

A STUDY ON RATHTHA MOOLAM

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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 20th century made rapid strides in eradicating various diseases through invention of various medicines. With constantly increasing population, diseases are also parallelly increasing day by day. In spite 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 (Sweet, 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, Sweetened, 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,

“கொல்லான் புலால் மறுத்தானை கைக்கூப்பி
எல்லா உயிரும் தொழும்.”

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,

“மிகினுங்குறையினும் நோய் செய்யும் ஞாலோர்
வளிமுதலா எண்ணிய மூன்று.”

- பாடல் எண்: 941, திருக்குறள்

According to Yugi Vaidhya Chinthamani, Raththa moolam is one among the twenty-one types of Moola Noi.

The word “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,

“தானென்ற மூலமதை சாற்றக்கேளு
சந்திரன்றன் மண்டலத்துக் கடுக்கவேறிக்

கோனென்ற பரசமொடு பர்வை திஷ்டி
கொடுத்தவனாம் மூலக்குண்டலியம்பாரே.”

“பாரப்பா குண்டலியும் வேறென்பான்

பதிவான சுழிமுனையை யறியமாட்டான்

ஆரப்பா பூரணகுண்டலியாமென்றும்

அண்டமென்றும் பிண்டமென்றும் மறியமாட்டான்

நேரப்பா பூரணமங் கலைநாலாகி

நிஷ்டையொடு சமாதரிஷ்ட களமுமாகிக்

காரப்பா வழமதை யுண்டுதேறிக்

கருத்துடனே சிவயோகங் கண்டுகொள்ளே.”

- பாடல் எண்: 7,8, பக்கம்: 183, யோகஞானம் - 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,

- * Abaanan
- * 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, eruvaai. 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 Guhu. 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,

“தேறவென்றால் குகுவென்று நரம்பு தானும்
செயலாக முன்சொன்ன முக்கோணில் நின்று
கோணாகும் அங்கு நின்று நரர் போலே
கொடுமையடா அந்நரம்பு மேல்போட்டாக
அபானத்தில் முன்னாளவாய் அங்கே நிர்க்கும்
காருதிகம் உளப்பை நரம்பிதாமே
தானென்ற நரம்பெல்லாம் இசைவாக
துண்டு போல் தேகத்துள்ளே
அன்மது உண்பதற்கும் தெகிப்பதற்கும்.”

- பாடல்: 18, பக்கம்: 32, தேரையர் நரம்பு சூத்திரம் - 150

CONTROL BY NARAMBU:

In Therayar nambu soothiram, nine narambugal are held responsible for deglutination, digestion, absorption and defaecation. Out of these one nambu is solely responsible for the purpose of visarkkam. This nambu divides into four branches in the moolaathaaram and supplies large intestine, urinary bladder, Spleen (kaariral), Uterus (pavalappai), Lungs (suvaasapai).

This narambu in association with other thathuvams such as, ten vaayus carries the act of Visarkkam. It is mentioned in the following verse,

“காணும் முப்பத்திரண்டு முழும் குடலை தானும்
மூலாதாரத்தில் இதழென்றாய் நாலும் சென்று
சேறான ஓரிதழ்தான் சுக்கிலத்தில் சென்று
சென்று மலசலாதினை தள்ளிப் போடும்
பொறியான மூன்றிதழும் பலளப்பையில்
சேர்ந்து முதுக்கிணையது போல இரைகள் சூழ்ந்து
கொண்டாடி அங்கிருக்கும் இதழ் மூன்றாலே
ஓன்றான குடல் நரம்பு திரளாய் நின்று
ஊக்கமுள்ள காரீரல் தன்னில் தாமரை
நூல் வளையம் போல் மோதி நிர்க்கும்
நிர்க்குமந்த நரம்பதுவும் சுவாசப் பையில்
தண்டதுக்கும் உறவாச்சு மலத்தைப் போக்கும்
பேரான தசவாயுவின் பெலத்தாலே
இழுத்துத் தள்ளாமடா மலத்தைத் தானே.”

- பாடல் எண்: 20, பக்கம்: 34, தேரையர் நரம்பு சூத்திரம் - 150

MOOLA NOI:

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,

“மூலமென் றறைந்தசொல் முதன்மை யானது
போலநோ யாதினும் புனைந்த தேப்பிணி
யாலமக ம.ததை யறிந்த தற்குநேர்
சீலமக மலிழ்தமுஞ் செய்த லாண்மையே.”

- பக்கம்: 247, தேரையர்சேகரப்பா.

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

“சனிப்பான மூலத்தின் பெயரே தென்றால்
சமரசமாம் நீர்மூலஞ் செண்டு மூலம்
முனிப்பான முளை மூலம் சிற்று மூலம்
மூர்க்கமாம் வறண்மூலம் ரத்தமூலம்

திணிப்பான சீமூலம் ஆழி மூலம்
 திணியான தமரகமர மூலத்தோடு
 வனிப்பான வாதமொடு பித்த மூலம்
 வகையான சேட்டுமத்தின் மூலமாமே.
 வகையாகுந் தொந்தமர மூலத்தோடு
 வளர்கின்ற வினைமூலம் மேகமூலம்
 பகையாகும் பவுத்திரமர மூலத்தோடு
 படர்கிரந்தி மூலமொடு குதயாமூலம்
 புகையாகும் புறமூலஞ் சுருக்குமூலம்
 பொருகின்ற சவ்வாகு மூலத்தோடு
 துகையாகு மூலந்தானிருபத் தொன்றும்
 சூட்சமர யிதனுடைய சுருபங்கேளே.”

- பக்கம்: 141, யூகி வைத்திய சிந்தாமணி

21 types are

- | | | |
|--------------------------|---------------------|-----------------------|
| 1. Neer Moolam | 8. Aazhi Moolam | 15. Mega Moolam |
| 2. Chendu Moolam | 9. Thamaraga Moolam | 16. Pavutthira Moolam |
| 3. Mulai Moolam | 10. Vali Moolam | 17. Granthi Moolam |
| 4. Siru Moolam | 11. Azhal Moolam | 18. Kutha Moolam |
| 5. Varal Moolam | 12. Iiya Moolam | 19. Pura Moolam |
| 6. Raththa Moolam | 13. Thontha Moolam | 20. Churukku Moolam |
| 7. Seezh Moolam | 14. Vinai Moolam | 21. Chavvu Moolam |

Of this, nine are Asaathiyam (Incurable) and twelve are Saathiyam (Curable). Raththa moolam is included one among the curable moola noi.

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

“முதலாமொன்று வாதமர முனிந்தவிரண்டு பித்தமர
மிதமரமுன்று சேத்துமத் தினிதுவுமின்றி நூலாகும்
பதமரம்வாத சேத்துமத்திற் பண்ணுமைந்து விரத்தத்தில்
பித்தமரம் வாய்விலுண்டாகும் பெருத்தமூல மறுவகையே”

- பாடல் எண்: 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.

“உண்மூலம் வகைரண்டாக முயர்ந்த வானில் வலப்புறத்தி
லுண்மூலம் பெண்ணதாகி லுகந்தவிடது புறத்ததுதர”

- பாடல் எண் 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. Silethuma 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 |
| 3. Raththa Moolam | 8. Azhal Moolam |
| 4. Seezh Moolam | 9. Iiya 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]:

“காண்ப்பா வாயுவாலுங் கனத்தந்த வபானன்றன்னைப்
பூண்ப்பா மலத்தைக் கட்டிப் புகையெனக் கறுக்கிநாளுந்
தோண்ப்பா முளையைப் போலச் சுருக்கி முன் மலந்தான் வீழல்
ஆண்ப்பா வபானந்தன்னை அழுத்தவே யிறுக்கும் பாரே.”

- பாடல் எண்: 45, பக்கம்: 26, சித்த மருத்துவம்

“மூலமெழுந்திடில் முன்னே பசி போகும்
மூலமெழுந்திடில் முன்னே முளைவிந்து நாசமாம்
மூலமெழுந்திடில் முன்னே முழங்கு மிரைச்சல் தான்
மூலமெழுந்திடில் முன்னே முகியாக் கழிச்சலே.”

- பாடல் எண்: 74, பக்கம்: 13, திருமூலர் கருக்கிடை வைத்தியம் - 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):

“மலமிறுகித் தழைமேயுஞ் சுவேத மையின்
வகைமையெனக் குழற்கடைத்த தாமரைபோல்
பலமிதமர யொருவேளை யபானஞ் சுற்றிப்
பதும முகிழ் விரியமைதிப் பிரசம் போலச்
சலசலெனப் பொசி குருதித் தில்லை பொங்கத்
தள்ளாடி வசமழியத் தளர்வுண்டாக்கி
நிலவரமற் றிடவஞரை யுஞற்று மையா
நீசத்துவ மூலகுண நிலைமை தானே”

- பாடல் எண்: 255, பக்கம்: 246, தேரையர் சேகரப்பா

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**,

“மலத்தை இறுக்கி மந்தித்து வறண்டே இரத்தம் மலத்தில் விழும்
மூலத்தில் வருவது ண்மையிது வுடனே வயிறும் வலித்திருக்குந்
தலத்தில் கரணாதுள் மூலந் தசையா துளக்கிய பானத்துள்
மலத்தை குறைக்கும் வியாதியெனப் பெரியோர் சொன்ன முறைமையிதே”

Constipation, bleeding associated with indigestion, passage of stools
with severe unbearable pain and deterioration of general health.

