

Clinical features are produced when these deranged pitham affects seven thaathus and malam. These include,

* Loss of appetite
* Pallor of skin
* Anaemia
* Giddiness and emaciation

This is best illustrated in the table below.

<table>
<thead>
<tr>
<th>Anal Pitham</th>
<th>Ranjagam</th>
<th>Praasagam</th>
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</tr>
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<td>Anaemia</td>
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<td>Giddiness &amp; emaciation</td>
</tr>
</tbody>
</table>
KABHAM:

Kabham constituted by neer and mann bootham, is responsible for coordination and defence mechanism of the body.

Kabham is located in samaana vaayu, semen, suzhumunai, blood, phlegm, bone marrow, nose, chest, nerve, bone, brain, eyes and joints.

1. Avalambagam

Lies in the lungs, controls the heart and other Kabha types.

2. Kilethagam

Lies in the stomach, makes the food moist, soft and helps in digestion.

3. Pothagam

Responsible for identifying the taste.

4. Tharpagam

Present in the head and is responsible for the coolness of eyes.

5. Santhigam

Responsible for lubrication and free movements of the joints.

In Raththa moolam, the primarily affected Kabham is Kilethagam.

When vaatham, pittham and kabham are deranged, they affect seven udal thaathus viz saaram, senneer oon, kozhuppu, enbu, moolai, sukkilam (or) suronitham and udal thees. They affect three malams and inturn produce various symptoms according to severity and site of ailment.

In Raththa moolam the primarily affected thathus are saaram and senneer. The symptoms of Raththa moolam are typically due to the vitiation
of these thaathus. In udal thee, moolaakkini is affected. Moolaakkini along with abaanan produces bleeding per rectum, which is the main symptom. Due to the malam derangement, constipation, itching around the anus results.

Thirumoolar Karukkidai Vaidhyam-600 describes the pathology of Raththa moolam. Suppression of appetite and defaecation leads to derangement of vaayu. This vaayu enters kundalini area. Here the vaayu combines with theyu and causes constipation. This causes formation of moola noi. When excess vaayu exerts pressure on them, they bleed on straining during defaecation. This is given as,

"கலம்பிங்கு பழை கூடாத விகிதம்

கரியுறுத்து சுடாம் பாவியும் பகவியும்

காலம் பசைக் கூடாத பத்தியும்

வாயு கொலியுறுத்து புத்தான்பாலியும்

வாயு பாறாத் கூடாத பாலியும்

வாயு மூழ்கும் பாறாத் காதியும்

வாயு மூழ்கு பாறாத் காதியும்

திருக்கியது முனையம் வேறாம் முனைக்கைம்

திருக்கியது முனையம் வேறாம் முனைக்கைம்

நூற்றாண்டு வந்துள்ளது வேறாம் வட்டம்

நூற்றாண்டு வந்துள்ளது வேறாம் வட்டம்

நூற்றாண்டு வந்துள்ளது வேறாம் வட்டம்

கலம்பிங்கு பழை கூடாத விகிதம்"

- பகுதி தொகு: 71-73, மட்டை: 13, கிருஷ்ணான் குருக்கியா கையாலாம் - 600
Agasthiyar Gunnavaagada Thirattu, Pathinen Siddhar Arulichaitha Naadi, Aatha Ratchaamirtham, Agasthiyar-12000 and various other siddha texts have the same verses for the pathology of Raththa Moolam.

**SIGNS AND SYMPTOMS OF RATHTHA MOOLAM:**

According to **Yugi Vaidhya Chinthaamani** the clinical features are,

*“இசூறிப்பு ராத்தகுடளக்கில் பாதிக்க நிறைந்து
சுக்கப்பிள்ளை பிறந்து கதைக் கொடுத்து
அர்வாரம் போடுத்தப்பட்டு கூம்புட்டியும் பாகத்து
திறந்துகொண்டு முன்னேற்றி பிள்ளையார் பாகத்து
ஆர்வாராக சுக்கத்தில் கற்று பாகத்து
சுக்காகவே சுக்கத்தில் கற்று பாகத்து
சூறிப்பம் கூம்புட்டியும் பாகத்து பாகத்து
திறந்து கொண்டு சுக்கத்தில் போடுத்து.”

- பக்தம்: 145.

- Pain in the umbilicus
- Spurting out of blood during defaecation
- Emaciation
- Pallor
- Feeling of weakness in the limbs
- Dropsy
- Headache
- Giddiness and
- Yellowish colouration of eyes.
According to Agathiyar Gunavaagadam,

"தாசார்த்தர் பதையும் ஹிருப்புப்பெறுவது
தாசார்த்தர் பதையும் ஹிருப்புப்பெறுவது

நிறைந்த வாழ்க்கையும் ஹிருப்புப்பெறுவது
நிறைந்த வாழ்க்கையும் ஹிருப்புப்பெறுவது

ஆசார்த்தர் ஹிருப்புப்பெறுவது
ஆசார்த்தர் ஹிருப்புப்பெறுவது

பார்வா ஹிருப்புப்பெறுவது
பார்வா ஹிருப்புப்பெறுவது

முழுப்பிட்டத்து விளக்குச்செய்யும் மூடும் தோல்தியது

சலப்பா ஹிருப்புப்பெறுவது

்சுற்றுக்குள்ளோர் ஹிருப்புப்பெறுவது

நோய்ந்த இருப்புப்பெறியும் மூடும் தோல்தியது

தாசார்த்தர் ஹிருப்புப்பெறுவது

- பார்வா எண்ணை: 1162,1163, பக்கம்: 289.

◆ Pile mass in the rectum

◆ Bleeding per anum

◆ Bleeding coming out from the rectal artery and vein (plexus)

◆ Continuous bleeding for longer duration causes fatigue and headache
According to **Moola Roga Sigitcha Bodhini,**

The clinical features of Raththa Moolam are as follows. Most of the symptoms of Raththa Moolam mimics Pitha Moola Rogam. The outgrowths are similar to coral reefs and tender leaves of ficus benghalensis. Due to constipation the outgrowths get dilated and starts to bleed. Due to increased loss of blood there will be pallor of skin which resembles the crane, the frog which becomes pallor during rainy season. The general health of the patient gets deteriorated day by day with loss of libido. Finally the stool gets hardened.

**Vatha Raththa Moola Lakshanam:**

The pile mass will be blood stained, reddish in colour and frothy in nature associated with pain in the calf muscles, pain in anal region.

**Kabha Raththa Moola Lakshanam:**

Bleeding that occurs in this type is thick in consistency and yellow in colour. The stools appears yellowish white and are greasy in nature and the anal region also feels greasy.

The author hasn’t mentioned about Pitha Moola Rogam because in general the symptoms of Raththa Moolam is similar to that of Pitha Moola Rogam.
According to **Cega Raasa Sekaram** the clinical features are,

"திருத்தம் கொண்டு விளையாடும் மூலம் வங்கா

தாக்கம் கொண்டு விளையாடும் மூலம்

முதலில் வாழ்வுக்கான் உரிமைகள் குறிப்பிட்டு

குறிப்பிட்டு வாழ்வு காரணங்கள் தற்போதையம்."


- Presence of pile mass
- Swelling of pile mass
- Bleeding per rectum

Same Verses are also mentioned in 4448 Viyaathigal-Oru Vilakkam.

According to **Aaviyalikkum Amutha Murai Churukkam** the symptoms are,

- Loss of appetite
- Lower abdominal discomfort
- Constipation
- Pain around the Umbilicus
- Bleeding per rectum
- Anaemia
- Breathlessness
According to **Thanvanthari Vaidhyam**, the verse is,

“நிஜவுற்று என்று நிலவியது குரை கிளை நிறைத்து விளைத்தும்
அபிணையும் குண்டும் விரிதல் விளையிலும் குலக்கன்
சுரு விளைபெற்றுது குரையான்கு கிளையார்
மிள்கு களருத்து குன்றில் விளையாடிவிட்டு.”

- பக்தம்: 282

✦ Pain in the Umbilicus
✦ Bleeding per rectum
✦ Protrusion of the pile mass
✦ Emaciation

According to **Aathma Ratchaamirtham Endra Vaidhya Saara Sangiragam**, the symptoms are,

✦ Pain around the Umbilicus
✦ Bleeding per rectum
✦ Protrusion of the pile mass
✦ Constipation
✦ Lower abdominal discomfort
✦ Increased intention to take food stuffs with bitter and sour tastes
✦ Loss of appetite
✦ Anaemia
✦ Irritation and burning sensation in the anus
✦ Warmness of body
According to **Aagasthiyar Ayoolvedham-1200**, the clinical features are,

“

Burning sensation in the anus
Constipation
Bleeding per rectum

According to **Veeramaa Munivar Aruli Cheitha Nasakaanda Venba**, the clinical features are

- Pain in the Umbilicus
- Spurting out of blood during defaecation
- Emaciation
- Pallor
- Weakness in limbs
- Dropsy
- Chest pain
- Head ache
- Giddiness

According to **Thirumoolar Karukkidai Vaidhyam-600** the symptoms are,

- Pile mass
- Bleeding per rectum
PINIYARI MURAIMEI (DIAGNOSIS):

Diagnosis is arrived at by Poriyaal arithal, Pulanaal arithal, Vinaathal and confirmed by En Vagai Thervugal viz,

✶ Naa (Tongue examination)
✶ Niram (Colour of the body)
✶ Mozhi (Speech)
✶ Vizhi (Eye examination)
✶ Sparisam (Palpation)
✶ Malam (Motion examination)
✶ Moothiram (Urine examination)
✶ Naadi (Pulse)

In Poriyaal arithal, Pulanaal arithal and Vinaathal, patient’s name, age, sex, occupation, income, thinai, complaints, duration of illness, past history, habits are recorded. The diagnosis is confirmed by En Vagai Thervugal.

✶ Naa

If the disease process takes a long course then the Naa becomes coated and pale.

✶ Niram

Pallor of skin is due to Anaemia, which ensues after a long course of Raththa moolam.
★ Mozhi

Mozhi is usually normal.

★ Vizhi

Conjunctiva is Pale due to loss of blood with every episodes of defaecation.

★ Sparisam

Body is said to stay in ushnam or hyperthermic state. This is due to the combined action of vatham and pitham.

★ Malam

The consistency becomes hard. There is no froth or mucus. The colour is usually reddish yellow or dark. Constipation is usually encountered.

★ Moothiram

Neerkuri:

The amount is usually normal. But when Veluppu noi and Sobai develop, the amount is reduced. There is no froth. The colour is usually light reddish yellow.

Neikkuri:

Neikkuri was seen in all the cases and showed Ring like pattern, Aravil Aazhi, Aazhiyil Aravu patterns.
**Naadi**

Naadi pareetchai or pulse reading reflects the humor involved and in the diagnosis of disease. Out of ten areas of naadi pareetchai, radial pulse reading is convenient to detect the accurate humoral involvement.

In Raththa moolam, the normal 1: ½ : ¼ maathirai pattern or gait pattern of hen, turtle and frog of Vatha, Pitha and Kabham respectively are affected giving rise to elevated maathirai of Vatham and Pitham than normal. This is often said in Vallaathi naadi as gait patterns such as cock for Pitham. This is given in the verse as follows,

"தாசினந்தாருணாகசன் பாதிப்புப் பொழுத்துத்தியாரையும்
காயருவர் பிள்ளைக் குறுநீர்ப்பாகசன்
சிகிராருவான் மாடுக்குலிப் பொழுத்துத்தியாரையும்.

