

A STUDY ON
“AKKARAM”

Dissertation Submitted to

THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY

Chennai – 32

For the Partial fulfillment in Awarding the Degree of

DOCTOR OF MEDICINE (SIDDHA)

(Branch – IV, Kuzhanthai Maruthuvam)



Department of Kuzhanthai Maruthuvam

Government Siddha Medical College

Palayamkottai – 627 002

SEPTEMBER - 2007

ACKNOWLEDGEMENT

First and foremost I thank my lord **almighty** who empowered me, with his grace and blessings from the beginning and till the end of my dissertation work.

I express my gratitude and acknowledgement to the **Vice Chancellor** , The Tamilnadu Dr. M.G.R. Medical University, Chennai.

I sincerely thank **Dr. M. Thinakaran, M.D. (S).**, Principal, Government Siddha Medical College, Palayamkottai who permitted and initiated this dissertation work.

I also thank **Dr. R.Devarajan, M.D.(S).**, Vice Principal, Government Siddha Medical College, Palayamkottai.

I am especially grateful to our Professor **Dr.R.Patturayan, M.D (S).**, Head of the Department, Postgraduate Kuzhanthai Maruthuvam Department, Government Siddha Medical College, Palayamkottai for his valuable guidance and encouragement for this study without his guidance it would not have been possible to bring out this work successfully.

It is my pleasure and privilege to record my deep sense of gratitude to, **Dr. Kathir Subramaniam M.D, D.Ch.**, Professor & Head of the Department and **Dr. M. Mathivanan, M.D., D.C.H.**, Asst. Prof. the Department of Pediatrics, Tirunelveli Medical College for their suggestion and guidance in this work.

I thank **Mr. M. Kalaivanan , M.Sc.**, Lecturer and other staffs of the Department of Phamacology, Government Siddha Medical College, Palayamkottai for helping me in this work by furnishing pharmacological analysis of the trial drug.

I thank **Mrs. N. Nagaprema, M.Sc., M.Phil.**, and other staffs of the Department of Bio-Chemistry for furnishing the Bio-Chemical analysis of the trial drug.

It is a pleasure to acknowledge the help from **Dr.S.Bagirathi, M.B.B.S.**, Head and Staff, department of Clinical Pathology, for this guidance rendered during the various studies of this dissertation.

I wish to acknowledge the help and encouragement provided by **my family members** and **friends** to complete this work successfully.

Finally I express my deep thanks to **Selwyn's Broad Band Net Café & Staffs** of this centre for their kind co operation.

INTRODUCTION

The origin of siddha medicine is attributed to Lord Shiva and Propogated through Sage Agasthiar and other Siddhars. Thousands of years before the advent of Ayurveda are any other medicine.

The siddha system of medicine was developed purely by the contribution of siddhars on there own life of thinking and achievements in the field of their research. It is founded on the basic principles of nature and its elements after careful and thorough study of the human system.

Siddha system of medicine considers man as microcosam and the universe in which the lives to be macrocosam.

“அண்டத்திலுள்ளதே பிண்டம்
பிண்டத்திலுள்ளதே அண்டம்
அண்டமும் பிண்டமும் ஒன்றே
அறிந்து தான் பார்க்கும் போதே”

- Chattamuni Gnanam

Also chattamuni has said any change in the cosmos reflects in the human body.

Siddha system of medicine too has its own doctrine / theory of fundamental principles based on hypothetical logic of natures law. This consist of

- ❖ Anda pinda thathuvam
- ❖ Panchabootha thathuvam
- ❖ Tridosha thathuvam
- ❖ Udal Thathuvam

Every thing is created by the basic five elements of nature. The Microcosam and Macrocosam are identical one self is all and all is one self. This is the law of nature all nature is nothing but the various combination of planets stars, galaxies and panchaboothas. Man is subject to tridosha viz vatha, pitha, selapanam. During Autumn air (Vayu) may be prominent in human body, in the winter season pitham (heat) will arise in the body and in the summer season water (phlegm) in the body. Hence during these season diseases is appropriate to the climatic conditions may occur in the human body.

Nature plays an important role in the process of human life. Creation, Restoration and Destruction are the fate of all objects on the earth. Air, Fire, Water are said to be more powerful and form the root cause for the creation restoration and destruction of all objects.

These three elements are well represented in the human body in a refined form called as bodily humours namely Vatha, Pitha and Kabha respectively. If these three doshas are deranged, they produce some pathological changes in human body which are named as disease.