“கொடியபொல் லாதமூல குணத்தை

யென் சொல்வேன் பாந்த

ளிடியினி லொடுங்க மாரே

யெவரையுங் கசங்கச் செய்து

குடிகெடு மாறு செய்யுங்

கொண்டவ ராயுட் கெய்து

முடிவத னாலே பெயன்று

மொழிந்தனர் தழைந்த ஞாலோர்”

- பாடல் எண்: 256, பக்கம்: 247, தேரையர் சேகரப்பா

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 Chinthamani.**”

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 Chinthamani,**

“தத்தையா மதிகமங் குளிரினாலும்

தரியாத வழற்சிவாற் கிரந்தியாலும்

புத்தையாம் பொருந்தாத உஷ்ணத்தாலும்

புணர்ச்சியாற் கோபத்தாற் சலிப்பினாலும்

கத்தையாம் வெகுகாரம் வேண்டலாலும்
 கடினமா முப்பாலும் காரத்தாலும்
 மொத்தையாம் வெகுதனங்கள் போனதாலும்
 மூலம்வந்துற் பத்திமுளையுந் தானே”
 “முனையாக மூத்தோரை வைதலாலும்
 மோசங்கள் பண்ணியே கற்பழித்தும்
 நினையாக நினைவிலொன்று வாக்கிலொன்றும்
 நேர்ந்தபடி சொல்லுகின்ற நிட்டுரைக்கும்
 பனையாகப் பரதேசி பந்து வானோர்
 பசித்திருக்க உண்டதோர் பாதகர்க்கும்
 தனையாகச் சமாதானந் தவிர்க்கின்றோர்க்கும்
 சண்டாளமூலம் வந்து சனிக்குந் தானே”

- பக்கம்:140, 141.

- * 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**

“காயத்தில் மூலரோகங் கண்டிடும் விதங்கள் கேளாய்
பாயொத்த பசியில்லாமை பட்டினிகிடக்கில் வாய்வு
மாயத்தி லிருத்திக் கொண்டு மலவறை யடக்கும்போது
ஓயத்த குண்டலிக்கு ளுட்புகும் வாயுதானே”

- 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,**

“நீங்காத மூலரோய் கன்மத்தாலே
நிலைகெட்ட அபானத்தில் நெருப்போமீறி
வாக்காலே யபானத்தின் வாசல் தன்னில்
வந்து முளைமேகத்தால் சூட்டால் காணும்
தாக்கோ வாலடைத் தாற்போல் வாயுநின்று
தன்மையுள்ள மலமதனை வரட்டித் தீய்ந்துப்
பேய்க்கோலம் பண்ணுமடா மூல ரோகம்
புலத்தியனே பழவினைகளி ன்னங்கேளே.”

- 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**,

“மூலமுயிறைச்சி தானு முதிரவே தின்கையாலும்

பாலுடனினிய கண்டில் பரந்துடன் தின்கையாலுஞ்

சாலநெய் புசிக்கையாலுந் தையலர் வேட்கையாலு

மாலகேர் விழியினாளே ஆகிய வறட்சியாமே”

“வேகமந் திரவியங்கள் மிகுகையால் நவற்கையாலும்

சாகமநங் கொம்மட்டிக்காய் தான வருண்கையாலுங்

காகிய பன்றி மாக்கிஷம் கடுந்தினி துண்கையாலும்

நீதியிற்றறியா தோங்கி நிரந்தர மிகுகையாலு

போதிய பகற்கண் தூங்கி யுயர்ந்திடு மூலந்தானே”

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,

“அனில பித்த தொந்தமலரது மூலம் வரரது.”

- தேரையர் சேகரப்பா.

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 pittham, 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 Raththa 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 out growth 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 Nokkukaal)

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.

Abaanan	Samaanan	Viyaanan
Constipation, Splashing of blood during defaecation	Loss of appetite	Feeling of Weakness in limbs

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.

Anal Pitham	Ranjagam	Praasagam	Saathagam
Loss of appetite	Anaemia	Pallor of skin	Giddiness & emaciation

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. Moolaaakkini 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,

“காயத்தில் மூலம் கண்ட விதங்கேளு
பாயொத்த தீபனம் பரிந்தே யடக்கினும்
மாயை மயக்க மலத்தை யடக்கினும்
ஓயற்ற குண்டலிக்குள் புகும்வாயுவே
வாயு புகுந்து மலத்தோட பானத்தை
தேயுவைக் கூட்டித் திரட்டி சுருக்கிடும்
தேயும் மலம் வரின் சுருக்கி முன்னே
நின்றேயு முளைபோ லபான னிருக்குமே
இருக்குஞ் சிலமூல மெழு மண்டலம் போல
மறுக்கரணம் கொண்டு வருஞ்சில மூலம்
உறுக்கிய வாயுவா லுதிரமும் தான் கூடித்
தறுக்கி விழுக்காட்டும் தான் ரெத்த மூலமே”

- பாடல் எண்: 71-73, பக்கம்: 13, திருமூலர் கருக்கிடை வைத்தியம் - 600

Agasthiyar Gunnavaagada Thirattu, Pathinen Siddhar Arulichaita Naadi, Aathma 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 Chinthamani** the clinical features are,

“சேதியாய் தொப்புள்தன்னில் வலித்து நொந்து
சிறுகதிர்போற் பீறிட்டு ரத்தம் வீழும்
மேதியாய் மேனிவற்றி வெளுத்துப் போகும்
மிகக்கைகக லசந்துமே சோகை யாகும்
மாதியாய் மர்பிளக்குந் தலைநோ வுண்டாம்
மயக்கந்தான் மிகுதியாய் தள்ளிப் போகும்
நாதியாய்க் கண்ணிரண்டு மஞ்சள் போலாம்
நலியும் ரத்த மூலத்தின் பண்புதானே.”

- பக்கம்: 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**,

”தானான ரத்தமூலம் சொல்லக்கேளு
தனியான உள்மூலந் தன்னில் நின்று
தேனாக வருகின்ற ரத்தமப்பா
தெளிவாக நாளத்தில் நின்று தானும்
ஊனான நாடிதனில் இருந்து எழும்
உள்படி தோன்றுமடா ரத்தந் தானும்
மானான இதுதீர வகையைக் கேளு
மக்களுக்கு சொல்லுகிறேன் மகிழ்ந்து கேளே
கேளடா ரத்தந்தான் நிதமா யப்பா
கெணிதமுடன் நாள்தோறும் கண்டாலுந் தான்
நாளடா துர்ப்பலமா யிருந்தாலுந் தான்
நலமான தலைவலியு மடைந்தாலுந் தான்.....”

- பாடல் எண்: 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 gets 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,

“இருக்கும் சிலமூல மெழு மண்டலம் போல
மறுக் கரணங்கெண்டு வளருஞ் சிலமூலம்
முறுக்கிய வாயுவால் உதிரந்தான் கூட்டித்
தறுக்கி விழக் காட்டுந்தான் ரத்தமூலமே.”

- பக்கம்: 116.

- * 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,

“தொப்புளும் வலித்து நொந்து துலங்கிட விரத்தம் வீழ்ந்து
அப்பொழுது தந்தமூல மறியவே வெளியில் தள்ளுந்
தப்பரு மேனிவற்றித் தளர்வுடன் துயரந் தேன்று
மிப்படி குணவிரத்த மூலமென் றியம்பலாமே.”

- பக்கம்: 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,

“எச்சவாய்க்குள் தானரிக்கு மிதற்குமுரித்தான் மலமிரத்தம்
வச்சகூட்டில் வீழாமகிழ்ந்தே நரம்பு தான்சிறந்து
அச்சமறவே ரத்தவிழு மதுவரங் குறிகளடவன்றி
நிச்சமுனிவர் மானிடர்க்கு நிகழ்த்துங் குறிகளிதுவாமே.”

- பாடல் எண்: 631, பக்கம்: 153.

- * 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 MURAIMAI (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,

“தரென்ற வரதமது கேரழிபேரல
சரவலைப் பேரல் பித்தமது தரண்டுமரகில்
கேரென்ற வரதபித்த தெரந்திப்பாகும்.”

- 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,

“வரதமெனும் நரடியது தேரன்றில்
சீதமந்தமெரடு வயிறுபெரமல் திரட்சிவரய்வு
சீதமுறுங்கிரரணி மகேதரம் நீரரமை
திரள்வரய்வு சூலை வலி கடுப்புத்தீரை
நீதமுறுங்கி ருமிசூன்மம் அண்டவரதம்
நிலையும் நீர்க்கிரிச்சரங்கள் தந்துமேகம்
பேதகமர முதரபிணி மூலரேரகம்
பேசவெகு பிணிகளுமே பெரருளதரமே.”

- பக்கம்: 164.

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

“மூவருமுரத்து நின்றால் முதிர்ந்திடுங் கழல்வாதங்கள்
மூவருமந்தமாளால் முளைத்திடு மூலமெல்லாம்
மூவரும்பதுங்கி நின்றால் முடிவதுதிண் ணங்கண்டாய்
மூவருந்தன் தன்காலந் துடித்திடில் வாமுலாமே.”

- பக்கம்: 384

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

“வண்ணமுடன் பித்தத்தில் வாதம் வந்தால்
வருமாறு பீனங்கள் மண்டைக் குத்து
கண்ணுமடா பவுத்திரங்க ளரையாப்புண்டாந்
தப்பாது நவமூலஞ் சாருந் தானே.”

- 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,

“காந்தலுண்டாம் பித்தமென்று வாதங் காலாம்
கதித்தெழுந்த நாடியடா அம்மை போல குண்ணும்
வாந்தியுண்டாம் மந்திக்கு வயிறெரிப்பு
வளமாக சுரங்காணும் கண்ணும் காந்தும்
ஊர்ந்துவிடும் பாண்டாகு மசனத்தில்
உற்றதோர் மூலமாம் புண்ணுமகும்.”

- 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.

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

Theerum Theera Nilai (Prognosis):

If there is definite cure (saathiyam), 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 Chinthamani, 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 derangement of Kabham makes the prognosis better.

NOI KANIPPU VIVAATHAM (DIFFERENTIAL DIAGNOSIS):

Raththa moolam should not be confused with other types of Moolanoi 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 Chinthamani

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 KURUTHIAZHAI 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):

“மூலஞ்சேர் கறிநுகரோம் மூத்ததயிர் உண்போம்
முதனாளிற் சமைத்தகறி யமுதெனினு மருந்தோம்
ஞாலந்தான் வந்திடினும் பசித்தொழிய வுண்ணோம்
நுமனர்க்கிங் கேதுகவை நாமிருக்கு மிடத்தே

.....

மண்பரவு கிழங்குகளிற் கருணையன்றிப் புசியோம்
வாழையிளம் பிஞ்சொழியக் கனியருந்தல் செய்யோம்
நுண்புபெற வுண்டபின்பு குறுநடையுங் கொள்வோம்
நுமனர்க்கிங் கேதுகவை நாமிருக்கு மிடத்தே.”