- பக்கம்: 127

**In Sathaga Naadi**, Vatha naadi having twice its normal phenomena is referred as the pathological naadi for moola noi. This is given in the verse as follows,

"மாதிரியானோ ராகோசன் புக்கீசத்திற்
சிகிராருவான் பாதிப்புக் காய்ப்பாகசன் சிகிராருவான்
சிகிராருவான் பாதிப்புக் காய்ப்பாகசன்
சிகிராருவான் பாதிப்புக் காய்ப்பாகசன்
சிகிராருவான் பாதிப்புக் காய்ப்பாகசன்
சிகிராருவான் பாதிப்புக் காய்ப்பாகசன்
சிகிராருவான் பாதிப்புக் காய்ப்பாகசன்
சிகிராருவான் பாதிப்புக் காய்ப்பாகசன்.

- பக்கம்: 164.
According to **Guna Vaagada Naadi**, Vatham, Pitham and Kabham all are reduced from their normal maathirai in moola noi.

“அப்பொழுது நிலைக்கும் மகிழ்ச்சியின் குடும்பக் கண்களே ஸ்ரீதனே முதல்வீனு சுருக்கிலிளங்களின் நோக்கிலும் வலியுறுத்தலின் முதல்வீனில் சீர்கிளில் உண்மையை விளக்கினும்.”

- பக்கம்: 384

Also in **Vallaathi Naadi**, it is said that Pithavatham is the diagnostic naadi for moola noi,

“வாலாதியில் உள்ள வித்தியாசம் மகிழ் வழியில் முன்னேறும் போதையான வாலாதியில் செய்தி
கூட்டப்பட்டு புகழ்விஞந் நோக்கிலும் புகழ்விஞந் நோக்கிலும் இரண்டும் வழியிலும் வரும் வரும்.”

- பக்கம்: 174

According to **Rathna Churukkam 500**, when Pitham’s maathirai increases to one and Vatham’s maathirai decreases to quarter it results in various diseases. Moola noi is one among the various diseases that occur in this naadi. This is explained in the verse as follows,

“நோக்கிலும் நோக்கிலும் வழியிலும் வழியிலும்
சிறிது சிறி சிறி ஆற்றல் வழியிலும்
சாத்து சிறிது சிறிது பரிபாலம்
சாத்துக்குச் சாத்துக்கு குறைக்கும்
நோக்கிலும் நோக்கிலும் வழியிலும் வரும்
சுருக்கிலில் உண்மையை விளக்கினும்.”

- பக்கம்: 136
Hence Vatha Pitha thontha naadi is the characteristic pathological naadi for all moola noi which include Raththa moolam.

**Thinai – Land (Geographical area):**

Geography affects a person in a same manner as the seasons. Nilam is classified into 5 types, depending on the surrounding vegetation, landscape and ecological state.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Thinai (Land)</th>
<th>Geographical area</th>
<th>Common diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Kurinji (Hilly fract)</td>
<td>Mountain &amp; its Surroundings</td>
<td>Kabham and Liver diseases</td>
</tr>
<tr>
<td>2.</td>
<td>Mullai (Sylvian fract)</td>
<td>Forest &amp; its Surroundings</td>
<td>Pitham, Vatham and Liver diseases</td>
</tr>
<tr>
<td>3.</td>
<td>Marutham (Fertile area)</td>
<td>Field &amp; its Surroundings</td>
<td>Ideal place for healthy living</td>
</tr>
<tr>
<td>4.</td>
<td>Neithal (Coastal area)</td>
<td>Sea &amp; its Surroundings</td>
<td>Vatham and Liver diseases</td>
</tr>
<tr>
<td>5.</td>
<td>Paalai (Arid area)</td>
<td>Desert &amp; its Surroundings</td>
<td>Vatham, Pitham and Kabham diseases</td>
</tr>
</tbody>
</table>

**Theerum Theera Nilai (Prognosis):**

If there is definite cure (saathiyyam), the following conditions should be fulfilled.

1. Vatha Naadi should not be reduced to a very low extent.
2. Pitham and Kabham should not get mixed.
3. Normal Udal anal should not be reduced.

4. Vatham and Kabham should not go hand in hand.

- Soodamani Naadi

In most of the cases of Raththa moolam these conditions are met and hence the prognosis is good and also according to Yugi Vaidhya Chinthaamani, it is curable. So if early treatment is started to pacify the deranged Vatham and Pitham, it can be cured. Complication in this disease occurs when Kabham gets involved. So suppressing the dearangement of Kabham makes the prognosis better.

NOI KANIPPU VIVAATHAM (DIFFERENTIAL DIAGNOSIS):

Raththa moolam should not be confused with other types of Moola noi and other disease, such as Vali Kuruthiazhal Noi, which also has symptom like bleeding per rectum. These include,

CHENDU MOOLAM:

Permanent irreducible pile mass is seen in the anus resembling karunai tuber and this is not present in Raththa moolam. Besides this, there is no splashing of blood as in Raththa moolam. Hence, there is only discharge of blood and mucus. Mucus discharge is not present in Raththa moolam although both the condition has constipation.

- Yugi Vaidhya Chinthaamani
VARAL MOOLAM:

In varal moolam, the bleeding is not like a splash but like drops of blood while defaecation. Both diseases have constipation, emaciation, anxiety, anger and malaise.

- Yugi Vaidhya Chinthaamani

AAZHI MOOLAM:

Here there is an external solitary pile mass, which looks like dioscorial tuber. Besides this, there is discharge of mucus and pus along with blood. These are not present in Raththa moolam.

- Yugi Vaidhya Chinthaamani

THAMARAGA MOOLAM:

Although it has bleeding per rectum, there is external pile mass and diarrhoea which are not present in Raththa moolam.

- Yugi Vaidhya Chinthaamani

AZHAL MOOLAM:

Here no splash of blood is present, but discharge of mucus along with blood is present. There are tiny pile masses like seeds of rice or cotton. Besides this, there is severe pain in the abdomen and anus. These are not present in Raththa moolam.

- Yugi Vaidhya Chinthaamani
VALI KURUTHIAZHAL NOI:

There is body pain, bleeding in dark colour, occasionally with froth, hard stools like faecal pellets of goat, which are not present in Raththa moolam, but both have bleeding per rectum.

– Siddha Maruthuvam

ASAATHIYA KURIGUNANGAL (COMPLICATIONS):

When moolakkini is vitiated to a hyper level it will cause many worst complications. The main complications are Anaemia (Veluppu noi) due to deranged Pitham and Dropsy (Sobai) due to Kabham involvement in later stage. If there is oedema of the limbs, navel region (abdomen), anus and face then it would be fatal.

PINI NEEKAM (THERAPEUTIC ASPECT):

Siddha system of medicine is able to cure diseases by rooting out them once for all. This system also envisages methods for the prevention of diseases and it treats not only the disease but the person as a whole.

These includes

✶ Kaapu

✶ Neekam

✶ Niraivu
Kaapu (Prevention):

"வேளியியல் காற்றுக்காளாம் தங்கத்து அல்லவர்கள் செய்துக்குத்
மராத்திய விளக்குகள் தவறான விளக்குகள்
கோளாயிரத் தந்தியும் பிரிந்துகொண்டு முழுநிலைக்கு
செய்யாதாயிருக் விளக்கும் வரிசையாக

……………………………………………………

மேலும் மற்றைருகிய அல்லாமல் விளக்கு
மராத்திய விளக்குகளுக்கு விளக்கு
செய்ளும் விளக்குகள் அவகாசம் நிற்காமலே
செய்யாதாயிருக் விளக்கும் வரிசையாக

- பக்கம்: 288, என்னுடன் முன்னேறும்படிக் தயாரிக்கம.

Above verses explains,

- Tubers, which induce haemorrhoids are to be avoided
- Sour curd is to be taken
- Food prepared in the previous day is to be avoided even though it is delicious
- Eating food without hungry is to be avoided.
- Among tubers, only Yam is to be taken
- Tender plantain is to be taken
- Mild walk is to be done after eating.

These are some of the general instructions to be followed to be free from diseases.
In addition to this,

"திருவண்டிக் கொந்த தீர்க்கவேற்று பிள்ளும்
திருவண்டிக் கொந்தகைக் கண்டும் நெய்ப்பு - திரும்
வட்டல் கீதிகள் கருத்தின் பிள்ளும்
வட்டல் கீதேன்பட்டு நெய்ப்பு.

- பகுதி: 210, திருவண்டிக் கொந்தகைக் கண்டும்.

These verses explains,

Urine and motion are to be evacuated daily. These processes keep the three thodam, vaatham, pittham and kabham in their position correctly. Digestive capacity (samanakkini) is also maintained. Diseases will not occur and good health is restrained.

Neekam (Treatment):

According to Anubava Vaidhya deva ragasiyam, treatment for moola noi is divided into 4 types namely Internal medicines (Oushadham), External applications (Kshaaram), Surgery (Sasthiram) and Cauterization (Akkini). Depending upon the health condition of the body, any one type of treatment is prescribed.

Among these four types siddhars prefer Internal medicines as the best treatment for moola noi in their texts and they suggest purgative treatment specially for Raththa moolam.
**Line of Treatment:**

Treatment for Raththa moolam includes,

- Administration of internal medicines.
- To stop bleeding and to relieve the constipation.
- To extenuate the derangements or morbid conditions of vatha pitha thontham.
- Pathiya bandhanam that includes diet restriction and the activities too. It will normalize the vitiated vatha pitha thontham and maintain a longer medicine action.
- Pranayama therapy to normalize the thathuvam
- Yoga therapy to normalize the bowel habits

**Dietics:**

It is also an important part of treatment. Proper dietic regimen enhances the effect, bioavailability of the medicine and helps to maintain a good health. If dietic regimen is not followed properly, certain foods may antagonize the medicine effect and produce harmful effects of the body.

“பதிப்புத் தரவு பல்லவானா குறிப்பிட்டு
பதிப்புகள் விளக்கம் மன்ன விளக்க - பதிப்புத் தரவு
பதிப்பு வரவுத்து பல்லவானா குறிப்பிட்டு
பதிப்புத் தரவு குறிப்பிட்டு பக.”

- பக்தம்:159, நூத்தகம் பூமிய்பார்.
Anubava Vaidhya Deva Ragasiyam prescribes the following diet regimen for moola noi.

- Karunai (Tacca pinnatifida)
- Pudalangaai (Trichosanthes anguina)
- Saaranai (Trianthema decandra)
- Buttermilk
- Vendhayakkeerai (Trigonella foenum graecum), Mulaikkeerai (Amaranthus gangeticus)
- Ghee
- Perungaayam (Ferula asafoetida)
- Milagu (Piper nigrum)
- Devadaaru (Cedrus deodara)
- Induppu (Rock salt)
- Mullang Kattiri (Solanum insanum)
- Vasambu (Acorus calamus)
- Kadukkai (Terminalia chebula)
- Castor oil
- Greens like Thutthikkeerai (Abutilon indicum), Manatthakkaalikkeerai (Solanum nigrum), Araikkeerai (Amaranthus tristis) and Sirukkeerai (Amaranthus gangeticus)
- Tender mango
According to **Pathaarthha Guna Chinthaamani**,

- Pirandai (Vitis quadrangularis)
- Kaara Karunai (Amorphophalus campanulatus)

These are specially prescribed for Raththa moolam and should be included in diet.