Nature is the health, Nature is the disease and Nature is the medicine. The basic causes for babies ailments are owing to parents behaviour and their illhealth, the development of baby in the uterus based on the mothers diet, feelings and actions.

Thiruvalluvar also mentioned this fact in his Thirukkural.

“மிகினும் குறையினும் நோய் செய்யும் நூலோர்
வளிமுதலா வெண்ணிய மூன்று”

- Thirukkural

The siddha system adopts the following principles for the diagnosis [Noi–Kanippu] treatment [Noi-neekam] , Prevention and secondary complication of disease.

- ❖ Tridhosha theory
- ❖ Five elemental principles
- ❖ Six basic tastes
- ❖ Udal Kattugal
- ❖ Ennvagai thaervugal
- ❖ Kaya kalpam
- ❖ Yogi principles

Infectious and nutritional deficiency is the twin problem among the health problem of children affecting their growth and development. **Akkaram (அக்கரம்)** [Ariboflavinosis] is one among the commonest in the global arena. I have select the disease “**Akkaram**” (அக்கரம்) for the present study. It is causes inherited from parents are transmited from

patients. I had selected for the study parents who are in the age group of 3 – 7 years because they have relatively low immunity among children.

The effective chemotherapy of **Akkaram (அக்கரம்)** from siddha system of medicine the author has undergone this dissertation work with a treatment of **Athemathura nei**. The medicine has been told to be effective action, safe and low cost for pediatric usage. The author humbly contributes the work to the glory of siddha system of medicine.

AIM AND OBJECTIVES

“நோயில்லை நொடியில்லை

நோக்காட்டால் சிறுவயதில்

மாய்ந்திடுவார் பூரணமாய்த்

தோய்ந்திட்டார் தாமன்றித்

துஞ்சுபவர் யாருமில்லை

- குழந்தை நல மருத்துவம்

The disease **Akkaram (அக்கரம்)** in siddha system due to excess heat production in moolam and affect the all organs of the body. The most of signs and symptoms of the diseases may be correlate with **Ariboflavinosis**. Its the most common nutritional deficiency in children. The researcher has selected this disease **Akkaram (அக்கரம்)** and treated the effectively with the help of **Athemathura nei**.

The objectives of the present study are as follows:

- ❖ To collect authentic literature and review the siddha literature about the diseases.
- ❖ To study the clinical features of the disease called **Akkaram (அக்கரம்)** , on the basis of udal thathu, Paruva kaalam, food , taste, age, sex, economic status ennvagai thervu, neerkuri and neikuri of the patients.

- ❖ To analyses the altered tridhosha (or) mukkutram and changes in the physiology as per Siddha procedures.
- ❖ To describe the unique diagnostic procedure mentioned in Siddha literature for the disease **Akkaram (அக்கரம்)** .
- ❖ To have a detailed study of the clinical efficacy of the drug Athemathuranei administered and the pharmacological and biochemical analysis of the drug identified in the changes in the patients.

The work is carried by having a clinical trial of **Athemathura nei** as internal drug for the disease **Akkaram (அக்கரம்)**.

I had identified 20 In-pateint between the age group of 3 – 7 years and serveral outpatients in the same age group in government siddha medical college hospital at palayamkottai for the study. 3 – 7 age group is selected because they have relatively low imunity among children.

REVIEW OF LITERATURE

PEDIATRICS IN SIDDHA SYSTEM

It is undeniable that if a country is to make rapid economic and other developments, it can be brought only by decades of services provided through the medical, nutritional and general care of small children, who become the active members of society later knowing this well, pediatrics for the past few decades has got the prime importance all over the world both in the medical and social work.

In modern medicine pediatrics emerged as a medical specialty only over a century ago in response to growing appreciation that the health problems of children are different from those of adults and that the child's reaction to them varies with age. [Nelson's Textbook of pediatrics Behrman and Vaughan]

But siddha system deals pediatrics known in Tamil as "Balavagadam" separately and in detail But only a very little amount of literature is available for us.

A child's life is divided in to many "Paruvangal" namely [Kaappu Paruvam], Sengeerai paruvam, Thalaattu, Sappani, Muththa, Varugai, Ambuli, Chittril, Siruparai, Sirutherviduthal paruvam] which coincide with the growth period classification and milestones mentioned in modern pediatrics.