- பக்கம்: 288, சித்த மருத்துவாங்கச் சுருக்கம்.

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,

“இருமலங்கள் தங்கா திறங்குங்கால் மூன்றாம்
இருமலங்கள் தங்கள்நிலை யெய்தும் - இருமச்
சமனாக் கிண்சாரும் சாராநேர யீட்டம்
சமனாக் கிண்சாரா தாம்.”

- பக்கம்: 210, சித்த மருத்துவாங்கச் சுருக்கம்.

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.

“பத்தியத்தி னாலே பலனுண்டா கும்மருந்து
பத்தியங்கள் பேரனாற் பலன் பேரகும் - பத்தியத்திற்
பத்தியமே வெற்றிதரும் பண்டிதருக் காதலினாற்
பத்தியமே யுத்தியென்று பாள்.”

- பக்கம்:159, தேரையர் வெண்பா.

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 **Pathaartha Guna Chinthamani**,

- * 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 (L_{1,2}) and parasympathetic (S_{2,3,4}) nerves through the superior rectal (Inferior mesenteric) and inferior hypo gastric 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 dialation 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 pudental 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 pudental 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 ends 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 consists 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 dilatations 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, diarrhoea, 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** – Haemorrhoids, 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 haemorrhoid 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:

Male	Female
Recto-vesical pouch	Pouch of Douglas
Base of bladder	Vagina
Seminal vesicles	Cervix
Vas deferens	Urogenital diaphragm
Prostate	Perineal body
Bulb of penis	

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 complains 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. Anal 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 occurs as the venous return becomes impeded and strangulation occurs. Strangulation is associated with considerable pain and it is often called 'acute attack of piles'.

*** 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 defeaction 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 post graduate 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 umbilicus
- * 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.Colonosopic 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”.

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
- Mukku-trangal
- Udal thaathukkal
- Envagai thervugal
- Neikuri

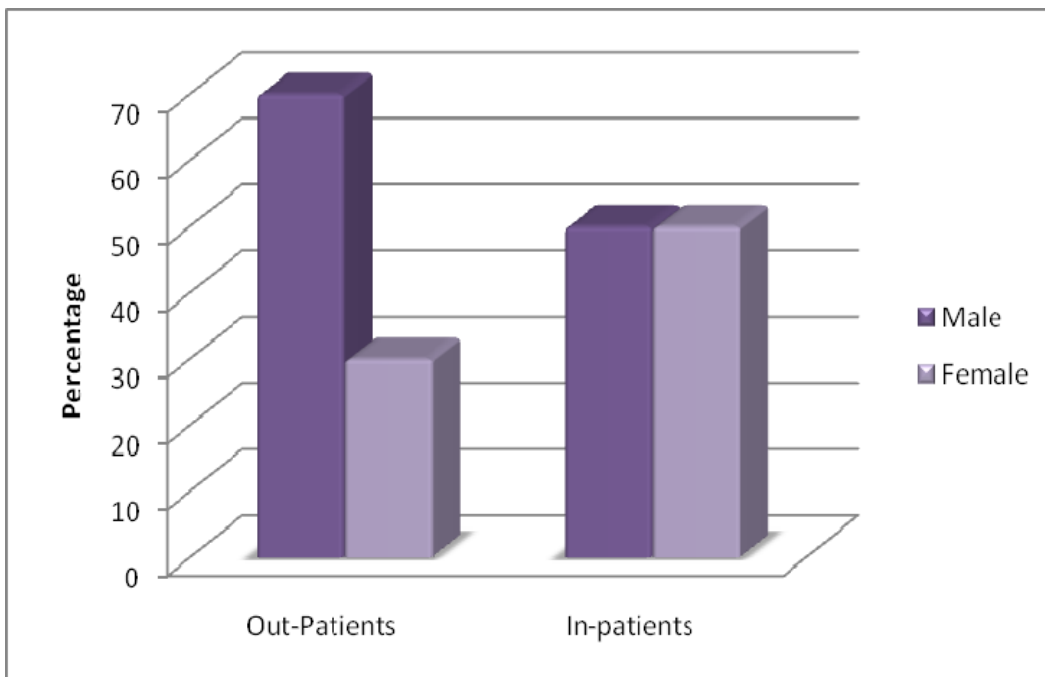
- Changes in Malam
- Position of the pile mass
- Arrest of bleeding
- Duration of Treatment
- Improvement in Haemoglobin level
- Gradation of Clinical improvement.

1. Distribution among Sex

Table 1

S. No	Sex	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-patients
1	Male	14	10	70	50
2	Female	6	10	30	50

From the table it is clear that the incidence is more in males compared to females.



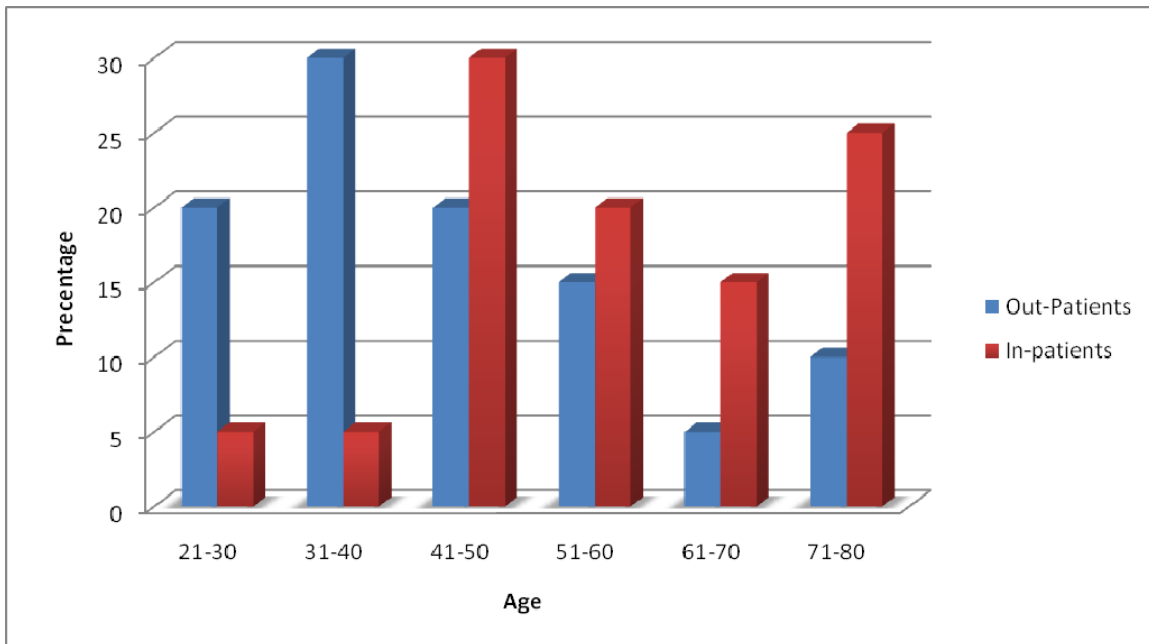
Distribution among Sex

2. Distribution among Age

Table 2

S. No	Age	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-patients
1	21-30	4	1	20	5
2	31-40	6	1	30	5
3	41-50	4	6	20	30
4	51-60	3	4	15	20
5	61-70	1	3	5	15
6	71-80	2	5	10	25

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



Distribution among Age

3. Religion:

Table – 3

S. No	Religion	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Hindu	15	17	75	85
2	Muslim	3	1	15	5
3	Christian	2	2	10	10

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

4. Thinai:

Table – 4

S. No	Thinai	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Kurinchi	-	-	-	-
2	Mullai	-	-	-	-
3	Marudham	16	18	80	90
4	Neithal	4	2	20	10
5	Paalai	-	-	-	-

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

S. No	Paruva kaalam	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Kaar kaalam	-	1	-	5
2	Koothir kaalam	4	2	20	10
3	Munpani kaalam	3	1	15	5
4	Pinpani kaalam	12	12	60	60
5	Elavenir kaalam	1	4	5	20
6	Mudhu Venir kaalam	-	-	-	-

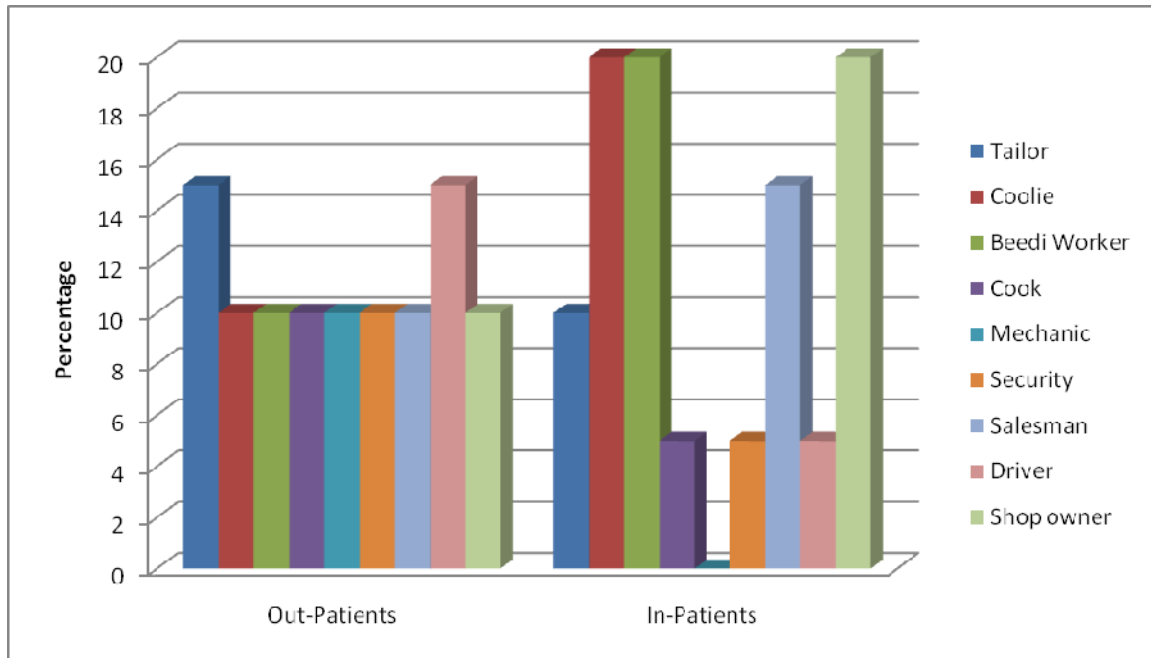
In 60% of OP and IP cases the disease gets aggravated during Pinpani kaalam.