**Apathiyam:**

- Ulundhu (Phaseolus mungo)
- Iluppai pinnaakku (Oil cake of Bassia longifolia)
- Kattirikkaai (Solanum melongena)
- Motchai (Dolichos tetraspermus)
- Vilvam (Aegle marmelos)
- Paruppugal (Pulses)
- Curd
- Fish
- Meat
- Hot food and drinks
- Straining activities such as riding on horse, camel and elephant, Strenuous labour, Swimming, Excessive sexual intercourse and Mental strain
- Constipation

After getting relief from Raththa moolam, patients are advised to follow Pranayamam and Yoga.
**Pranayama therapy:**

The basic vitality which is key to life, is what we term Prana. Prana is the basic life principle. We believe that everything in creation has Prana. Growth of Prana from lower strata to higher strata is the process that characterizes life. In man, this process is being accelerated by the conscious discrimination faculty and is called Pranayama, regulation of Prana.

All the patients were advised to do

1. Naadi Suddhi Pranayama
2. Cooling Pranayamas
   - Sitali Pranayama
   - Satkari Pranayama
   - Sadanta Pranayama

All these helps in bringing down the vitiated Pitham to the normal state thus preventing the occurrence of Moola Noi.

**Yoga therapy:**

The following asanas are prescribed to prevent the constipation, which is considered to be the root cause for Raththa moolam. Thus recurrence of Raththa moolam is also prevented.

All inverted postures like Sarvangasana and Sirasasana helps to drain the stagnant blood from the anus and may reduce or abolish the symptoms of this disease.
ASWINI MUDRA:

Aswini means **mare** and **mudra** means **symbol**.

**Technique:**

Contract and relax the sphincter muscles of the anus slowly, evenly and tightly while exhaling and relax while inhaling. The contraction and relaxation of these muscles closes and opens up the anus alternately. The repeated alternation of this process is Aswini Mudra.

**Benefits:**

The practise of this Mudra will strengthen the rectum and the muscles and nerves surrounding the anal sphincters.

Other recommended posture are as follows:

- Gomukhasana (Cow face posture)
- Bhadrasana (Beneficial posture)
- Paschimotasana (Posterior stretch)
- Pavana Muktasana (Wind releasing posture)
- Sasankasana (Hare posture)
- Ardha Halasana (Half plough posture)
- Padmasana (Lotus posture)
- Shalabasana (Locust posture)
- Matsyasana (Fish posture)
- Viparita karani (Inverted posture)
- Sarvangasana (All parts posture)
- Mayurasana (Peacock posture)
- Dhanurasana (Bow posture)
Niraivu (Life Style Modification):

Advised to

- Avoid strenuous work load
- Avoid sedentary life style
- Avoid emotional stress at any cause
- Avoid smoking and avoid indulgence to alcohol
- Avoid tobacco chewing or snuff
- Avoid fast food and spicy items

Advised to take plenty of fiber rich foods like fruits, greens and vegetables.

Advised to follow the yogaasanas as already mentioned.
MODERN ASPECTS

ANATOMY OF ANO RECTAL REGION

THE RECTUM:

The Rectum is the distal part of the large gut. It extends from the sigmoid colon to the anus. The rectum in man is not straight as the name implies. In fact it is curved in an antero posterior direction and also from side to side. Part of the rectum is within the abdomino pelvic cavity and part lies inferior to it. It is about 12cm in length. The rectum lacks haustra, appendices epiploica and taenia coli, which are the cardinal features of the large intestine. Only the proximal 50-60% of the rectum is covered by peritoneum. In the upper part, it has the same diameter as that of sigmoid colon, but in the lower part it is dilated to form the rectal ampulla.

Functional Parts of Rectum:

The rectum has two functional parts. The upper part (related to peritoneum) develops from the hindgut and lies above the middle fold of the rectum. It acts as a faecal reservoir, which can freely distend anteriorly.

The lower part (devoid of peritoneum) develops from the cloaca and lies below the middle fold. It is empty in normal individuals, but may contain faeces in case of chronic constipation (or) after death. Being sensitive, its distension causes the desire to defaecate.
Arterial Supply:

- The superior rectal artery is the continuation of the inferior mesenteric artery, supplies the entire internal aspect of the rectum and upper half of the external aspect.
- A pair of middle rectal arteries arises from internal iliac arteries supply the external aspect of lower half of rectum.
- Median sacral Artery, a small branch arising from the back of the aorta near its lower end. It descends in the median plane and supplies the posterior wall of ano-rectal junction.

Venous Drainage:

- **Superior rectal vein:** Six tributaries of this vein are from the internal rectal venous plexus. After piercing the muscular coat they unite to form the superior rectal vein and continues as the inferior mesenteric vein.
- **Middle rectal vein:** They drain chiefly, the muscular wall of the rectal ampulla and open into the internal iliac veins.

Lymphatic Drainage:

- Lymphatics from more than the upper half of the rectum pass along the superior rectal vessels to the inferior mesenteric nodes after passing through the para rectal and sigmoid nodes.
- Lymphatics from the lower half of the rectum pass along with the middle rectal vessels to the internal iliac nodes.
Nerve Supply:

The rectum is supplied by both sympathetic (L₁,₂) and parasympathetic (S₂,₃,₄) nerves through the superior rectal (Inferior mesenteric) and inferior hypogastric plexuses.

Sympathetic nerves are inhibitory to rectal musculature and parasympathetic nerves are motor to the musculature of the rectum.

Sensations of distension of the rectum pass through the parasympathetic nerves while both the sympathetic and parasympathetic nerves carry pain sensations.

THE ANAL CANAL:

The anal canal is the terminal part of the large intestine. It is situated below the level of the pelvic diaphragm. It is 3.8cm long and runs downwards and backwards. It extends from the anorectal junction and terminates by opening to the exterior of anal triangle of perineum. The terminal opening has got subcutaneous musculature called corrugator cutis ani.

Relations:

Anteriorly

In both sexes : Perineal body
In males : Membranous urethra and bulb of penis
In females : Lower end of vagina
Posteriorly:

- Ano coccygeal ligament
- Tip of the coccyx.

Laterally

- Ischio rectal fossa. It helps in the dilation of the anal canal during defaecation.
- Levator ani and fascia covering it.

Interior of the anal canal:

It can be divided into 3 parts.

- Upper part about 15mm long (Mucous)
- Middle part about 15mm long (Transitional zone or Pectan)
- Lower part, about 8mm long (Cutaneous)

Upper Part (Mucous):

- Lined by mucous membrane (Stratified columnar epithelium)
- It is of endodermal origin
- It shows 6-10 vertical folds, called the anal columns of Morgagni
- Anal valves are short transverse folds that unite the lower end of anal columns.
- Pectinate line, a transverse line formed by the anal valves
- Anal papillae are the epithelial projections of the anal valves
Middle Part (Transitional Zone or Pectan):

- It is also lined by mucous membrane (stratified squamous epithelium) and the mucosa is less mobile, but anal columns are absent.

- Lower limit of this region (i.e., Pectan) often has whitish appearance, referred as the “White line of Hilton”.

Hilton’s Line: It is also referred to as the inter sphincteric groove as it is the dividing line between the external and internal sphincters. Internal haemorrhoids occurs above this line, whereas external haemorrhoids occurs below it.

Lower Part (Cutaneous):

It is lined by true skin containing sweat and sebaceous glands.

Ano rectal ring:

The anorectal ring marks the junctions between the rectum and the anal canal. It is formed by the joining of puborectalis muscle, the deep external sphincter, conjoint longitudinal muscle and the highest part of the internal sphincter.

Muscles:

- Internal sphincter (consisting of smooth muscle fibers)

- External sphincter (formed by striated muscle)

    Subcutaneous part

    Superficial part

    Deep part
**Arterial Supply:**

It is supplied by inferior rectal branches of the internal pudendal arteries. It anastomoses with its fellow and with the superior, middle rectal and perineal arteries.

**Venous Drainage:**

1. The internal rectal venous plexus or haemorrhoidal plexus lies in the submucosa of the anal canal. It drains mainly into the superior rectal vein, but communicates freely with the external plexus and thus with the middle and inferior rectal veins. The internal plexus is therefore an important site of communication between the portal and systemic veins. The internal plexus is in the form of a series of dilated pouches connected by transverse branches around the anal canal. Veins present in the three anal columns situated at 3, 7 and 11 o’clock positions as seen in the lithotomy position are large and constitute potential sites for the formation of primary internal piles.

2. The External rectal venous plexus lies outside the muscular coat of the rectum and anal canal and communicates freely with the internal plexus. The lower part of the external plexus is drained by the inferior rectal vein into the internal pudendal vein, the middle part by the middle rectal vein into the internal iliac vein and the upper part by the superior rectal vein which continues as the inferior mesenteric vein.
3. The anal veins are arranged radially around the anal margin. They communicate with the internal rectal plexus and with the inferior rectal veins. Excessive straining during defaecation may rupture one of these veins, forming a subcutaneous perianal haematoma known as external piles.

**Lymphatic Drainage:**

Lymphatics above the level of the Hilton’s line of the anal canal and rectum end in sacral and internal iliac nodes.

Lymphatics below the level of the Hilton’s line wind around the root of thigh both medially and laterally and reach the superficial inguinal nodes. They never follow blood vessels.

**Nerve Supply:**

Above the Hilton’s line, the anal canal and rectum are supplied by the autonomic plexus of nerves and not sensitive to pain.

Below the Hilton’s line, the anal canal is supplied by the inferior rectal nerve (Spinal nerve) and is pain sensitive.

They reach the gut as plexus along with the superior rectal artery and middle rectal artery. They consist of both sympathetic from L₁ and L₂ and parasympathetic fibers from S₃ and S₄ segments. Both afferent and efferent fibers for the defaecation reflex pass through the parasympathetic nerves.
PHYSIOLOGY OF DEFAECATION:

Movements of Large intestine:

🌟 Mixing movements – Segmentation contractions

🌟 Propulsive movements – Mass peristalsis

Defaecation – Definition:

Voiding of faeces is known as defaecation. Faeces is formed in the large intestine and stored in sigmoid colon. By the influence of an appropriate stimulus, it is expelled out through the anus. This is prevented by tonic constriction of anal sphincters in the absence of the stimulus.

Defaecation Reflex:

The mass movement drives the faeces into sigmoid or pelvic colon. In the sigmoid colon the faeces is stored. The desire for defaecation occurs when some faeces enter rectum due to the mass movement. Usually, the desire for defaecation is elicited by an increase with intra rectal pressure to about 20 to 25cm H₂O.

The act of defaecation is preceded by voluntary efforts like assuming an appropriate posture, voluntary relaxation of external sphincter and the compression of abdominal contents by voluntary contraction of abdominal muscles.
Usually, the rectum is empty. During the development of mass movement, the faeces are pushed into rectum and the defaecation reflex is initiated. The processes of defaecation involves the contraction of rectum and relaxation of internal and external anal sphincter.

The internal anal sphincter is innervated by parasympathetic nerve fibers via pelvic nerve. The external anal sphincter is controlled by somatic nerve fibers, which pass through pudental nerve. The pudental nerve always keeps the external sphincter constricted and the sphincter can relax only when the pudental nerve is inhibited.

Usually, defaecation occurs by the gastrocolic reflex mediated by intrinsic nerves of gastrointestinal tract. In this, the distension of stomach by food causes contraction of rectum followed by desire for defaecation. However this reflex causes only a weak contraction of rectum. The strong contraction of rectum and the relaxation of anal sphincters occurs by the reflex mediated by parasympathetic nerves and the reflex center is in the sacral segment of the spinal cord.
Pathway for Defaecation Reflex:

When rectum is distended due to the entry of faeces by mass movement, sensory nerve endings are stimulated and the impulses are transmitted via afferent fibers of pelvic nerve, nerve to sacral segments of spinal cord (center). The Spinal cord, in turn sends motor impulses causing strong contraction of descending colon, sigmoid colon, rectum and relaxation of internal sphincter. Simultaneously, voluntary relaxation of external sphincter occurs. This is due to the inhibition of pudental nerve by impulses arising from cerebral cortex.
HAEMORRHOIDS

SYNONYM:

PILES

In Greek, **HAIMA** = Blood  **RHOOS** = Flowing

In Latin, **PILA** = A ball

Saccular dialatations of the rectal venous plexus (or) cushion is formed by the superior and inferior rectal (haemorrhoidal) veins, which is in normal anatomical structure.