Regarding the etiology of a disease Dr. Uthamarayan have told that

“சுக்கிலத்தில் சுரோணிதங் கலக்குமன்று
புகுந்திடும் வியாதி மூன்று”

- சித்தமருத்துவாங்கச் சுருக்கம் பக்கம் 40

Which means a child health is decided even the time of conception. They have told that the physical and mental condition and diet of the mother even during pregnancy and lactation directly affects the child and thus be causative factors of diseases or weakness of the child. They have mentioned the other external factors of disease.

It has been mentioned that the conditions of the father also affects the child

“பிறந்த நாள் பிள்ளைக்குத் தானே தன்றாய்
பிதாவாலே பிணியுடலின் மேலே தோன்றும்”

- பாலவாகடகம் பக்கம் - 5

They have vast classifications of disease not ignoring even minute symptoms of the child. They had known that disease attacks the child from his fetal life and classified them under “Karuvil thondrum noigal “ [Disease that arise during fetal life] If we go through the literature they have offered a variety of solutions for each and every problem the child faces in day to day life.

Development of immunity and prevention disease start from the fetal life itself. The drugs pregnant women had to take every month have been dealt with. Her diet, psychological conditions good for the fetus environment activities everything has been described.

- ❖ In brief Balavagadam had got more importance than any other branches of medicine in Siddha system. On the basis of udal thathu Paruva kaalam, food, taste, age, sex, economic status ennvagai thaervu, neerkuri and neikuri.

Siddha system of medicine is one of the ancient forms of medicine. It is believed to be the system of medicine propagated by God. According to this system. Our body is made up of five elements or panchaboothams namely *Earth, Air, Water, Fire* and *Space*. These five elements combine to form the three humours.

The three humours are,

Vatham [Air + Space]

Pitham [Earth + Fire]

Kapham [Earth + Water]

According to siddha system of medicine any derangement of these three humours will result in disease.

The disease ***Akkaram*** (***அக்கரம்***) is a common disease affecting children. It occurs due to the derangement of three humours. So before describing about ***Akkaram*** (***அக்கரம்***). It is important to know about all Uyirathukkal.

“வாதமாயப் படைத்து பித்த வன்னியாய்க் காத்து சேட்ப
சீதமாய்த் துடைத்துப் பாராந் தேகத்திற் குடியா மைந்து
பூதவிந்தியாமைவர் பூசை கொண்டவர் பால் விந்து
நாதமாங் கிருஷ்ணமூர்த்தி நமக்கென்றும் துணையாவாரே”

- Theraiyar Maruthuva bharatham

MUKKUTRA THEORY

VADHAM (வாதம்)

Synonyms: (வேறுபெயர்கள்)

Vayu, Vali, Air

Definition:

Vadham is a humour which is responsible for construction nature of works in the human body.

Genesis of Vadham:

Vadham = Vali + Akayam

When vali bootham and Akaya bootham are combined vadham is formed.

Shape:

It is invisible. It can be felt by action or movement of the body.

Location:

It is present in each and every cells of the human body. But it is predominant in the following parts. Abanan, Hip bone, Faeces, Skin, Idakalai, Nervous system, lower abdomen, joints, genital organs, muscles and hair roots.

Function of vadha humour:

”ஊர்வாயு வாயு ஆகியவை வாதம் எனப்படும்,
வாயு வாதம் ஆகியவை வாதம் ஆகியவை வாதம்
ஆகியவை வாதம் ஆகியவை வாதம் ஆகியவை
வாதம் ஆகியவை வாதம் ஆகியவை வாதம்”

- Maruthuva thani bharatham

Under normal physiological condition vadha gives

- ❖ Encouragement to mind
- ❖ To control breathing
- ❖ Gives signals to mind
- ❖ Expels 14 vegas (i.e.) seven udal kattugal waste of the body
- ❖ Gives energy to the physical body
- ❖ Gives coordination to seven udal kattugal

Signs of Increased vadha:

Constipation, Abdominal disturbances, Fatigue, Depression of five porigal, Giddiness, Incoherent speech, Rigor, Insomnia, Fond of eating hot food stuffs, Emacination with blackish discolouration

Signs of Decreased vadha:

Vague pain all over the body, Low pitched voice, Difficulty to do any work, Reduction of intelligence, Syncope, Symptoms of hyperkapha

Classification of Vadham:

It can be classified into ten types. This has been said in Yoogi muni 800 as follows.

"Ó"ÈÂ;õ ÀçÃ;½§É; ¼À;ÉÝ ÅçÂ;ÉÝ
ã÷î,Á; Ó¼;É|É;Î °Á;É ç;ý
¾çÈ"ÁÂ;í Ü÷Á|É;Î ,çÕ, ÃÝÈ;ý
§¾Á¾ð¾ |É;Î ¾Éï °ÂÛÁ;ìõ."