6. Distribution among occupation:

Table – 6

S. No	Occupation	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Tailor	3	2	15	10
2	Coolie	2	4	10	20
3	Beedi Worker	2	4	10	20
4	Cook	2	1	10	5
5	Mechanic	2	-	10	-
6	Security	2	1	10	5
7	Salesman	2	3	10	15
8	Driver	3	1	15	5
9	Shop owner	2	4	10	20

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

S. No	Socio – economic status	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Lower class	11	12	55	60
2	Middle class	9	8	45	40
3	Upper class	-	-	-	-

Table shows the higher incidence of Raththa Moolam among the people belonging to poor socio-economic status.

8. Distribution among family history:

Table – 8

S. No	Family history	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Positive	6	7	30	35
2	Negative	14	13	70	65

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:

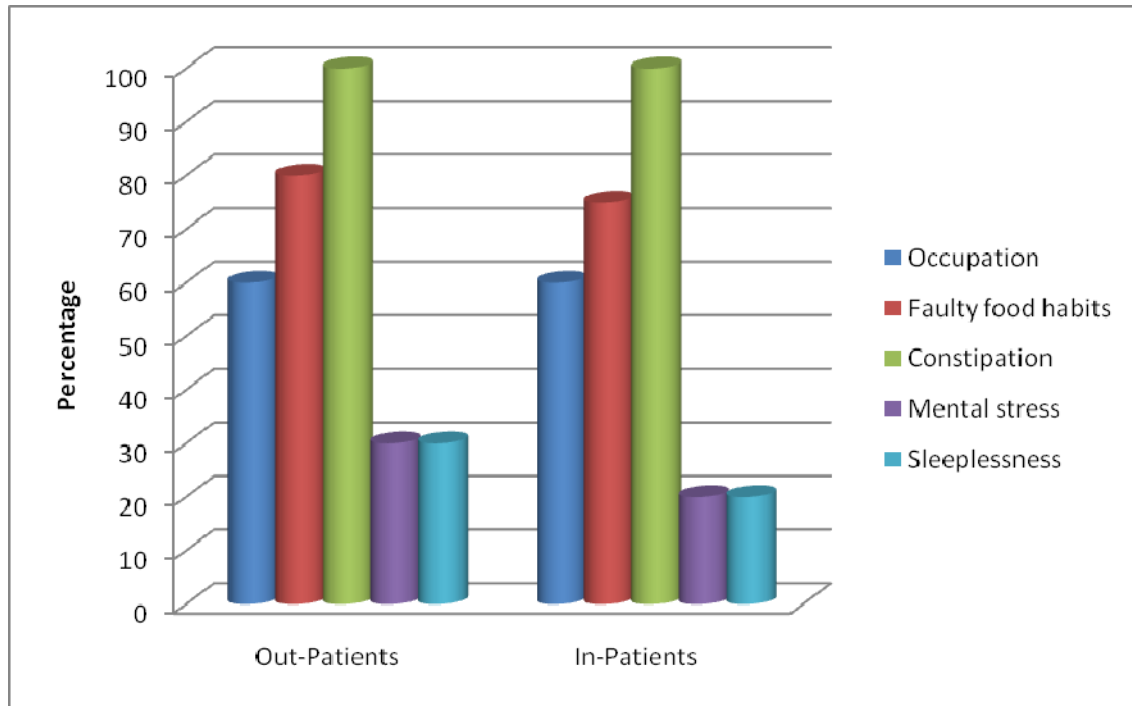
Table – 9

S. No	Precipitating Factors	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Occupation (sedentary work)	12	12	60	60
2	Faulty food habits	16	15	80	75
3	Constipation	20	20	100	100
4	Mental stress	6	4	30	20
5	Sleeplessness	6	4	30	20

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

S. No	Duration of Illness	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	7 days – 15 days	12	5	60	25
2	15 days – 1 month	8	10	40	50
3	1 month – 6 months	-	4	-	20
4	6 months – 1 year	-	1	-	5
5	1 year – 5 years	-	-	-	-

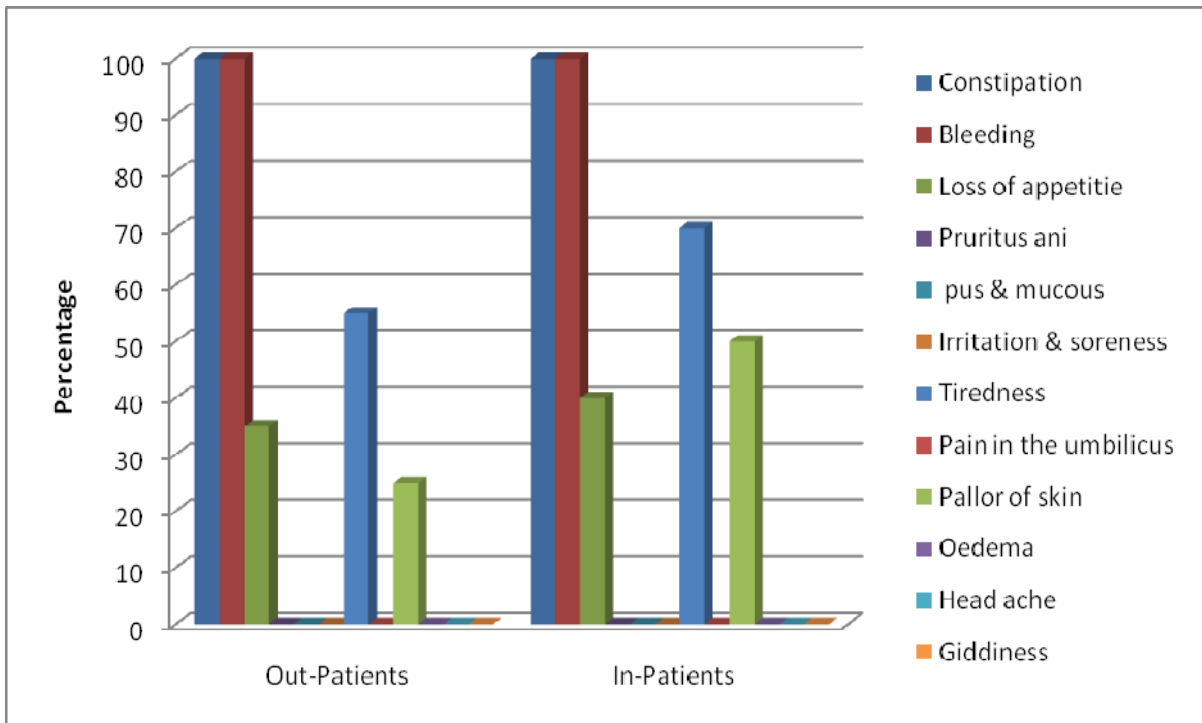
60% of OP cases and 25% of IP cases were having the complaints which ranges from 7 days – 15 days. In IP cases 20% of the cases were having the complaints that ranges from 1 month – 6 months.

11. Clinical Features:

Table – 11

S. No	Clinical Features	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Constipation	20	20	100	100
2	Bleeding per rectum after defaecation	20	20	100	100
3	Loss of appetite	7	8	35	40
4	Pruritus ani	-	-	-	-
5	Discharge of pus & mucous	-	-	-	-
6	Irritation & soreness after defaecation	-	-	-	-
7	Tiredness	11	14	55	70
8	Pain in the umbilicus	-	-	-	-
9	Pallor of skin	5	10	25	50
10	Oedema	-	-	-	-
11	Head ache	-	-	-	-
12	Giddiness	-	-	-	-

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:

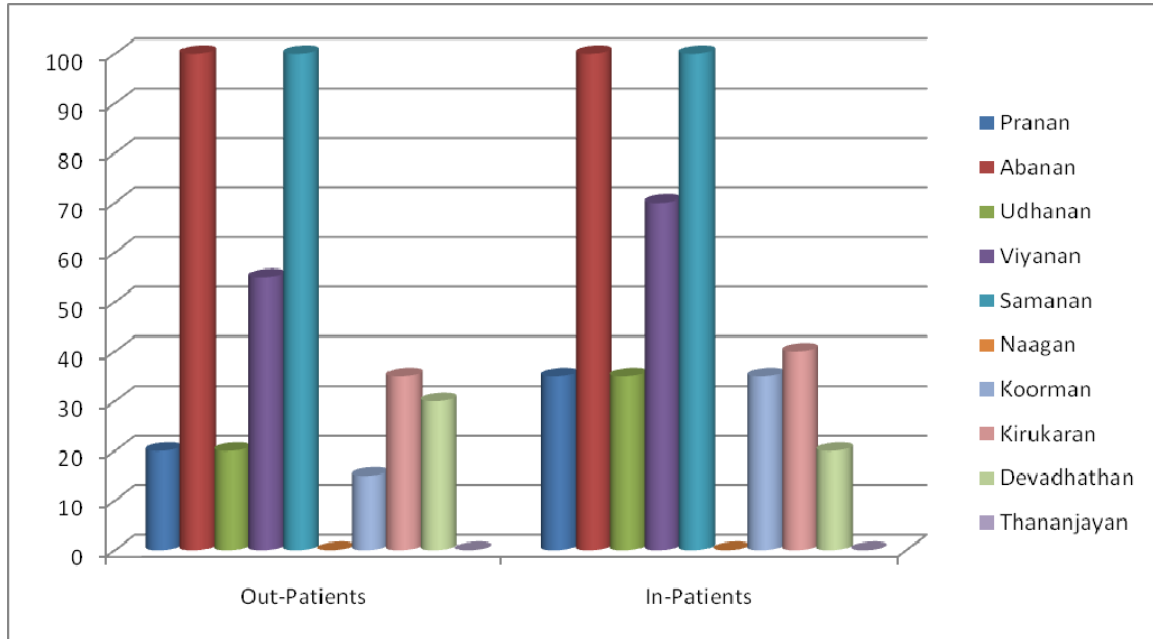
a. Vatham:

Table – a

S. No	Vatham	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Praanan	4	7	20	35
2	Abaanan	20	20	100	100
3	Udhaanan	4	7	20	35
4	Viyaanan	11	14	55	70
5	Samaanan	20	20	100	100
6	Naagan	-	-	-	-
7	Koorman	3	5	15	35
8	Kirukaran	7	8	35	40
9	Devadhathan	6	4	30	20
10	Thananjayan	-	-	-	-

In 100% of OP and IP cases Abaanan 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. Devadhathan was affected in 30% OP cases and 20% of IP cases leading to anger, sleeplessness.