INCIDENCE:

All adults are prone to the development of symptomatic haemorrhoids and the prevalence is about 50% of the adult population. Men are affected roughly twice more frequently than women.

DEFINITION:

External skin tags are redundant fold of skin that arises from the anal verge. Internal Haemorrhoids arise from the superior rectal (haemorrhoidal) venous plexus above the Hilton’s line and are covered by columnar epithelium of the rectum. External haemorrhoids arise from the inferior rectal (haemorrhoidal) venous plexus below the Hilton’s line and are covered by anal squamous epithelium.
INTERNAL HAEMORRHOIDS:

Internal Haemorrhoids are exceedingly common. Essentially the condition, is a dilatation of the internal venous plexus with an enlarged displaced anal cushion. Because of the communication between the internal and external plexuses, if the former becomes engorged, the latter is liable to become involved also.

Internal Haemorrhoids are,

★ Vascular Haemorrhoids:

In this type, there is extensive dilatation of the terminal superior rectal venous plexus. It is commonly found in adults particularly in men.

★ Mucosal Haemorrhoids:

In this type, there is sliding down of the thickened mucous membrane, which conceals the underlying veins.

AETIOLOGY:

1. Hereditary:

It is often seen in members of the same family.

2. Anatomical:

★ It has long been suggested that internal pile is a natural consequence of adaptation of erect posture of mankind.
Absence of valves in the superior rectal veins

The veins passing through the rectal musculature 10cm above the anus will cause occlusion of the veins and congestion during defaecation.

The radicles of superior rectal vein lie unsupported in loose submucous connective tissue of the rectum.

3. Exciting Causes:

Straining to expel constipated stool causes dilatation of the venous plexus. Once dilatation of the venous plexus as well as partial prolapse would occur, with each bowel movement it would stretch the mucosal suspensory ligament. Over purgation and diarrhoea of colitis, dysentery, enteritis etc aggravate latent haemorrhoids.

4. Physiological Cause:

Some Surgeons have regarded the extensive venous plexus of the upper anal canal as physiological. The pathology of the so called venous plexus is in fact, a corpus cavernosum with direct arterio venous communication. This plexus termed as Corpus Cavernosum Rectum, is a normal constituent in the upper third of the anal canal. Hyperplasia of the corpus cavernosum rectum may result from failure of mechanism controlling the arteriovenous shunts producing superior rectal veins varicosity and haemorrhoids.
5. Diet:

Low roughage ‘western’ diet may excite haemorrhoid formation whereas adding bulk or bulk-forming compounds can prevent haemorrhoid formation.

Secondary Haemorrhoids:

Haemorrhoids may be secondary to a few conditions. These are,

- Carcinoma of the rectum, which compresses the superior rectal veins and gives rise to haemorrhoids.
- Pregnancy compresses superior rectal veins and also causes secondary laxity of smooth muscle of the veins. Similarly, Uterine tumors compresses the superior rectal veins.
- Stricture of urethra or enlarged prostate will cause increased intra-abdominal pressure and will raise the venous pressure in the superior rectal veins producing haemorrhoids.
- Portal hypertension rarely produces haemorrhoids, even though it is the junction of portal and systemic veins.
PATHOGENESIS:

Elegant Histological studies have shown that haemorrhoids are normal features of the human anatomy. They have three important parts,

1. Lining (rectal mucosa or anoderm).
2. Stroma (blood vessels, smooth muscle, supporting connective tissue).
3. Anchoring connective tissue (which secures the haemorrhoids to the sphincter mechanism).

With age and other aggravating factors, the anchoring and supporting connective tissue deteriorates, causing the haemorrhoids in patients with chronic constipation, diarrhea, pregnancy or pelvic tumors-conditions that increase pelvic venous pressure. In certain individuals, the internal sphincter becomes hypertrophic and the anal outlet becomes functionally narrowed. At straining, the faecal bolus acts as an obturator, forcing the haemorrhoidal cushion to descend through the hypertrophic sphincter, enlarge and become symptomatic.
PATHOLOGY:

Through a Proctoscope the internal haemorrhoid is well visualised and can be divided into three parts. These are

- Pedicle
- Body of internal haemorrhoid.
- Associated external haemorrhoid.

* Pedicle:

Each internal haemorrhoid has a pedicle in the rectum just above the anorectal ring. The pedicle is covered with pale pink mucous and through it, a large tributary of the superior rectal vein can be seen. Occasionally a pulsating artery may be felt at the pedicle.

* Body of the internal haemorrhoid:

After the pedicle, the body of the internal haemorrhoid continues distally and ends at the Hilton’s line. The body is covered by bright red or purple mucous membrane.

* Associated external haemorrhoid:

It lies between the Hilton’s line and the anal margin and is covered by skin. The blue veins can be seen through the skin. Associated external haemorrhoid is present in long continued cases of internal haemorrhoid.
Each primary internal haemorrhoids contains main terminal divisions of superior rectal vein and artery. There are three main terminal divisions of such superior rectal vessels arranged in three characteristic positions,

- Left lateral (3o’clock)
- Right posterior (7o’clock)
- Right anterior (11o’clock)

In lithotomy position, these can be visualised. Besides these primary haemorrhoids, there may be small secondary haemorrhoids in between.

**CLINICAL FEATURES:**

* **Bleeding:**

   The principle and earliest symptom is bleeding. Bleeding is bright red, painless and occurs along with defaecation (a ‘splash in the pan’). At first the bleeding is slight and may continue intermittently for months or years.

* **Constipation:**

   Longstanding constipation leads to the development of haemorrhoids and hence it is the commonest and prominent feature in the clinical history.

* **Prolapse:**

   It is a later symptom. In the beginning prolapse is minimal. According to prolapse, haemorrhoids can be divided into four degrees.
First degree – Haemorrhoids that bleed but do not come out of the anus.

Second degree – Haemorrhoids comes out only during defaecation and are reduced spontaneously after defaecation.

Third degree – Haemorrhoids comes out only during defaecation and do not return by themselves but need to be replaced manually and then they stay reduced.

Fourth degree – Heamorrhoids, that permanently prolapse. At this stage great discomfort is complained of with a feeling of heaviness in the rectum.

♦ Pain:

    Pain is not a characteristic feature of heamorrhoid unless there is associated thrombosis or there is associated fissure-in-ano.

♦ Mucous Discharge:

    It is a particular symptom of prolapsed haemorrhoids, which softens and excoriates the skin at the anus. This mucous discharge is due to enlarged mucous membrane. Pruritus ani will be caused by such mucous discharge.

♦ Anaemia:

    It is often seen in long standing cases of haemorrhoids due to persistent and profuse bleeding.
RECTAL EXAMINATION

Position of the Patient:

✱ *Left lateral position (Sim’s position):*

   It is the most popular position for ano rectal examination

✱ *Dorsal position:*

   It is convenient to do bimanual examination and this position is also popular when the patient is too ill to alter the position. It is suitable to know the interior of the pelvis in a better way but is not suitable for inspection around the anus.

✱ *The knee-elbow position:*

   This position is particularly suitable for palpating the prostate and seminal vesicles.

✱ *Lithotomy position:*

   The advantages of this position is more informative regarding pelvic viscera can be obtained and bimanual examination can be conveniently performed. Position of the pile mass can also be viewed.

INSPECTION:

Internal haemorrhoid without prolapse will not show any abnormal feature. During second and third degree, internal haemorrhoids may be seen only when patient strains and that too transiently and the prolapse disappears after the straining is over.
PALPATION:

No evidence of internal haemorrhoid can be reported in palpation. In protruded and complicated cases, pain can be felt while palpation.

Digital Examination:

Internal haemorrhoids cannot be felt unless they are thrombosed but to exclude other pathologies, digital examination is done.

Information received in rectal examination can be divided into.

- Within the lumen
- In the wall
- Outside the wall

Carcinoma of the rectum is a condition in which rectal examination is of paramount importance. About 90% of rectal cancer can be felt by digital examination. Following structures can be palpated by introducing the gloved finger into the anal canal and rectum.

**Posteriorly** : Sacrum, Coccyx and Ano coccygeal body

**Laterally** : Ischio – rectal tissues and Ischial spines
Anteriorly:

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
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</thead>
<tbody>
<tr>
<td>Recto-vesical pouch</td>
<td>Pouch of Douglas</td>
</tr>
<tr>
<td>Base of bladder</td>
<td>Vagina</td>
</tr>
<tr>
<td>Seminal vesicles</td>
<td>Cervix</td>
</tr>
<tr>
<td>Vas deferens</td>
<td>Urogenital diaphragm</td>
</tr>
<tr>
<td>Prostate</td>
<td>Perineal body</td>
</tr>
<tr>
<td>Bulb of penis</td>
<td></td>
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</tbody>
</table>

Bimanual Examination:

The examination of the contents of the pelvis can be conveniently examined during rectal examination by placing another hand on the abdomen. This gives a better idea of the size, shape and nature of any pelvic mass. At the end of examination the examining finger should be looked for the presence of faeces, blood, pus or mucus.

Abdominal Examination:

In the case of annular carcinoma at the upper part of the rectum an indistinct lump may be felt at the left side of abdomen. This is nothing but the descending colon loaded with hard faeces. This swelling pits on pressure. Liver is examined for secondary metastasis, Jaundice. Hard subcutaneous nodules (or) free fluid can also be examined within the abdomen.
**Lymph Nodes:**

Carcinoma arising from the hindgut will metastasizes to the iliac groups of lymph nodes. Enlargement of these nodes can be felt on deep palpation. Carcinoma arising from or involving lower part of the anal canal below the pectinate line commonly spreads to inguinal group of lymph nodes and these are easily palpable.

**Barium Enema & Barium Meal:**

It is carried out in selected cases to rule out carcinomatous states.

**Blood for Bleeding Time and Clotting Time:**

It is carried out to rule out bleeding diasthesis.

**Motion for Occult Blood:**

It is carried out to rule out upper gastro intestinal disorders and carcinoma of colon and rectum.

**SPECIAL INVESTIGATIONS:**

Proctoscopy, Sigmoidoscopy and Colonofibroscopy are the procedures which makes use of tubular instruments that incorporate small electrical lights that allow the lumen of the lower bowel to be viewed directly.
PROCTOSCOPY:

It is used to inspect the rectum for evidence of haemorrhoids, ulceration, tumors, polyps or other pathology.

**Position:**

- Left lateral or knee-elbow position.

Internal haemorrhoids are well visualised through this instrument. Position of the piles is according to the main branches of superior rectal (haemorrhoidal) vein. Chronic fissure is often situated on the midline posteriorly, which can be viewed through the instrument. By proctoscope, inner opening of fistula can also be found. Biopsy can be taken from a growth or an ulcer through a proctoscope.

SIGMOIDOSCOPY:

The Flexible sigmoidoscope permits an examination of up to 40 cm to 50 cm from the anus, more than 25cm can be seen with the rigid sigmoidoscope. By this instrument whole of the rectum and a large part of the sigmoid colon can be examined.

**Position:**

- Knee-elbow position.