- Yoogi Vaidhya Chindamani

- ❖ Pranana (ÀçÃ;½ý)

- ❖ Abanan («À ; Éÿ)
- ❖ Viyanan (ÅçÂ ; Éÿ)
- ❖ Udhanan (¯¼ ; Éÿ)
- ❖ Samanan (°Á ; Éÿ)
- ❖ Nagan (ç ; ,ÿ)
- ❖ Koorman (Û÷Áÿ)
- ❖ Kirukaran (, çÕ , Ñÿ)
- ❖ Devadhata (§¼Å¼ð¼ÿ)
- ❖ Danajeyan (¼Éï | °Âÿ)

Pranan:

It is responsible for maintaining respiratory function. In the case of **Akkaram** it is not affected.

Abanan:

It is responsible for expelling faeces urine, semen, menstrual blood and foetus. In this case of **Akkaram (அக்கரம்)** it is not affected.

Viyanan:

It is situated in the skin and spread all over the parts of body. It is responsible for locomotor activity. It carries nutrients to all over the body.

In **Akkaram (அக்கரம்)** it is not affected

Udhanan:

It is situated in the udharakini. It is responsible for digestion and absorption of foods. It also responsible for all upward visceral movements

such as vomiting, nausea erection and hiccough. In **Akkaram (அக்கரம்)** it is affected.

Samanan:

It is situated in the abdomen and spreads to the legs. It controls the domination of other vayus. It is responsible for balancing six tastes and water. In **Akkaram (அக்கரம்)** it is affected.

Nagan:

It is responsible for higher intellectual function. It is responsible for opening and closure of eyes. In **Akkaram (அக்கரம்)** it is not affected.

Koorman:

It is situated in the mind. It is responsible for opening and closing of eye lids,yawing and closing of mouth. In **Akkaram (அக்கரம்)** it is not affected.

Kirukaran:

It is situated in the longue and oropharynx. It is responsible for salivation, nasal secretion, sneezing and cough. In **Akkaram (அக்கரம்)** it is affected.

Devadhatan:

It is responsible for tiredness, lazziness, sorrow sleep, argument, angerness. In **Akkaram (அக்கரம்)** it is affected.

Dhananjeyan:

It is situated in the nose. Physiologically, it is inactive and maintains the intra cerebral pressure

PITHAM (பித்தம்)

Synonyms - Azhal

Definition - Pitha is a life force / protective force.

Pitha represents gastric Juice, bile, energy, heat
inflammation anger and irritation etc.,

Genesis of pitham - Pitham = Thee

Shape - invisible

LOCATION

Bladder, Sacral plexus, heart, head , endocrineglands, umbilical
region circulatory & Respiratory system, stomach, Abdominal visceral,
liver, gall bladder, sweat gland, heamopoietic system, plasma & cellular
fluids & eyes.

Function of pitha humour

“பசிதாகம் ஓங்கொளிகண் பார்வை பண்டத்து

தருசிரி சக்தி வெம்மை வீரம் - உசித

மதி கூர்த்த புத்தி வணப் பளித்துக் காக்கும்

அதிகாரி யாங்கா னழல்

- Maruthuva Thani Bharatham

Normal Physiological condition pitha gives

- ❖ Helps in digestion
- ❖ Regulates vision
- ❖ Stimulation of appetite and thirst
- ❖ Perception of tastes

- ❖ Perception of light
- ❖ Thinking knowledge
- ❖ Immunity
- ❖ Maintenance of heamostasis

Role of pitham in organ system

Thermo regulation :

- ❖ It regulates heat and temperature & maintain normal B.M.R.
- ❖ It causes dis coloration of skin and mucous membrane in diseased condition eg. yellow in jaundice, blue in cyanosis, shock, hypoxia, pale in anaemia
- ❖ It favours absorption and assimilation of food stuff by regulating the secretion of stomach bile and succus entericus and pancreas.
- ❖ It regulates the function of reticulo endothelial system
- ❖ Neurological – Sweating, Vagal syncope, tremors
- ❖ Psychological – irritability non co-operation, delirium

Signs of Increased pitha

Yellowish discolouration of skin, mucous membrane and sclera, Excessive appetite, Excessive thirst, Feeling of warmthless all over the body, Burning sensation, Insomnia, Emarciation, Sensation of bitter taste, Sourness..