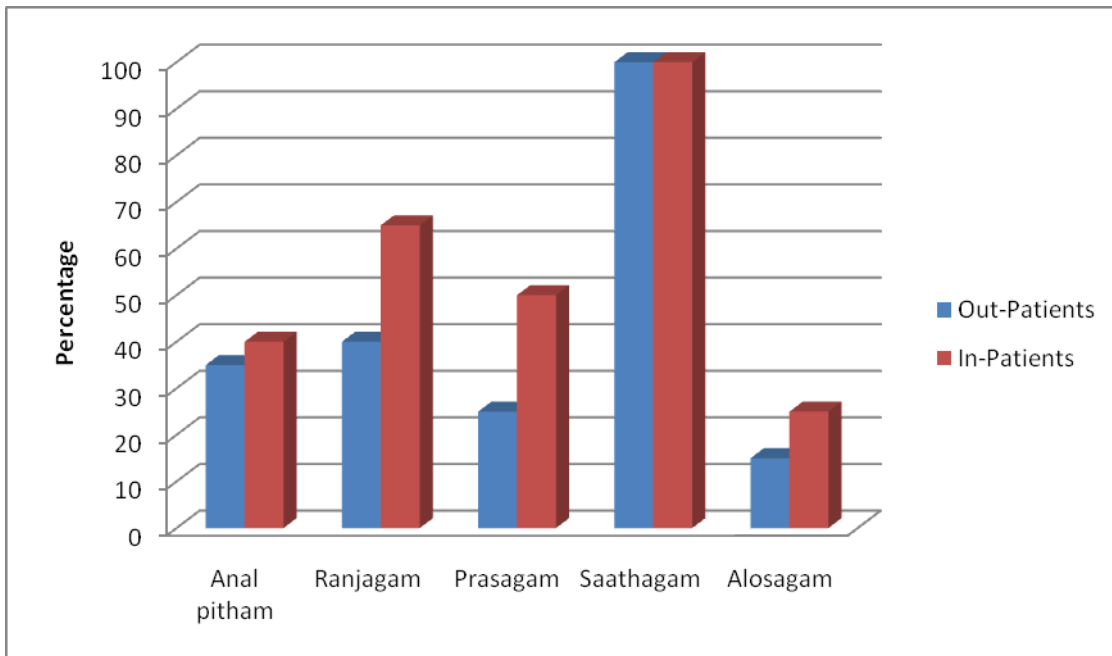
Disturbances in Vatham

b. Pitham

Table – b

S. No	Pitham	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Anal pitham	7	8	35	40
2	Ranjagam	8	13	40	65
3	Prasagam	5	10	25	50
4	Saathagam	20	20	100	100
5	Aalosagam	3	5	15	25

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.



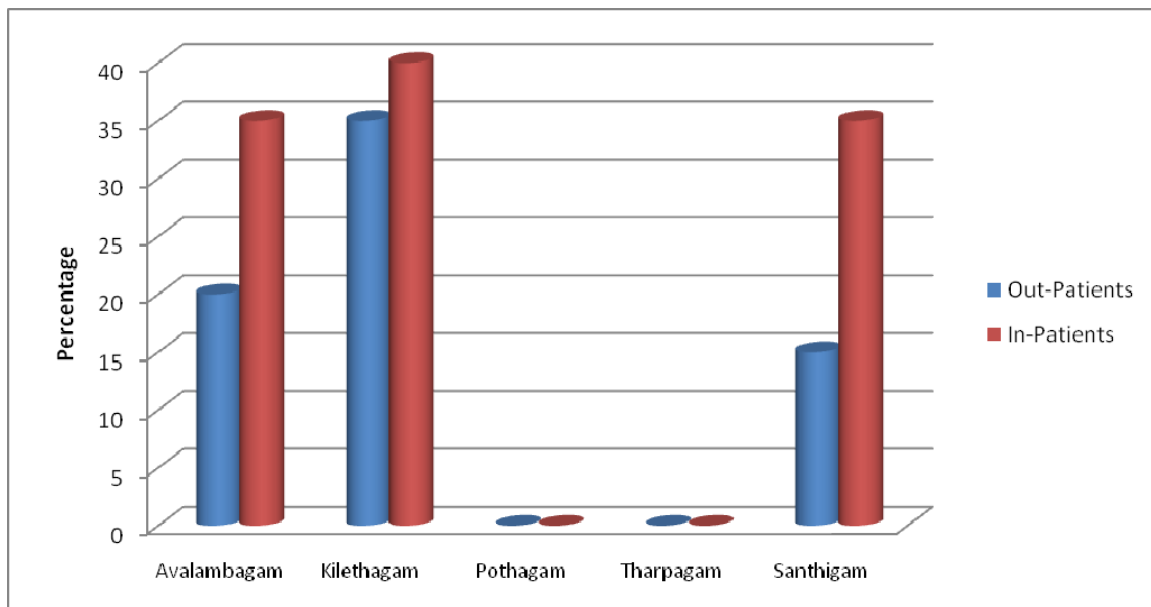
Disturbances in Pitham

c. Kabham:

Table – c

S. No	Kabham	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Avalambagam	4	7	20	35
2	Kilethagam	7	8	35	40
3	Pothagam	-	-	-	-
4	Tharpagam	-	-	-	-
5	Santhigam	3	7	15	35

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.



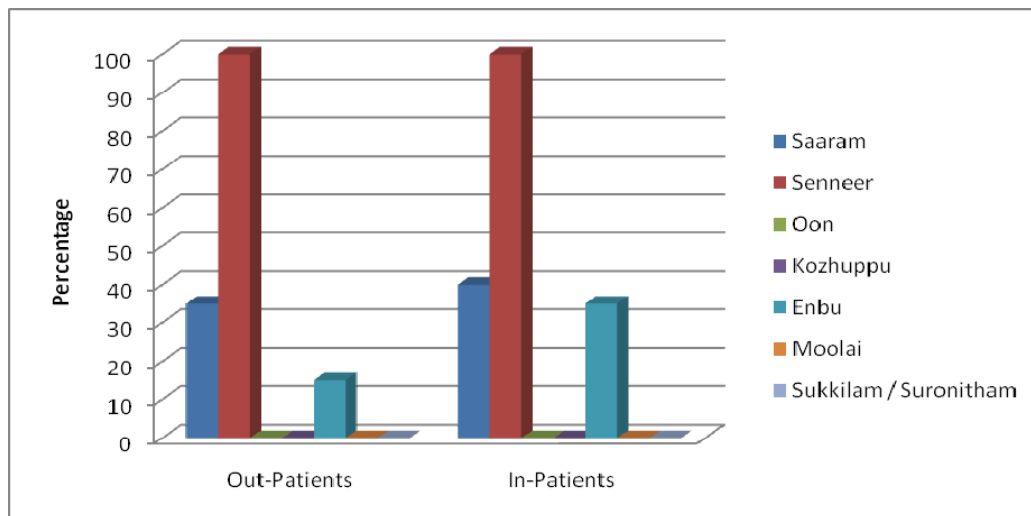
Disturbances in Kabham

13. Ezhu Udal Thathukkal

Table – 13

S. No	Udal Thathukkal	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Saaram	7	8	35	40
2	Senneer	20	20	100	100
3	Oon	-	-	-	-
4	Kozhuppu	-	-	-	-
5	Enbu	3	7	15	35
6	Moolai	-	-	-	-
7	Sukkilam / Suronitham	-	-	-	-

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.



Ezhu Udal Thathukkal

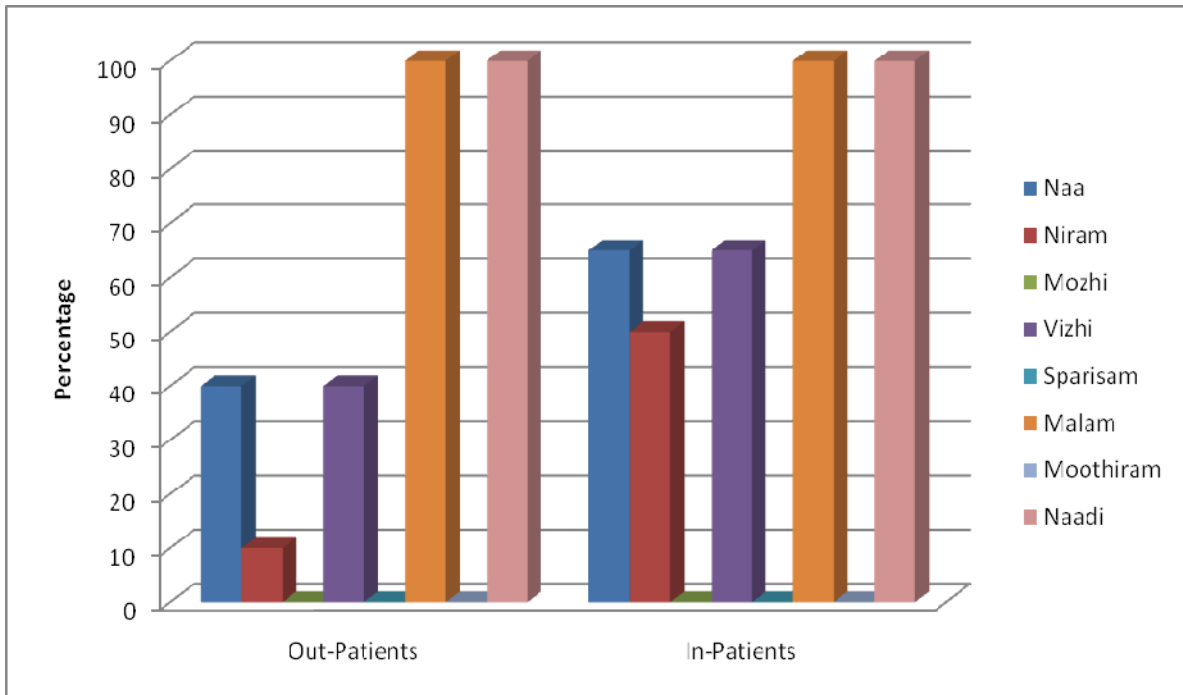
14. Envagai Thervugal:

Table – 14

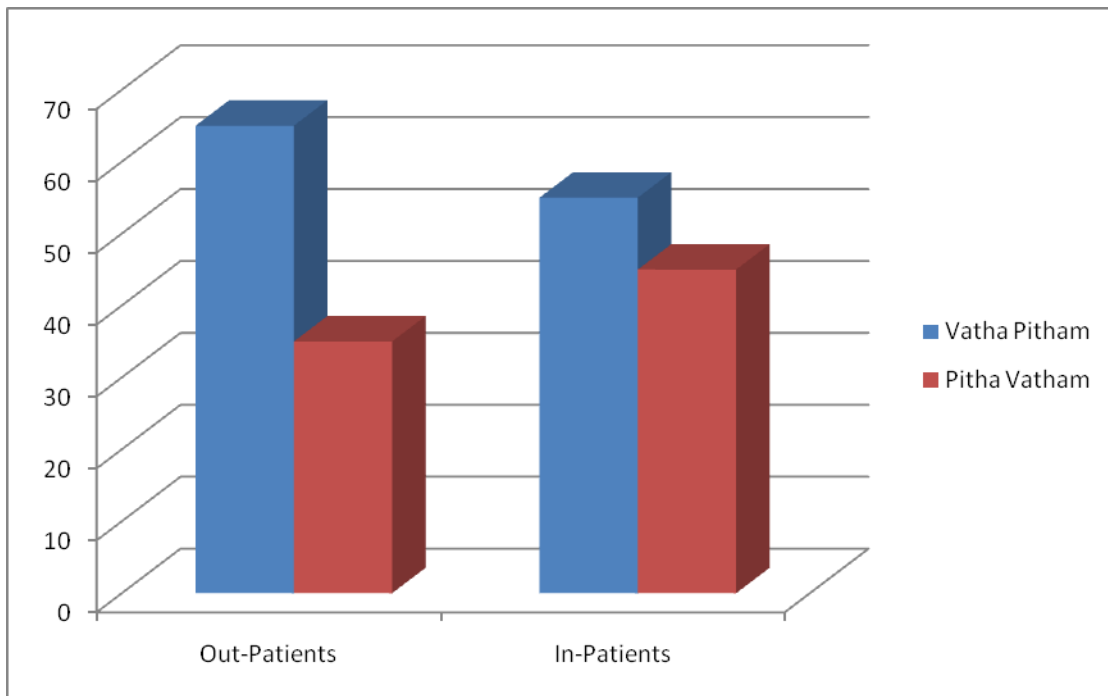
S. No	Envagai Thervugal	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Naa	8	13	40	65
2	Niram	5	10	10	50
3	Mozhi	-	-	-	-
4	Vizhi	8	13	40	65
5	Sparisam	-	-	-	-
6	Malam	20	20	100	100
7	Moothiram	-	-	-	-
8	Naadi				
	- Vatha Pitham	13	11	65	55
	- Pitha Vatham	7	9	35	45

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.

Envagai Theruvugal



Naadi



15. Neikuri

Table – 15

S. No	Neikuri	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Ring (Aazhi)	3	2	15	10
2	Aravil aazhi	8	10	40	50
3	Aazhiyil aravu	9	8	45	40

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

16. Distribution among changes in Malam:

Table – 16

S. No	Malam	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Malamirugal	20	20	100	100
2	Malapperukku	-	-	-	-
3	Kaduppudan malam varuthal	-	-	-	-
4	Ratthamudan malam varuthal	20	20	100	100
5	Seetham kalanthu malam varuthal	-	-	-	-
6	Seezh kalanthu malam varuthal	-	-	-	-

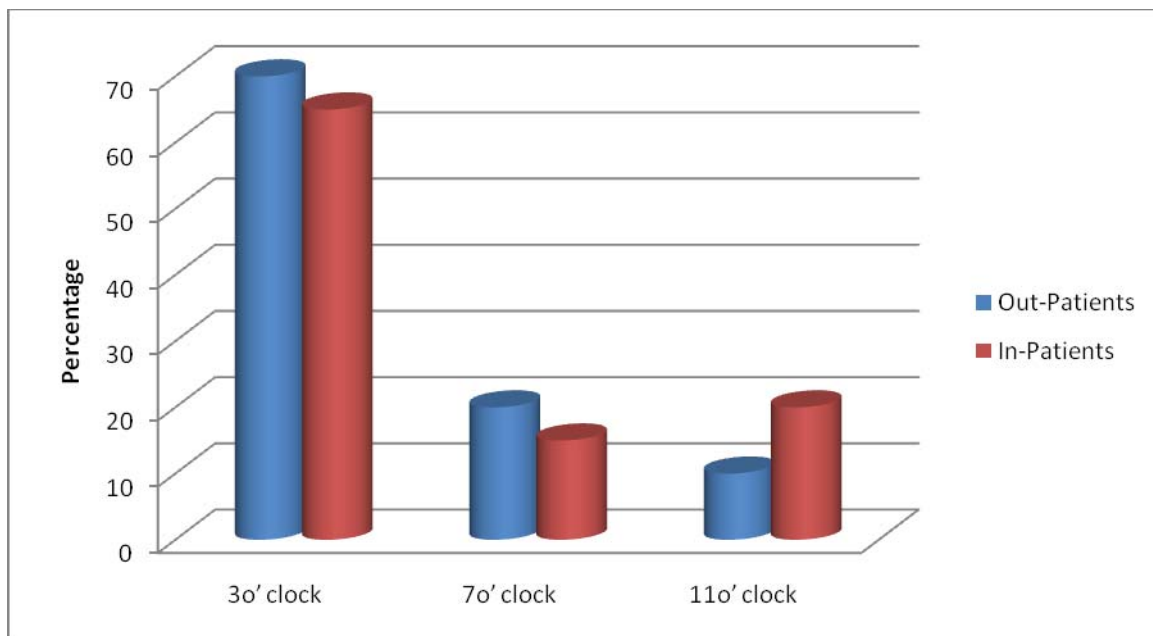
Malamirugal and Raththamudan malam varuthal were seen in all cases.

17. Distribution among position of pile mass:

Table – 17

S. No	Position of pile mass	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	3o' clock	14	13	70	65
2	7o' clock	4	3	20	15
3	11o' clock	2	4	10	20

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.



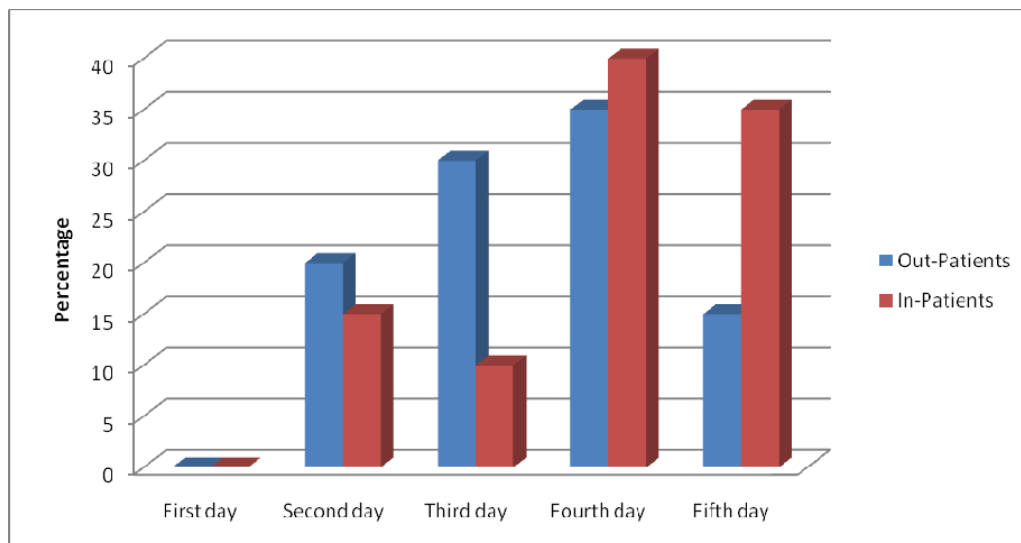
Distribution among position of pile mass

18. Report on Bleeding per rectum after intake of trial medicine.

Table – 18

S. No	Improvement in the Bleeding tendency	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	First day	-	-	-	-
2	Second day	4	3	20	15
3	Third day	6	2	30	10
4	Fourth day	7	8	35	40
5	Fifth day	3	7	15	35

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.