This instrument is mainly used to detect presence of any growth, ulcer, diverticulum etc., in the rectum and the lower part of the sigmoid colon. The growth may be biopsied and a smear may be taken from ulcer for bacteriological examination through this instrument.
**COLONOSCOPY:**

Direct visual inspection of colon up to the caecum is possible by means of a flexible fibroptic colonoscope. This procedure is used as a diagnostic aid and the instrument may be used to remove foreign bodies, polyps, or tissue for biopsy.

The key to pleasant and successful colonoscopy lies in achieving a clean bowel before hand. Colonoscopy is done after satisfactory anaesthesia by injecting intravenously Diazepam (Valium) 5-20mg and Pethidine 25-70mg.

Complications are rare following this procedure, although perforation or haemorrhage is possible.

**BLEEDING PER ANUM OTHER THAN HAEMORRHOIDS:**

**Without Pain:**

- Blood alone-Polyp, Villous adenoma and Diverticular disease.
- Blood with mucous-Ulcerative colitis, Crohn’s disease, Intussusception, Ischaemic colon etc.
- Blood mixed with stool-Carcinoma of the colon.
- Defects of Blood vessels and Clotting mechanism, Disorders of Blood platelets.
With Pain:

- Fissure in ano
- Fistula in ano
- Ruptured Perianal haematoma
- Ruptured Anorectal abscess
- Complicated Portal hyper tension
- Injury

DIFFERENTIAL DIAGNOSIS:

1. FISSURE-IN ANO:

Bright streak of blood with the passage of stool is seen in acute type of fissure. Pain after defaecation, blood streaked on stool is the characteristic feature. It is a deep tear in the anal canal with surrounding oedema and inflammatory induration and associated with spasm of the anal sphincters. Acute fissure heal spontaneously. When fails to heal it will gradually develop into a deep undetermined ulcer with continued infection and oedema. It is highly painful as the fissure is mainly situated in the lower anal canal. In Rectal examination, it can be felt as a chronic ulcer, but proctoscopy could not be done due to extreme spasm of sphincters.
2. CARCINOMA OF THE RECTUM:

Unlike other carcinomas this condition may be seen even in young patients and is very virulent. Bleeding is the most constant symptom. It may bleed during defaecation or it may simply stain the underclothing. In case of proliferative growth in ampulla the patient feels the sense of incomplete defaecation even after full opening of the bowel. The patient may endeavour to empty the rectum several times a day often with passage of blood and mucus (‘spurious diarrhoea’). The patient often gets up in the morning with an urgent urge for defaecation. In case of Annular carcinoma, the patient complaints of increasing constipation and needs increasing dose of purgatives and as a result diarrhoea occurs and also the hard faeces irritates the colon leading to diarrhoea. Pain is a late symptom. Weight loss and anaemia are usual features. Liver should always be palpated for metastasis. Peritoneum may be studded with secondary deposits. Ascites may be the result.

3. RECTAL PROLAPSE:

This condition is at the extremes of life in children between 1 to 3 years and the elderly after 40 years of age. Women are commonly affected than men. Ano rectal bleeding, mucous discharge, anal pain, the bowel habit and the control of defaecation are the symptoms which may be present or
absent. Something coming out per rectum during defaecation is the main complaint in this disease. It may come out spontaneously even on standing, walking or coughing. Mucosal partial and complete are types of rectal prolapse. Mucosal prolapse consists of only two layers of mucosa, while a complete prolapse consists of two full thickness of rectal wall. The length of the prolapse is less than 3.75cm for a partial prolapse and more than for a complete prolapse.

4. EXTERNAL HAEMORRHOID:

Dilatation of veins occurring outside the external sphincter of anal canal and covered by skin is called external haemorrhoid. Bleeding at stool, Itching and Pain are the symptoms of this disease.

There are two peculiar conditions associated with external haemorrhoid:

i. Dilatation of the veins at the anal verge is sometimes seen in persons of sedentary life particularly during straining.

ii. Perianal haematoma or thrombosed external haemorrhoid-A small clot in perianal subcutaneous tissue. This condition appears suddenly and is very painful. It may be seen lateral to anal margin as tense and tender swelling. If untreated, it may resolve by itself or may suppurate or may fibrose or may burst giving rise to bleeding.
5. ANO-RECTAL ABSCESS:

Incidence of ano-rectal abscess is higher in men than women. An abscess may occur in a variety of spaces in and around the rectum. Usually it is caused by infection of pathogenic microorganisms. So, often it contains a quantity of foul smelling pus and is painful. If the abscess is superficial, swelling, redness and tenderness are observed. A deeper abscess may result in toxic symptoms, even lower abdominal pain and fever.

6. FISTULA – IN – ANO:

It is a tiny tubular tract that extends into anal canal from an opening located beside the anus. More than half of the rectal abscess will result in fistulas. A history of intermittent swelling with pain, discomfort and pus or stool leaking constantly from the cutaneous opening can often be obtained. Ano rectal sling (ring) is felt by rectal examination to find out whether the internal opening is above or below that sling. If the opening is above the ring, then the fistula is said to be a ‘high fistula’ and below the sling the fistula is said to a ‘low fistula’.
COMPLICATIONS

The two main complications of haemorrhoids are excessive bleeding and thrombosis. Besides these there are a few complications, which may occur in haemorrhoids.

✴ Profuse Bleeding:

Bleeding is the main symptom in the first degree. A patient with first-degree haemorrhoid for a quite long time will become anaemic. Bleeding usually occurs externally. Only when a bleeding haemorrhoid is retracted, it may bleed internally into the rectum.

✴ Thrombosis:

The affected haemorrhoid becomes dark purple, black and feels solid. The anal margin becomes oedematous and there is severe anal pain. Pain may continue for a week or so, until the oedema subsides and the thrombosis is absorbed.

✴ Strangulation:

Unless the internal haemorrhoid is reduced immediately, strangulation is followed by thrombosis. When the internal haemorrhoid prolapses and becomes gripped by the external sphincter, further congestion occur as the venous return becomes impeded and strangulation occurs. Strangulation is associated with considerable pain and it is often called ‘acute attack of piles’.

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**Gangrene:**

It occurs only when the arterial supply of the haemorrhoid is somehow or other constricted. Sloughing occurs which is usually superficial, but occasionally the whole haemorrhoid may slough off leaving an ulcer, which gradually heals by itself. Very occasionally massive gangrene may initiate spreading anaerobic infection and portal pyaemia.

**Fibrosis:**

Usually follows thrombosis of the internal haemorrhoid. Fibrosis also follows transient strangulation. In the beginning, the fibrosed pile is sessile, but by repeated traction during defecaion it becomes pedunculated. Then it is differentiated from adenoma by its white colour.

**Suppuration:**

It is very rare and only occurs as a result of infection of thrombosed haemorrhoid. Throbbing pain with perianal swelling is the feature. Perianal or submucous abscess may follow.

**Pylephlebitis (Portal Pyaemia):**

This is a theoretical entity and with the advent of antibiotics this has considerably been reduced. This usually follows infection and suppuration of the haemorrhoid, which ultimately causes portal pyaemia and liver abscesses.
MATERIALS AND METHODS

The clinical study of “RATHTHA MOOLAM” was carried out in postgraduate department of Podhu Maruthuvam, Government Siddha Medical College, Palayamkottai. In this study, 20 patients of both sexes were selected in the Out-Patient ward. 20 cases were admitted in the In-Patient ward and were treated with the trial medicine.

Selection of Patients:

Patients were selected on the basis of the following criteria.

- Bleeding per rectum
- Constipation
- Loss of appetite
- Pruritus ani
- Discharge of pus and mucus
- Irritation and soreness after defaecation
- Tiredness
- Pain in the umblicus
- Pallor of skin
- Oedema
- Headache
- Giddiness
Diagnosis:

Diagnosis was made on the basis of Poriyal Arithal, Pulanal Arithal, Vinathal, Mukkutra Verupadugal, Udal Kattugal, Envagai Thervugal, Nilam, Kaalam.

Investigations:

Diagnostic tests such as blood TC, DC, ESR, Hb%, Urine analysis(Albumin, Sugar, Deposits), Motion Test(Ova,Cyst,Occult Blood) was done in all the cases.Further Proctoscopic examination was done in all the cases to find the position of the pile mass.Colonoscopic examination was done in one to confirm the diagnosis.

To establish the efficacy of trial medicine, Biochemical Analysis and Pharmacological Analysis were done at the Department of Biochemistry and Department of Pharmacology respectively in Government Siddha Medical College, Palayamkottai.

Management:

The treatment is aimed to arrest the bleeding and in bringing the vitiated humor to equilibrium state.

The trial drug used in the study was, “Moola Rogangal Gunamaga Ennei”-2.5 ml, twice daily. Apart from this Pathiyam, Yogasanas, Pranayamam are advised for speedy recovery of “Raththa Moolam”.

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RESULTS AND OBSERVATION

20 In-patients and 20 Out-Patients with signs and symptoms of Raththa Moolam were treated in the Post Graduate Maruthuvam Department, Government Siddha Medical College, Palayamkottai. Tabulations were made with reference to the following criteria.

- Sex
- Age
- Religion
- Nilam (Thinai)
- Paruvakaalam
- Occupation
- Socio-Economic Status
- Family History
- Precipitating Factors
- Duration of Illness
- Clinical Features
- Mukkutrangal
- Udal thaathukkal
- Envagai thervugal
- Neikuri
- Changes in Malam
- Position of the pile mass
- Arrest of bleeding
- Duration of Treatment
- Improvement in Haemoglobin level
- Gradation of Clinical improvement.
1. Distribution among Sex

Table 1

<table>
<thead>
<tr>
<th>S. No</th>
<th>Sex</th>
<th>No. of cases</th>
<th>Percentage</th>
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<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
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</tr>
<tr>
<td>2</td>
<td>Female</td>
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</tr>
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</table>

From the table it is clear that the incidence is more in males compared to females.
2. Distribution among Age

Table 2

<table>
<thead>
<tr>
<th>S. No</th>
<th>Age</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
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<td>In-Patients</td>
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<td>71-80</td>
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</table>

It is clear that most of the cases belongs to Pitha Kaalam (34-66 age group).
3. Religion:

Table – 3

<table>
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<tr>
<th>S. No</th>
<th>Religion</th>
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<th>Percentage</th>
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<tr>
<td>3</td>
<td>Christian</td>
<td>2</td>
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</tbody>
</table>

Table shows that the incidence of disease is more in Hindus.

4. Thinai:

Table – 4

<table>
<thead>
<tr>
<th>S. No</th>
<th>Thinai</th>
<th>No. of cases</th>
<th>Percentage</th>
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<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Kurinchi</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Mullai</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Marudham</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>Neithal</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Paalai</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Most of the patients were from Marudha Nilam. Even though it is a disease free zone people were affected by this disease due to change in food habits and life style.
5. Paruva Kaalam:

Table – 5

<table>
<thead>
<tr>
<th>S. No</th>
<th>Paruva kaalam</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Kaar kaalam</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Koothir kaalam</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Munpani kaalam</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Pinpani kaalam</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>Elavenir kaalam</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Mudhu Venir kaalam</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

In 60% of OP and IP cases the disease gets aggravated during Pinpani kaalam.

6. Distribution among occupation:

Table – 6

<table>
<thead>
<tr>
<th>S. No</th>
<th>Occupation</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Tailor</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Coolie</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Beedi Worker</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Cook</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Mechanic</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Security</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Salesman</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Driver</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Shop owner</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>
From the table it is clear that the patients who were engaged in work such as tailor, beedi worker, driver, shop owner (who were seated for long time) are more prone to this disease.