Signs of Decreased pitha

Indigestion, Coldness, Pallar, Hypopigmentation, Belching, Stunted growth

Classification of pitham

It can be classified into five types

“ஆக்கனல் வண்ணவெரி யாற்றலங்கி யொள்ளித் தீ
நோக்கழலாம் பித்தமைந்த நூதனமா யாக்கு மொழி
பாசகமி ரஞ்சகஞ் சாதகம் ராசகமா
லோசக மென்றிடுமா லோ”

- Mruthuva Thani Bahratham

- ❖ Anar pitham (அநர் பித்தம்)
- ❖ Ranjaga pitham (ரஞ்சகம், அநர் பித்தம்)
- ❖ Prasaga pitham (பாசகம், அநர் பித்தம்)
- ❖ Aalosaga pitham (அலோசகம், அநர் பித்தம்)
- ❖ Sathaga pitham (சாதகம், அநர் பித்தம்)
- ❖ **Anarpitham (Gastric juice)**

This gives appetite and helps digestion

- ❖ **Ranjaga pitham (Hemoglobin)**

It gives colour to the blood

- ❖ **Prasaga pitham (Bile)**

It gives complexion (cluster) to the skin.

- ❖ **Aalosaga pitham (Aqueous humour)**

It is responsible for clarity of vision

- ❖ **Sathaga pitham (Life Energy)**

It controls the whole body

KAPHAM

Signs of increased Kapha:

Loss of appetite, Excessive salivation, Diminished activity, Heaviness, Excessive musculature, Cough, Dyspnoea, Excessive Sleep.

Signs of decreased Kapha:

Giddiness, Dryness of joints, Prominant of bones, Dry cough, Excessive sweating, Lightness, Palptation.

Classification of Kapha:

"-¼Ã Å ;õ |Áõì «ÃÃõ À¼Á ; í , ç
§Ã¼, Á ; ì ° ç " Åô §Ã¼õ½÷ô §Ã ; ¼, Á ; õ
¼üÀ, Á ; ì °ó¼ç , ççø çíìì °ç§Ã¼, Á ;
ÃüÀÃçÄ ; î § ° òÐÁ " ÁóÐ"

- Maruthuva thani Bharatham

1. Avalambagam (அவலம்பகம்)
2. Kileathagam (கிலேதகம்)
3. Pothagam (போதகம்)
4. Tharpagam (தற்பகம்)
5. Santhigam (சந்திகம்)

Avalambagam (Serum)

It is present in the lungs. It controls the heart. In **Akkaram** it is not affected.

Kileathagam (Saliva)

It is present in the stomach and makes the food and liquid moisture and helps in digestion. In **Akkaram** it is affected.

Pothagam (Lymph)

It is responsible for taste. In **Akkaram** it is affected.

Tharpagam (Cerebrospinal Fluid)

It gives cooling to the eyes. In **Akkaram** it is not affected.

Santhigam (Synovial Fluids)

Lubrication of joints and response for free movements,. In **Akkaram** it is not affected.

Relationship between Taste and Pitham

These tastes are Increase the pitham

“ஒளியுவர் கைப் பேறில் பித்து சீறும்”

- பதார்த்த குண சிந்தாமணி

கார்ப்பு (Pungent) - வளி + தீ

புளிப்பு (Acidity) - மண் + தீ

உவர்ப்பு (Salty) - நீர் + தீ

The tastes suppress the pitham

“சுத்த துவரோடு சொல்லிணிப்புச் - சத்தாகும்.

கைப்புச் சுவையே கருதுவதன் வீறு

எய்படையு மென்று ரைத் தாரிங்கு

- கண்ணு சாமியம்

துவர்ப்பு (Sour)	-	மண் + வளி
இனிப்பு (Sweet)	-	மண் + நீர்
கைப்பு (Bitter)	-	வளி + விண்

AKKARAM (அக்கரம்)

இயல் (Definition)

It is one of the disease found in oral cavity of children.

குழந்தைகளின் நாவில் மாபோல் நீறு பூத்து பாலை உண்ண முடியாத படி வெறுப்பை விளைவிக்கும் இயல்புடைய நோயாகும்.

வேறு பெயர் (Synonyms) – அச்சரம்

நோய் வரும் வழி (Etiology)

“அச்சரமென் றொரு நோயயுண் டக்கரமுமாகும்

அவை விளக்கு முள்ளாவிச் சூட்டானாவில்

நிச்சயமாய் வேக்காட்டைத் தந்து மாப்போல்

நீறு பூத்து துன்ப நிலைக்கச் செய்து

சச்சரவுண் டாக்கு மெனவன்றி

.....