Arrest of Bleeding

19. Report on Duration of Treatment:

Table – 19

S. No	No. of days treated	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	1 – 10	-	2	-	10
2	11 – 20	20	15	100	75
3	21 – 30	-	3	-	15

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

S. No.	Haemoglobin Level (%)	No. of Cases				Percentage			
		BT		AT		BT		AT	
		OP	IP	OP	IP	OP	IP	OP	IP
1.	61 – 67	6	10	-	-	30	50	-	-
2.	68 – 73	2	3	5	8	10	15	25	40
3.	74 – 80	10	4	11	5	50	20	55	25
4.	81 – 88	2	3	4	7	10	15	20	35

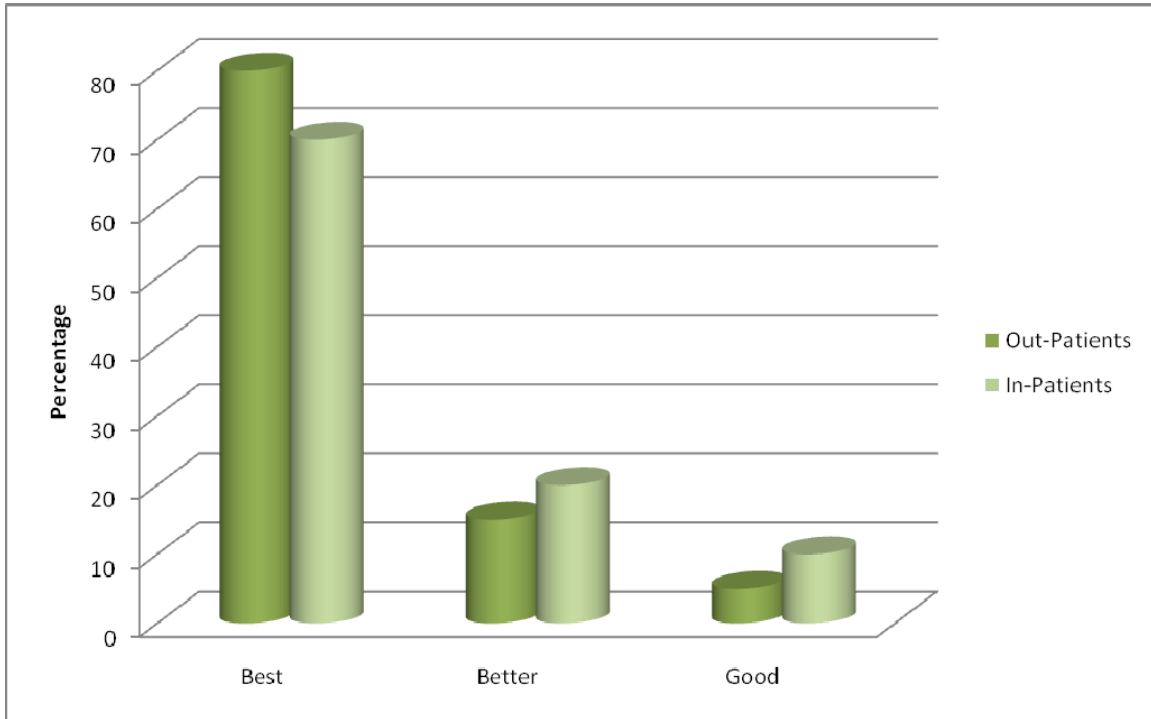
In most of the OP cases, the Hb level before treatment was between 74 – 80% and in most of the IP cases the Hb level before treatment was between 61 – 67%. After treatment the Hb level was increased to 74 – 80% in 55% of OP cases and in 40% of IP cases it was increased to 68 – 73%.

22. Gradation of Clinical Improvement:

Table – 22

S. No	Gradation	No. of cases		Percentage	
		Out-Patients	In-Patients	Out-Patients	In-Patients
1	Best	16	14	80	70
2	Better	3	4	15	20
3	Good	1	2	5	10

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.

“அனில பித்த தெரந்தமலரது மூலம் வரரது”

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 is 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.

“விநேசனத்தால் வாதம் தரழும்”

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

மூல நோய்கள் குணமாக எண்ணெய்:

“பார்ப்பா மணக்கெண்ணெய் பலம் நூலைந்து
பழச்சா நீருள்ளிச்சாறு கத்தாழஞ் சாறு
மார்ப்பா நல்மணத் தக்காளி சாறு
வகையொன்றுக் கீரைந்து பலமே வாகங்கி
சேர்ப்பா பலமரை நற்சீரகந்தான்
திறமாக ஆட்டி எண்ணெயிலே கூட்டி
கோர்ப்பா மெழுகு பதமெரித்துக் கொண்டு
கொடுத்திடாய் பலமொன்று தினமர்க் கொள்ளே.”

- பாடல் எண் 368.

“கொள்ளடா தினகரனைப் பூசை பண்ணி
கூரியதோர் சீதமூலம் இரத்தமூலம்
உள்ளடா கடுப்பாசனக் கடுப்பும்
உள்காய்ச்சல் உள்மூலம் வெளிமூலம் போம்
மெள்ளடா புகையுடனே புளி கல்லுப்பு
மீறியதோர் பழையது மட்டிறைச்சி மச்சம்
தள்ளடா தயிர்மோர் நெய் வெண்ணீ ரன்னம்
சாதிக்க நோயகலுந் தெரிந்து போடே.”

- பாடல் எண் 369.

Reference:

தேரையர் அருளிய வைத்திய சாரம் , பக்கம் எண் - 203.

செய்முறை:

ஒரு பாண்டத்தில் ஆமணக்கெண்ணெய் 20 பலம், எலுமிச்சம் பழச்சாறு 10 பலம், வெங்காயச்சாறு 10 பலம், கற்றாழைச்சாறு 10 பலம், மணத்தக்காளிச்சாறு 10 பலம் வீதம் ஊற்றிக் கொண்டு நற்சீரகம் ½ பலம் அரைத்து பாண்டத்திலிட்டு நன்கு கலக்கி அடுப்பிலேற்றி மெழுகுபதத்திற்கு காய்ச்சி வடித்துக் கொண்டு, தினம் 1 பலம் வீதம் சாப்பிட்டு வரவும்.

தீரும் நோய்:

சீதமூலம், இரத்தமூலம், கடுப்பு, ஆசனக்கடுப்பு, உட்காய்ச்சல், உள்மூலம், வெளிமூலம்.

நீக்க வேண்டியவை:

புகை, புளி, உப்பு, பழைய சாதம், மாட்டிறைச்சி, மீன்.

சேர்க்க வேண்டியவை:

தயிர், மோர், நெய், வெந்நீர் சாதம்.

PROPERTIES OF INGRIEDIENTS:

I. ஆமணக்கெண்ணெய்:

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

பொதுக் குணம்:

“உரைத்தவா மணக்கி எண்ணெய்க் குட்டணம் பித்தவெட்டை
கரப்பனே சிரங்கு மூலங் கபாலம் புண் கிருமிக்காய்ச்சல்
வரட்சியோ டட்ட குன்மந் தலைவலி வளர்மேகம் போம்
உரைத்திடு பெலனு முண்டா முத்தமம் பேதிக் காமே.”

- பதார்த்த சூடாமணி பாடல் எண் 34.

உடல் சூடு, பித்தவெட்டை, கரப்பான், சிரங்கு, மூலம், கபாலப்புண், கிருமி, காய்ச்சல், வரட்சி, அட்டகுன்மம், தலைவலி மேகம் போகும். பேதி உண்டாகும்.

II. எலுமிச்சை:

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

பொதுக்குணம்:

“தாகம் குநகநோய் தாழரச் சிலிபதநோய்

வேகங்கொள் உன்மாதம் வீறுபித்தம் - மாகண்ணோய்

கண்ணோய் வாந்தியும் பேரங் கட்டுவா தித்தொழிலில்

மன்னெலுமிச் சங்கனியை வாழ்த்து.”

- அகத்தியர் குணவாகடம்.

நீர்வேட்கை, குநகநோய், யானைக்கால்நோய், உன்மாதம், பித்தநோய்கள், கண்ணோய், வாந்திபோகும், கழிச்சலைப் போக்கும்.

III. வெங்காயம்

1. Botanical Name - *Allium cepa*
2. Synonyms - ஈருள்ளி, உள்ளி, ஈரவுள்ளி,
காயம், சுக்கிரந்தம்,
நிச்சியம், பலாண்டு.
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.

பொதுக்குணம்:

“வெப்பமூ லங்கிரந்தி வீறுரத்த பித்தமுடன்
செப்புநா அக்கரந்தீ ராத்தாகம் - வெப்பக்
கடுப்பறுமந் தஞ்சந்நி காசம் வயிற் றுப்பல்
தடிப்பேறும் வெங்காயத்தால்.”

- அகத்தியர் குணவாகடம்.

உடலின் வெப்பம், மூலம், சிரங்கு, குருதியழல் நோய், அக்கரம்,
நீர்வேட்கை, கழிச்சல் இவை நீங்கும். ஆனால் மந்தம், சன்னி, இருமல்,
வயிற்றுப்பிசம் பெருகும்.

IV. கற்றாழை

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.
6. Chemical Constituents - Aloin, Isobarbaloin, emodin.
7. Taste - Kaippu
8. Thanmai - Thatppam
9. Pirivu - Inippu
10. Action - Tonic, alterative ,purgative, emmenagogue

பொதுக்குணம்:

“சுலவே குளிர்ச்சியாகுந் தலைவலி கண்ணிற்குத்து

மூல முட்டணம் வரட்சி மொழிந்திடு மேகமோடு

சீலமில் குன்மம் போகுஞ் சேர் மல சுத்தியாகும்

மேலதாம் புள்ளி பெற்ற மிகு பிள்ளைக் கற்றாழைக்கே.”

- பதார்த்த சூடாமணி பாடல் - 99.

குளிர்ச்சி உண்டாகும், தலைவலி, கண்குத்தல், மூலம், உடல்கூடு, வறட்சி, மேகம், குன்மம் போகும். மலம் சுத்தியாகும்.

V. மணத்தக்காளி:

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.

பொதுக்குணம்:

“பித்தமே சேட மேகம் பெருமூல மிவைகள் போக்கும்
சுத்தபே தியுமே யாக்கும் துகளிலா மணித்தக் காளி
ஓத்தபாண் டலர்கண் முல்லை யுரைத்திடும் பொருமலோடு
மெத்திய வீக்கந் தன்னை மீட்குமென் றுரைக்கு னூவே.”

- பதார்த்த சூடாமணி, பாடல் எண் 100.

பித்தம், மேகம், மூலம் போக்கும். பேதியுண்டாக்கும்.

VI. சீரகம்:

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, thymine,
cuminol, cymene, cymol.
7. Taste - Inippu, Kaarppu
8. Thanmai - Thatppam
9. Pirivu - Inippu

பொதுக்குணம்:

“வாயுவொடு நரசிநேயம் வன்பித்தஞ் சேராதது
காயம் நெகிழாதது கண்குளிர்நுந் - தூய மலர்க்
காரளகப் பெண்மயிலே கைகண்ட தித்தனையுஞ்
சீரகத்தை நீதினமுந் தின்.