Distribution among occupation

7. Distribution among Socio-economic status

Table – 7

<table>
<thead>
<tr>
<th>S. No</th>
<th>Socio – economic status</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Lower class</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>Middle class</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>Upper class</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Table shows the higher incidence of Raththa Moolam among the people belonging to poor socio-economic status.

8. Distribution among family history:

Table – 8

<table>
<thead>
<tr>
<th>S. No</th>
<th>Family history</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Positive</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Negative</td>
<td>14</td>
<td>13</td>
</tr>
</tbody>
</table>

Out of 20 OP cases 30% of cases were having strong family history and out of 20 IP cases 35% of cases were having strong family history.

9. Distribution among precipitating Factors:

Table – 9

<table>
<thead>
<tr>
<th>S. No</th>
<th>Precipitating Factors</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Occupation (sedentary work)</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>Faulty food habits</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Constipation</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>Mental stress</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Sleeplessness</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

Constipation was the main precipitating factor in all the cases.

Occupation plays a main role in the causation of disease and accounts for
60%. Faulty food habits also plays a role in the disease production and accounts for 80% in OP cases and 75% in IP cases. Mental stress and sleeplessness also accounts for about 30% in OP cases and 20% in IP cases.

Distribution among precipitating Factors

10. Duration of illness:

Table – 10

<table>
<thead>
<tr>
<th>S. No</th>
<th>Duration of Illness</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>7 days – 15 days</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>15 days – 1 month</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>1 month – 6 months</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>6 months – 1 year</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>1 year – 5 years</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
60% of OP cases and 25% of IP cases were having the complaints which ranges from 7 days – 15 days. In IP cases 20% of the cases were having the complaints that ranges from 1 month – 6 months.

11. Clinical Features:

Table – 11

<table>
<thead>
<tr>
<th>S. No</th>
<th>Clinical Features</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Constipation</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Bleeding per rectum after defaecation</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Loss of appetite</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>Pruritus ani</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Discharge of pus &amp; mucous</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Irritation &amp; soreness after defaecation</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>Tiredness</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>8</td>
<td>Pain in the umbilicus</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>Pallor of skin</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>Oedema</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>Head ache</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>12</td>
<td>Giddiness</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
All the 40 patients had constipation and bleeding per rectum. Loss of appetite was seen in 35% of OP cases and 40% of IP cases. Pruritus ani was complained in 10% of OP cases and 15% of IP cases. Tiredness was complained in 55% of OP cases and 70% of IP cases. Pallor of skin is seen in 25% of OP cases and 50% of IP cases.

Clinical Features
12. Disturbances in Mukkutram:

a. Vatham:

Table – a

<table>
<thead>
<tr>
<th>S. No</th>
<th>Vatham</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Praanan</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Abaanann</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Udhaanan</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>Viyaanan</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>Samaanan</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>Naagan</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>Koorman</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Kirukaran</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>Devadhathan</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Thananjayan</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

In 100% of OP and IP cases Abaanann was affected leading to constipation, bleeding per rectum. Praanan and Udhaanan was affected in 20% of OP cases and 35% of IP cases leading to cough, dyspnoea. Viyaanan was affected in 55% of OP cases and 70% of IP cases resulting in difficulty in movements. Samaanan was affected in all the cases as it is a neutralizer of other increased vayus and in a few leads to loss of appetite. Kirukaran was affected in 35% of OP cases and 40% of IP cases leading to
loss of appetite. Koorman was affected in 15% of OP cases and 35% of IP cases leading to disturbances in vision. Devadhanan was affected in 30% OP cases and 20% of IP cases leading to anger, sleeplessness.

Disturbances in Vatham

b. Pitham

Table – b

<table>
<thead>
<tr>
<th>S. No</th>
<th>Pitham</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Anal pitham</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Ranjagam</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>3</td>
<td>Prasagam</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Saathagam</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>Aalosagam</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>
Anal pitham was affected in 35% of OP cases and 40% of IP cases leading to loss of appetite. Ranjagam was affected in 40% of OP cases and 65% of IP cases leading to anaemia. Prasagam was affected in 25% of OP cases and 50% of IP cases leading to pallor of skin. Saathagam was affected in all the cases leading to straining during defaecation. Alosagam was affected in 15% of OP cases and 25% of IP cases leading to disturbances in vision.
c. Kabham:

**Table – c**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Kabham</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Avalambagam</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Kilethagam</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>Pothagam</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Tharpagam</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Santhigam</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

Avalambagam was affected in 20% of OP cases and 35% of IP cases leading to cough, dyspnoea. Kilethagam was affected in 35% of OP cases and 40% of IP cases leading to loss of appetite. Santhigam was affected in 15% of OP cases and 35% of IP cases leading to disturbance in movements.

**Disturbances in Kabham**
### 13. Ezhu Udal Thathukkal

#### Table – 13

<table>
<thead>
<tr>
<th>S. No</th>
<th>Udal Thathukkal</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Saaram</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Senneer</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Oon</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Kozhuppu</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Enbu</td>
<td>3</td>
<td>7</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>

Saaram was affected in 35% of OP cases and 40% of IP cases leading to loss of appetite. Senneer was affected in all the cases leading to bleeding per rectum. Enbu was affected in 15% of OP cases and 35% IP cases leading to disturbances in movements.
### 14. Envagai Thervugal:

**Table – 14**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Envagai Thervugal</th>
<th>No. of cases</th>
<th>Percentage</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
<td>Out-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Naa</td>
<td>8</td>
<td>13</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>Niram</td>
<td>5</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Mozhi</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Vizhi</td>
<td>8</td>
<td>13</td>
<td>40</td>
</tr>
<tr>
<td>5</td>
<td>Sparisam</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Malam</td>
<td>20</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>7</td>
<td>Moothiram</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>Naadi</td>
<td>- Vatha Pitham</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Pitha Vatham</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

In Envagai Thervugal Naa and Vizhi was affected in 40% of OP cases and 65% of IP cases leading to pallor of tongue and conjunctiva. Niram was affected in 10% of OP cases and 50% of IP cases leading to pallor of skin. Malam was affected in all the cases leading to constipation. In Naadi Vatha Pitha Naadi was seen in 65% of OP cases and 55% of IP cases and Pitha Vatha Naadi was seen in 35% of OP cases and 45% of IP cases.
15. Neikuri

Table – 15

<table>
<thead>
<tr>
<th>S. No</th>
<th>Neikuri</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Ring (Aazhi)</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Aravil aazhi</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Aazhiyil aravu</td>
<td>9</td>
<td>8</td>
</tr>
</tbody>
</table>

Most of the cases showed Aravil Aazhi and Aazhiyil Aravu patterns.

16. Distribution among changes in Malam:

Table – 16

<table>
<thead>
<tr>
<th>S. No</th>
<th>Malam</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Malamirugal</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Malapperukku</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Kaduppudan malam</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>varuthal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Rathhamudan malam</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>varuthal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Seetham kalanthu</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>malam varuthal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Seezh kalanthu malam</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>varuthal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Malamirugal and Rathhamudan malam varuthal were seen in all cases.
17. Distribution among position of pile mass:

Table – 17

<table>
<thead>
<tr>
<th>S. No</th>
<th>Position of pile mass</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>3o’ clock</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>7o’ clock</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>11o’ clock</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

70% of OP cases and 65% of IP cases had pile mass in 3o’ clock position which shows higher incidence of pile mass in 3o’ clock position.
18. Report on Bleeding per rectum after intake of trial medicine.

Table – 18

<table>
<thead>
<tr>
<th>S. No</th>
<th>Improvement in the Bleeding tendency</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>First day</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Second day</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Third day</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Fourth day</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>Fifth day</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

In 35% of OP cases and 40% of IP cases bleeding was arrested on fourth day. In 30% of OP cases and 10% of IP cases bleeding was arrested on third day. In 15% of OP cases and 35% of IP cases bleeding was arrested on fifth day. In 20% of OP cases and 15% of IP cases bleeding was arrested on second day.
19. Report on Duration of Treatment:

Table – 19

<table>
<thead>
<tr>
<th>S. No</th>
<th>No. of days treated</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>1 – 10</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>11 – 20</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>21 – 30</td>
<td>-</td>
<td>3</td>
</tr>
</tbody>
</table>

All the OP cases were treated for a period of 11 – 20 days and nearly 75% of IP cases were treated for a period of 11 – 20 days.

21. Observation of Haemoglobin Level:

Table – 21

<table>
<thead>
<tr>
<th>S. No</th>
<th>Haemoglobin Level (%)</th>
<th>No. of Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BT</td>
<td>AT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OP</td>
<td>IP</td>
</tr>
<tr>
<td>1.</td>
<td>61 – 67</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>2.</td>
<td>68 – 73</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>74 – 80</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>4.</td>
<td>81 – 88</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
In most of the OP cases, the Hb level before treatment was between 74 – 80% and in most of the IP cases the Hb level before treatment was between 61 – 67%. After treatment the Hb level was increased to 74 – 80% in 55% of OP cases and in 40% of IP cases it was increased to 68 – 73%.

22. Gradation of Clinical Improvement:

<table>
<thead>
<tr>
<th>S. No</th>
<th>Gradation</th>
<th>No. of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Out-Patients</td>
<td>In-Patients</td>
</tr>
<tr>
<td>1</td>
<td>Best</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>Better</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Good</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Observation of clinical improvement showed best results in 80% of OP cases and 70% of IP cases. The results were better in 15% of OP cases and 20% of IP cases. 5% of OP cases and 10% of IP cases showed good results.
Gradation of Clinical Improvement
DISCUSSION

Bleeding or Haemorrhage is a condition that has to be treated promptly with utmost care and requires a pragmatic approach.

“Raththa Moolam”, one of the classification under Moola noi, by yugi has been compared with the First Degree Internal Haemorrhoids in modern clinical entity. The aetiology, pathology, clinical features and diagnostic criteria have been studied in detail in both siddha and modern aspects.

A total of 40 Patients who fulfilled the following stipulated criteria were selected.

- Bleeding per rectum after defaecation
- Constipation
- Loss of appetite
- Tiredness
- Giddiness
- Anaemia
- Head ache
- Pain around the umblicus
- Pain all over the limbs
Out of 40 Patients, 20 were admitted in the In-Patient ward and the remaining 20 were treated as Out-Patients in the Post graduate, Maruthuvam Department, Palayamkottai. All the patients were given the trial medicine.

Patients were treated for a period from 10-27 days. Out patients were reviewed once in 2 days and the clinical assessment for In Patients were carried out daily. Detailed history from the patient regarding Age, Sex, Socio economic status, Occupation, Food habits etc. were taken and their influence in producing the disease was observed.

**Aetiology:**

From the history given by the patients, it is clear that occupation, dietic factors, Mental stress etc. play a vital role in the production of disease, there by dearranging the two humors, Vatham and Pitham. This has been highlighted in the following version.

“அதில் வின் வின்னையையும் பின் பின்னையும்”

Vitiation of these 2 humors, Vatham and Pitham induces constipation, there by straining during defaecation ultimately resulting in haemorrhoids.
Sex:

Among 20 Out-Patients, men were predominantly affected at a rate of 70% and women were affected at a rate of 30%.

Among 20 In-Patients, both were affected at the rate of 50%.

Men preponderance may be because of occupation stress and strain.

Age distribution:

Among 20 Out-Patients, 30% of cases were recorded in the age group of 31-40 years.

Among 20 In-Patients, 30% of cases were recorded in the age group 41-50 years.

This shows that the incidence is more in the age group between 31-40 years and 41-50 years, depicting that the disease in common during Pitha Kaalam.

Religion:

Most of the cases i.e., 75% of Op cases and 85% of Ip cases were Hindus. This may be due to the higher proportion of Hindus in the society.

Thinai:

Most of the patients belonged to Marutham Thinai. Even though Marutha Nilam is a disease free zone, change in life style, food habits, occupation all of which contribute to the development of the disease.
20% of Op cases and 10% of Ip cases were from Neithal Nilam, which is the land for development of Vatha diseases and Raththa Moolam is mainly due to Vatha dearangement.

**Paruva Kaalam:**

Most of the cases were affected during Pinpani kaalam. In siddha system of medicine, aggravation of Vatham and Pitham occurs in Kaar Kaalam and Koothir Kaalam. But the studies show that the vitiation of Vatham and Pitham occurs more in Pinpani Kaalam. This may be attributed to food habits and occupation.

**Occupation:**

Among 20 Out-Patients, most of the cases affected were tailor, driver who were affected at the rate of 15% each. Remaining cases were cooli, Beedi worker, Cook, Mechanic, Security, Sales man, Shop owner who were affected at the rate of 10% each.

Among 20 In-Patients, most of the cases affected were Cooli, Beedi worker, Shop owner who were affected at the rate of 20% each. 15% of cases were Sales man, 10% of cases were tailor and remaining cases were security driver who were affected at the rate of 5% each.

This shows, that most of them were sedentary workers whose nature of job was being seated for long time. This was one of the precipitating cause for the development of Moola Noi.
**Socio economic status:**

Most of the cases belonged to poor Socio economic status, where malnutrition, stress made them prone to this disease.

**Family history:**

Family history was positive in only 30% of Op cases and 35% of Ip cases. In remaining cases the family history was negative.

Though hereditary is one of the cause for the development of haemorrhoids it was not significant.

**Precipitating factors:**

The study shows that constipation, faulty food habits, occupation mainly acts as a precipitating factor in the causation of the disease. Further mental stress, sleeplessness also acts as a precipitating factor in 30% of Op cases and 20% of Ip cases.

**Food habits:**

80% of Op cases were on mixed diet and 75% of Ip cases were on mixed diet. This showed that the incidence is more on the people taking non-veg, which plays a main role in causing constipation, there by producing haemorrhoids.

**Duration of illness:**

Most of the Op cases had duration of illness of about 7 – 15 days. Most of the Ip cases had duration of illness of about 15 days to 1 month.
Reference to Clinical Features:

All the cases showed constipation and bleeding per rectum as a main symptom. 35% of Op cases and 40% of Ip cases had loss of appetite. Tiredness was felt in 55% of Op cases and 70% of Ip cases. Due to anaemia pallor of skin occurs in 25% of Op cases and 50% of Ip cases.

Uyir Thathukkal:

In Vatham, Abanan, Viyanan, Samanan, Kirukaran, Devadhathan gets affected.

In Pitham all the five types viz, Anal Pitham, Ranjagam, Prasagam, Saathagam gets affected.

In Kabam, Avalambagam, Kilethagam gets affected.

Ezhu Udal Thathukkal:

Saaram was affected in 35% of Op cases and 40% of Ip cases leading to anorexia.

Senneer was affected in all the cases leading to bleeding per rectum, decrease in udal vanmai etc.
**Envagai Thervugal:**

In Envagai Thervugal, Naa and Vizhi was affected in 40% of Op cases and 65% of Ip cases leading to pallor of tongue, conjunctiva.

Malam was affected in all the cases leading to constipation, bleeding per rectum during defaecation.

In Naadi 65% of Op cases and 55% of Ip cases showed Vatha Pitha Naadi and 35% of Op cases and 45% of Ip cases showed Pitha Vatha Naadi.

**Neikuri:**

Most of the cases showed thontha neer with aravil aazhi and aazhiyil aravu patterns and a few showed ring like patterns (Pitha Neer).

**Position of Pile mass:**

Most of the cases had pile mass in 3 o’clock position.

**Report on bleeding per rectum after intake of trial medicine:**

In most of the cases bleeding stops on the fourth day of the treatment.

**Duration of Treatment:**

All the Op cases were treated for about 11 – 20 days and 75% of Ip cases were treated for about 11 – 20 days.

**Reference according to laboratory findings:**

Hb level as low as 61 – 67% occurs in 50% of Ip cases and 30% of Op cases. Few cases showed increase in erythrocyte sedimentation rate.
Investigation:

Motion test for occult blood showed negative in all patients. Bleeding time and clotting time were within the normal limits in all the patients. Proctoscopic examination was done in all the cases to find the position of pile mass.

In one case, colonoscopic examination was carried out for confirmation of diagnosis.

Mode of Action According to Siddha System:

The ingredients that are included in the trial drug were known to possess refrigerant, demulcent, laxative, emollient, astringent action all of which contributes in pacifying the vitiated humors and thus reducing the symptom. Due to the laxative, emollient action of castor oil, speedy recovery from constipation is achieved. Further the ingredients have the property of curing moola noi as mentioned in Agathiyar Guna Vagadam and Pathartha Guna Soodamani.
PRE – CLINICAL SCREENINGS:

Bio – chemical analysis:

Bio chemical analysis of the trial drug showed the presence of calcium, chloride, ferrous iron, tannic acid, unsaturated compound, reducing sugar and amino acid.

- Calcium constituent is necessary for coagulation or arrest of bleeding.
- Iron constituent is essential for the synthesis of haemoglobin. Bleeding per rectum causes anaemia due to iron deficiency, which is substituted by the trial medicine. In the trial medicine iron was present in ferrous form, which is more soluble and gets readily absorbed from intestine.
- Tannic acid constituent which is an astringent (coagulant) owes its action in the arrest of bleeding there by bringing down the symptom.

Pharmacological analysis:

Pharmacological studies of trial medicine showed significant laxative and significant styptic action in albino rats.
Gradation of clinical improvement:

The results were tabulated as very good, good and fair based on the improvement in the signs and symptoms of the patients.

Very good - Earlier arrest of bleeding per rectum

Complete relief from constipation

Relief from burning sensation around the anus

Feeling of well being.

Good - Complete relief from constipation, burning sensation around the anus.

Delayed arrest of bleeding per rectum.

Fair - Relief from constipation.

Delayed arrest of bleeding per rectum

Presence of burning sensation around the anus.

It is observed that 80% of Op cases and 70% of Ip cases showed very good clinical improvement. The results were good in 15% of Op cases and 20% of Ip cases. 5% of Op cases and 10% of Ip cases showed fair results.
Management:

“The treatment of a part should not be attempted
without treatment of the entirety”

- Plato.

Siddha system of medicine emphasis more on this there by treating
the whole in bringing down the vitiated humors.

“பின்னண்டு காதல் கருது”

Moola noi, basically a vatha disease occurs due to derangement of
Vatham and Pitham. All the patients were given the trial drug, “Moola
Rogangal Gunamaga Ennei”- 2.5ml twice daily. As the trial drug possess
laxative action this will pacify the vitiated vatha humor there by bringing
down the vitiated Pitham with its ingredients which has got ‘Pitha Samani’
action in itself. Further bleeding per rectum which is the chief complaint in
Raththa Moolam is arrested with its constituents that are analysed in
Biochemical analysis. This also owes its action in raising the Hb level there
by restoring the general health to normalcy.

The patients were advised to follow the Pathiyam. Further they were
instructed to avoid straining at defeacation. They were encouraged to
consume high fiber diet and advised to ingest a large amount of water.
SUMMARY

The clinical study on Raththa Moolam with reference to its aetiology, symptomatology, treatment and prognosis were carried out in Post Graduate Department of Maruthuvam, Government Siddha Medical College, Palayamkottai. 40 cases who fulfilled the criteria were selected. Out of which 20 patients were admitted in Inpatient ward and were treated and remaining 20 cases were treated as Out patients. Clinical and pathological assessment was carried out on the basis of both Siddha and Modern Aspect.

All the patients were treated with Moola Rogangal Gunamaga Ennei 2.5ml twice daily. The responses were assessed two days once for Out Patients and daily for In-patients. No untoward effects were observed clinically in any of the cases during the course of treatment. Patients were advised to follow pathiyam confined to trial drug and disease.

The results were found to be very good in almost every case. Bleeding was arrested in almost all the cases. Other symptoms like constipation, burning sensation, pruritus ani were also relieved. After the relief of symptoms, patients were advised to follow yogasana, pranayamam and pathiyam including life style modification to prevent relapse of disease.
Qualitative analysis of medicine showed the presence of calcium, chloride, ferrous iron, tannic acid, unsaturated compound, reducing sugar, amino acid which are active ingredients responsible for the action of trial medicine.

Pharmacological analysis showed significant laxative and styptic action of trial drug.

Most of the patients treated with trial medicine and who followed pathiyam with life style modifications showed good results.
CONCLUSION

Preclinical Studies Showed significant activity of the trial drug. The Clinical study done on Raththamoolam Patients with Moola Rogangal Gunamaga Ennei – 2.5ml twice daily confirmed the efficacy of the trial medicine, in controlling the bleeding and relief from the ailment. The treatment, further improved the function of abaanavayu, which regularises, the bowel habits.

Clinical Improvement was graded as

- Very Good  -  70% of cases
- Good       -  20% of cases
- Fair       -  10% cases

Siddha way of approach is certainly the best treatment for Raththamoolam in all aspects, as it could avoid surgical procedure.

Because of the encouraging results both preclinically and clinically, it was considered that treatment of Raththamoolam with Moola Rogangal Gunamaga Ennei will be very effective.

Qualitative analysis of medicine showed the presence of Calcium, Chloride, Ferrous Iron, Tannic Acid, Unsaturated Compound, Reducing Sugar and Amino acid, which are active ingredients responsible for the action of trial medicine.
Pharmacological analysis showed significant laxative and styptic action of trial drug.

Most of the patients treated with trial medicine and who followed pathiyam with life style modification showed good results.
ANNEXURE – I
PREPARATION AND PROPERTIES OF
TRIAL DRUG

Reference:

- மற்றும் செய்திகள், செய்திகள், குறிப்பிட்டு - 203.
 tamil

உள்ள பார்வைகளும் துடுப்பாட்டக்கலையில் 20 பாலம், சுருக்கியம் புருஷத்தான் 10
பாலம், பவளக்குறையார் 10 பாலம், குற்றதுமுருக்கு 10 பாலம், மோகனதின்குறையார்
10 பாலம் விளக்கும் ஆனார் கொன்றவர் முறையும் ½ பாலம் உண்மையான பார்வைகளில்
தலை கல்லூரியில் கொண்டுள்ள மூலம் பெற்றுள்ள கொழுவு, இல்லவை 1 பாலம் விளக்கும் கோட்டின் முகம்.

குறிப்பு விளக்கம்:

ஒன்று பாலம், இணைக்கபாலம், காலம், குற்றதுமுருக்கு, பண்டி செல்கம், சதுரபாலம்,
பாலிகுறையார்.

முதல் விளக்கமுமை:

பாலம், பாலம், பாலம் செல்கம், பாலிகுறையார், போன்.