- அகத்தியர் குணவாகடம்.

வாதாதிக்கம், பீனிசம், பயித்தியமும் விலகும். சரீரத்திற்கு உறுதியையும்,
கண்ணுக்கு குளிர்ச்சியையும் தரும்.

ANNEXURE II

BIO – CHEMICAL ANALYSIS OF MOOLA ROGANGAL 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

S. No	Experiment	Observation	Inference
1.	<u>TEST FOR CALCIUM</u> 2ml of the above prepared extract is taken in a clean test tube. 2 ml of 4% ammonium oxalate solution is added to it.	A white precipitate is formed.	Indicates the presence of Calcium.
2.	<u>TEST FOR SULPHATE:</u> 2ml of the extract is added to 5% barium chloride solution.	No white precipitate is formed.	Absence of Sulphate.
3.	<u>TEST FOR CHLORIDE</u> The extract is treated with silver nitrate solution.	A white precipitate is formed.	Indicates the presence of Chloride.

4.	<u>TEST FOR CARBONATE</u> The substance is treated with concentrated HCL.	No brisk effervescence is formed.	Absence of Carbonate.
5.	<u>TEST FOR STARCH</u> The extract is added with weak iodine solution.	No blue colour is formed.	Absence of Starch.
6.	<u>TEST FOR IRON</u> <u>FERRIC:</u> The extract is treated with glacial acetic acid and potassium ferro cyanide.	No blue colour is formed.	Absence of Ferric Iron.
7.	<u>TEST OF IRON :</u> <u>FERROUS:</u> The extract is treated with concentrated Nitric acid and ammonium thio cyanate.	Blood red colour is formed.	Indicates the presence of Ferrous Iron.
8.	<u>TEST FOR PHOSPHATE</u> The extract is treated with ammonium molybdate and concentrated nitric acid.	No Yellow precipitate is formed.	Absence of Phosphate.
9.	<u>TEST FOR ALBUMIN</u> The extract is treated with Esbach's reagent.	No yellow precipitate is formed.	Absence of Albumin.
10.	<u>TEST FOR TANNIC ACID</u> The extract is treated with ferric chloride.	Blue black precipitate is formed.	Presence of Tannic Acid.

11.	<u>TEST FOR UNSATURATION</u> Potassium permanganate solution is added to the extract.	It gets decolourised.	Indicate the Presence of Unsaturated Compound.
12.	<u>TEST FOR THE REDUCING SUGAR</u> 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.	<u>TEST FOR AMINO ACID:</u> 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 upto 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

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

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.

Styptic Action

S. No.	Drug	Bleeding time (in seconds)
1.	Control	4.55
2	Standard (vitamin K tablet)	2.55
3	Moola Rogangal Gunamaga Ennei	1.25

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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Etiology

Food habits
Evil doings

Suppression of reflexes
Increased Heat, cold climate exposure

Anger, Fear
Hereditary

Mukkutram Changes

Udal Thathukkal Changes

Vatham

Pitham

Kabam

Abaanan - Constipation,
Bleeding per rectum

Anal pitham - Anorexia

Avalambagam - Vitiation of other
kabha types

Viyanan - Difficulty in carrying
Out activities

Ranjagam - Anaemia

Kilethagam - Anorexia

Saaram
↓
Anorexia

Senneer
↓
Decreased
udal vanmai
Bleeding per
rectum.
anaemia

Samaanan - Vitiation of other
Vayus loss of appetite

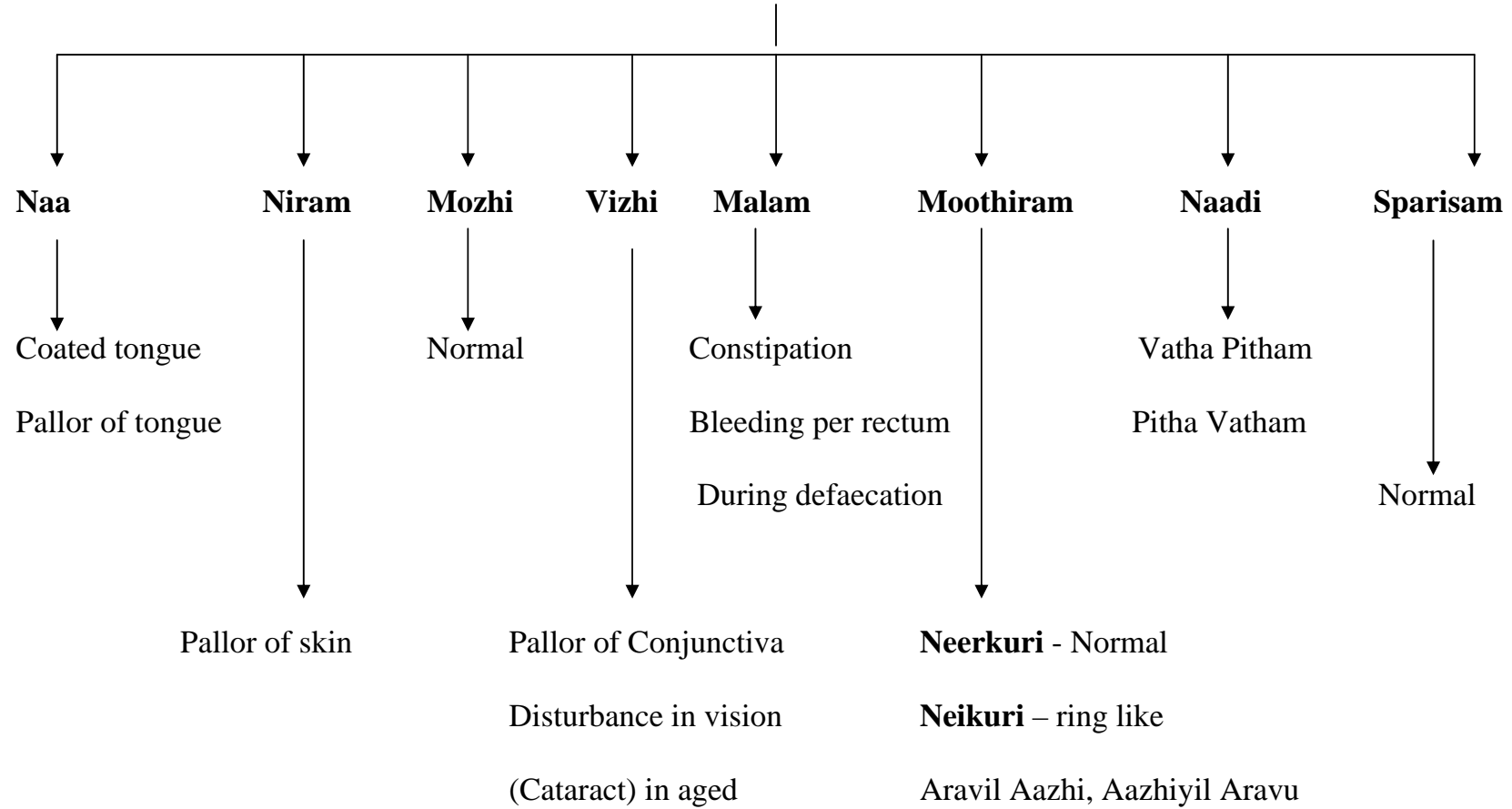
Prasagam - Pallor of skin

Kirukaran - Anorexia

Saathagam - Difficulty in carrying
Out activities

Devadhathan - Sleeplessness

Diagnosis (Envagai Thervugal)



IV. OCCUPATION, DURATION OF ILLNESS NO. OF DAYS TREATED AND RESULTS OF 20 I.P. PATIENTS

Sl. No	I.P. No.	Name	Age/ Sex	Occupation	Duration of illness	Date of admission	Date of discharge	No. of days treated	Medicine	Result
1	2014	Sankara konar	60/M	Sales Man	1 month	10-08-07	24-08-07	15	Moola Rogangal Gunamaga Ennei - 2.5ml (BD).	V.Good
2	2754	Narayanan	70/M	Shop owner	20 days	16-11-07	12-12-07	27		V.Good
3	2951	Dasan	60/M	Security	3 months	04-12-07	17-12-07	14		Fair
4	314	Mookammal	45/F	Beedi worker	20 days	02-02-08	22-02-08	21		V.Good
5	392	Gomathiyammal	75/F	Cooli	15 days	11-02-08	01-03-08	20		V.Good
6	393	Syed Ali	48/M	Cook	25 days	11-02-08	20-02-08	10		Good
7	506	Sivarama Ganapathy	72/M	Shop owner	10 days	20-02-08	04-03-08	14		V.Good
8	523	Shanmugam	55/F	Beedi worker	3 months	21-02-08	04-03-08	13		V.Good
9	371	Durai Raj	35/M	Driver	25 days	23-02-08	09-03-08	16		V.Good
10	698	Isakki	62/M	Shop owner	1 week	14-03-08	02-04-08	20		V.Good
11	723	Subbammal	45/F	Tailor	1 1/2 month	17-03-08	31-03-08	15		V.Good
12	729	Thangavel	73/M	Shop owner	1 month	18-03-08	02-04-08	16		Good
13	780	Kamachi	65/F	Cooli	1 week	25-03-08	10-04-08	17		V.Good
14	781	Sivani	75/F	Cooli	21 days	25-03-08	10-04-08	17		Good
15	791	Ananth	56/M	Sales Man	10 days	26-03-08	12-04-08	18		V.Good
16	801	Subbaiya Pillai	79/M	Cooli	20 days	27-03-08	12-04-08	17		Good
17	915	Veniyammal	26/F	Beedi worker	2 months	09-04-08	22-04-08	14		V.Good
18	918	Mariyammal	49/F	Sales Women	1 month	10-04-08	19-04-08	10		V.Good
19	987	Komu	48/F	Tailor	8 months	16-04-08	06-05-08	24		V.Good
20	1153	Pittchammal	50/F	Beedi worker	28 days	08-05-08	21-05-08	13		V.Good