இணைக்க விளங்குமை:

செல்கம், பாலம், பாலம், சுருக்கித் தாட்டம்.
PROPERTIES OF INGREDIENTS:

1. **Botanical Name** - Ricinus communis
2. **Synonyms** - Erandam, Chithram, Thalarubam
3. **English** - Castor oil plant
4. **Family** - Euphorbiaceae.
5. **Parts Used** - Oil, leaves, roots and seeds.
6. **Chemical constituents** - Ricinoleate of glycerol, palmitin, stearin & ricin.
7. **Action** - Laxative, Emollient
II. நாடியல்

1. Botanical Name - Citrus medica variety acida
2. Synonyms - Sambeeram
3. English - Acid lime
4. Family - Rutaceae
5. Parts Used - Fruits, its juice
6. Chemical Constituents - Citric acid, phosphoric and malic acids, also citrates of potassium
7. Taste - Pulippu
8. Thanmai - Veppam
9. Pirivu - Kaarppu
10. Actions - Refrigerent, Anti scorbutic

மாநிக்கல்

"நாடியல் கன்னியை கொண்டு சேகப்பைப் புரிகும்
இலங்கையிலே சாப்பை வழிபடும் - எகைக்கை இரா மாநிக்கல்
இலங்கையிலே சாப்பை வழிபடும் கொண்டு சேகப்பை வழிபடும்
எகைக்கை இரா மாநிக்கல் வழிபடும்."

- ராமணியா நந்தவர்ஜியம்.

பிரிக்கல்லுக்காக, குறைவிலைகளுக்காக, மரணவகைகளிலைகளுக்காக, சுத்தமகளை, பிறிச்சங்களை, மரங்களை, மரங்களின் பாண்டிகளை, அவ்விடைகளை வழிபடுத்தும்.
III.  இயற்கைக் கணப்பு

1. Botanical Name - Allium cepa
2. Synonyms - காய்ப்பொன்றி, ஒன்றி, மாக்கொன்றி,
               கொன்றி, பொன்றி, பொண்டலி,
               பொண்டலி, பொண்டலி.
3. English Name - Onion
4. Family - Liliaceae
5. Parts Used - Bulb
6. Chemical Constituents - Bulb contains an acrid volatile oil which
                            contains sulphur, essential oil & organic
                            sulphides.
7. Taste - Kaippu
8. Thanmai - Veppam
9. Pirivu - Kaarppu
10. Action - Stimulant, diuretic, expectorant,
        emmenagogue, rubefacient, demulcent,
        aphrodisiac.
IV. குண்ணுரை

1. Botanical Name - Aloe barbadensis
2. Synonyms - Kanni, Kumari
3. English - Indian aloes
4. Family - Liliaceae
5. Parts Used - Expressed and dried juice of leaves and pulp.
7. Taste - Kaippu
8. Thanmai - Thatppam
9. Pirivu - Inippu
10. Action - Tonic, alterative, purgative, emmenagogue
1. Botanical Name - Solanum nigrum
2. Synonyms - Manithakkali, Milaguthakkali, Ulagamatha, Kakamachi.
3. English - Black night shade
4. Family - Solanaceae
5. Parts Used - Leaf, Berry
6. Chemical Constituents - Solanine, saponin, solanidine.
7. Taste - Inippu
8. Thanmai - Thatppam
9. Pirivu - Inippu
10. Action - Alterative, sedative, diuretic, diaphoretic, expectorant.
VI. **Kulam:**

1. Botanical Name - Cuminum cyminum
2. Synonyms - Asai, Seeri, Ubakumbabeesam, Pitha naasini, Posanakudori.
3. English - Cuminseed
4. Family - Umbelliferae
5. Parts used - Fruit or seed, essential oil
6. Chemical constituents - Resin, fatty oil, mucilage, gum, thyme, cuminol, cymene, cymol.
7. Taste - Inippu, Kaarppu
8. Thanmai - Thatppam
9. Pirivu - Inippu
பார்த்தகத்தலம்:

"மரபாடியதை நோக்கில் பார்த்தால் மலர்ப்பட்டு சொன்னது
காமத் பிரம்மாயின் கல்லண்டோசின் - துந்தி மலர்
காரணங்கள் பல்பலவேண்டு என்றால் குறிப்பிட்டவும்
சந்தைத் துளைக்காத்திட.

- அசன்றி பழம்பெறவாம்.

மார்த்தகிகமும், பிறப்பும், பொறியியலும் சிறுமியர். எழுத்துக்கள் எழுதியவழை,
கூர்த்தாக குறிப்பிட்டவை கூடிய.
ANNEXURE II

BIO – CHEMICAL ANALYSIS OF

MOOLA ROGANAL GUNAMAGA ENNEI

PREPARATION OF THE EXTRACT:

5gm of choornam was weighed accurately and placed in a 250ml clean beaker. Then 50ml distilled water was added and dissolved well. Then it was boiled for 10mins. The contents were cooled and filtered in a 100ml volumetric flask and then it was made upto 100ml with distilled water. This fluid was taken for analysis.

Qualitative Analysis

<table>
<thead>
<tr>
<th>S. No</th>
<th>Experiment</th>
<th>Observation</th>
<th>Inference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>TEST FOR CALCIUM</td>
<td>A white precipitate is formed.</td>
<td>Indicates the presence of Calcium.</td>
</tr>
<tr>
<td></td>
<td>2ml of the above prepared extract is taken in a clean test tube. 2 ml of 4% ammonium oxalate solution is added to it.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>TEST FOR SULPHATE:</td>
<td>No white precipitate is formed.</td>
<td>Absence of Sulphate.</td>
</tr>
<tr>
<td></td>
<td>2ml of the extract is added to 5% barium chloride solution.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>TEST FOR CHLORIDE</td>
<td>A white precipitate is formed.</td>
<td>Indicates the presence of Chloride.</td>
</tr>
<tr>
<td></td>
<td>The extract is treated with silver nitrate solution.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. **TEST FOR CARBONATE**  
The substance is treated with concentrated HCL.  
No brisk effervescence is formed.  
Absence of Carbonate.

5. **TEST FOR STARCH**  
The extract is added with weak iodine solution.  
No blue colour is formed.  
Absence of Starch.

6. **TEST FOR IRON**  
**FERRIC:** The extract is treated with glacial acetic acid and potassium ferro cyanide.  
No blue colour is formed.  
Absence of Ferric Iron.

7. **TEST OF IRON:**  
**FERROUS:**  
The extract is treated with concentrated Nitric acid and ammonium thio cyanate.  
Blood red colour is formed.  
Indicates the presence of Ferrous Iron.

8. **TEST FOR PHOSPHATE**  
The extract is treated with ammonium molybdate and concentrated nitric acid.  
No Yellow precipitate is formed.  
Absence of Phosphate.

9. **TEST FOR ALBUMIN**  
The extract is treated with Esbach’s reagent.  
No yellow precipitate is formed.  
Absence of Albumin.

10. **TEST FOR TANNIC ACID**  
The extract is treated with ferric chloride.  
Blue black precipitate is formed.  
Presence of Tannic Acid.
| 11. | **TEST FOR UNSATURATION**  
Potassium permanganate solution is added to the extract. | It gets decolourised. | Indicate the Presence of Unsaturated Compound. |
| 12. | **TEST FOR THE REDUCING SUGAR**  
5ml of benedict’s qualitative solution is taken in a test tube and allowed to boil for 2 mts. Add 8-10 drops of the extract and again boil it for 2 mts. | Colour change occurs. | Presence of Reducing Sugar. |
| 13. | **TEST FOR AMINO ACID:**  
One or two drops of the extract is placed on a filter paper and dried well. After drying, 1% ninhydrin is sprayed over the same and dried it well. | Violet colour is formed. | Presence of Amino Acid |
ANNEXURE III

PHARMACOLOGICAL ANALYSIS

STUDY OF LAXATIVE ACTION ON RATS

Preparation of Drug:

2ml of test drug / 100gm body weight of the Rat was administered.

Procedure:

Six albino rats of uniform weight and size were selected and divided into 2 groups, each containing 3 rats. All the rats were fasted for 48 hours before the experiment. The first group was treated as control group. The control group received 2ml of distilled water orally. The second group was fed with the test drug Moola Rogangal Gunamaga Ennei at a dose of 2ml/100gm body weight.

One hour later, each animal of both groups were given 0.5ml of an aqueous suspension of 10% charcoal with acacia by oral administration. 1 hour after the administration of charcoal meal, the animals were sacrificed with chloroform.
The small intestine, from the pylorus up to caecum, was removed and the distance travelled by the charcoal from the pylorus was measured. This distance travelled by the carbon particle gives the extent of laxative action. The result was compared with that of the control group.

**Study of Laxative action by Charcoal Meal Method using the drug, Moola Rogangal Gunamaga Ennei**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of Drug</th>
<th>Dose / 100 gram body weight</th>
<th>Total Length of the intestine</th>
<th>Charcoal meal traveled up to</th>
<th>distance traveled (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Control (water)</td>
<td>2ml</td>
<td>100cm</td>
<td>75cm</td>
<td>75%</td>
</tr>
<tr>
<td>2</td>
<td>Moola Rogangal Gunamaga Ennei</td>
<td>2ml</td>
<td>98cm</td>
<td>85cm</td>
<td>86.7%</td>
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</table>

**Result:**

The drug, Moola Rogangal Gunamaga Ennei has got Significant Laxative action when compared with control.
PHARMACOLOGICAL ANALYSIS

STUDY OF STYPTIC ACTION ON RATS

Drug:
Moola Rogangal Gunamaga Ennei.

Procedure:

4 Albino rats were selected and divided into 2 groups, each consisting of male and female rats. They were anaesthetized with ether. The first group was treated with saline and kept as control. The abdomen was opened and the liver was located. A small portion from any lobe of the liver was cut off and pieces of blotting paper were used to remove the blood. The time taken for the bleeding to stop was noted. For the second group the ingredients that are included in Moola Rogangal Gunamaga Ennei were powdered and the choornam was applied to the cut wound until the bleeding stops. The time taken for the bleeding to stop was noted.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Drug</th>
<th>Bleeding time (in seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Control</td>
<td>4.55</td>
</tr>
<tr>
<td>2</td>
<td>Standard (vitamin K tablet)</td>
<td>2.55</td>
</tr>
<tr>
<td>3</td>
<td>Moola Rogangal Gunamaga Ennei</td>
<td>1.25</td>
</tr>
</tbody>
</table>

Result:

Moola Rogangal Gunamaga Ennei arrested the bleeding in 1.25 min. Compared to the standard it has got Significant Styptic action.
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Food habits
Evil doings

Suppression of reflexes
Increased Heat, cold climate exposure

Anger, Fear
Hereditary

Mukkutram Changes

Vatham
- Abaanan - Constipation, Bleeding per rectum
- Viyanan - Difficulty in carrying Out activities
- Samaanan - Vitiation of other Vayus loss of appetite
- Kirukaran - Anorexia
- Devadhathan - Sleeplessness

Pitham
- Anal pitham - Anorexia
- Ranjagam - Anaemia
- Prasagam - Pallor of skin

Kabam
- Avalambagam - Vitiation of other kabha types
- Kilethagam - Anorexia
- Saathagam - Difficulty in carrying Out activities
- Saaram - Anorexia
- Devadhathan - Sleeplessness

Udal Thathukkal Changes

Samaanan - Vitiation of other Vayus loss of appetite

Senneer - Decreased

Out activities

Anaemia

udal vanmai

Bleeding per rectum.

anaemia
Diagnosis (Envagai Thervugal)

Naa  | Niram  | Mozhi  | Vizhi  | Malam  | Moothiram  | Naadi  | Sparisam

Coated tongue | Normal | Constipation | Vatha Pitham | Pallor of tongue | Bleeding per rectum | Pitha Vatham | Pallor of skin | Pa llor of Conjunctiva | Neerkuri - Normal | Disturbance in vision | Neikuri – ring like | (Cataract) in aged | Aravil Aazhi, Aazhiyil Aravu | Normal
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<th>I.P. No.</th>
<th>Name</th>
<th>Age/Sex</th>
<th>Occupation</th>
<th>Duration of illness</th>
<th>Date of admission</th>
<th>Date of discharge</th>
<th>No. of days treated</th>
<th>Medicine</th>
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