.....

மருத்துவர் களறியுமாறு லகிலன்றே”

- பாலவாகடகம் 271.

மூலத்தில் கிளம்பும் ஆவியின் சூடானது நாவிற்கு ஏறி அந்நாவிற்கு வேக்காட்டை உண்டாக்கி மாவைப் போல் நீறு பூத்து குழந்தைகளுக்கு பல துன்பங்களை உண்டாக்கி பாலை உண்ண முடியாத படி வெறுப்பை விளைவிக்கும்.

நோய் குறிகுணங்கள் [Clinical features]

‘தலையில் வலியுந் தானுண்டாம்
தாது மிகவந் துடித்து நிற்கும்
குலையும் வெந்து நாவெந்து
குளிர்ந்து தானே வரும்பிள்ளை
கலையும் பொசியு நாவெளுத்துக்
கலங்கிக் கண்டந் தான்வெந்து
மலையின் மிளகு கொளவொண்ணா
வகுத்துச் சொன்னோ மக்கரமே”

- பால வாகடம் - பக்கம் - 272

- ❖ Ulceration in the tongue
- ❖ Excess salivation
- ❖ Pale & coated tongue.
- ❖ Head ache
- ❖ Does not tolerate in Pepper pungent
- ❖ Redness of the tongue

In Balaroga Nithanam

“பொருமலுங் கழிச்சலும் புண்ணும் வாயினிற்
செருமலும் வயிற்றினி னோவுஞ் சேர்ந்திடும்
இருமலுங் காய்ச்சலு மெரிவுங் கூதலும்
தரும் பெரு மக்கரத் தலைக் கொப்புமே”

(பா - 196)

கறுப்பதாய் வெள்ளையாய் கரியின் பச்சிலை
உறுப்பதாய் சிவப்பாய் உதிரச் சீதமாய்
இறுப்ப நெய் யெண்ணெய் பாலெனக் கழிந்திடிற்
செறு பதக்கரக் குணக் கழிச்சல் செப்பிடே
(பா- 197)

கூறிய வாயுடல் குதங்கள் குய்யங்கள்
நாறியே புண்ணதாய்ப் பூத்து நாவரண்
ஓறிய மூலந் தள்ளி யுள்ளவந்
தேறிய சத்தியோ டிருமிக் காயுமே”
(பா - 198)

- ❖ Distended abdomen
- ❖ Ulceration in oral cavity
- ❖ Cough
- ❖ Pain in abdomen
- ❖ Fever
- ❖ Burning sensation in the body
- ❖ Dryness of the month
- ❖ Vomiting
- ❖ Dycentry

வாய் நோய் வகைகள் (Classification)

1. Nagamunivar Thalai noi enumerates 1008 diseases which occur in head which include mouth disease. [Disease of the tongue and lips]

“பகருநா லாயிரத்து நானூற்று நாற்பத்தெட்டும்

புகலுறுப் பெண்ணான் கோடு பொருந்திடும் பொன்னாய் கேள்

சிகையுறு சிரத்தில் ரோகஞ் செப்பிலாயிரத்தெட்டாகும்

வகையுறு பேர் சாத்தீய மசாத்தியம் வழுத்தலாமே”

.....

.....

தோகையே சிகுவைதன்னில் ரோகமுஞ் சொல்லுங்காலை

நாகமாமுனி யுரைத்தான் முப்பத்தி நாலாமென்னப்

.....

தானமா மிதழி ரண்டிற் சாருநோய் பதினாறாகும்”

- நாகமுனிவர் தலைநோய் மருத்துவம்

நாக்கு நோய் - 34

உதட்டு நோய் - 16

II. In Jeeva Rakchamitham

- ❖ Uthattu noigal
- ❖ Vazhi uthadu
- ❖ Azhal uthadu
- ❖ Iya uthadu
- ❖ Mukkutra uthadu
- ❖ Sathai uthadu

- ❖ Neeru uthadu
- ❖ Menumenuppu uthadu
- ❖ Kuruthi uthadu
- ❖ Kutta uthadu
- ❖ Vedipu uthadu
- ❖ Adepatta uthadu

III. 4448 வியாதிகள் ஒரு விளக்கம் - Dr.ச.அரங்கராசன் B.I.M

வாய் நோய் - 156

IV தேரையர் வாகடம்

வாய் நோய் - 70

நாக்கு நோய் - 49

அக்கரம் வகைகள் (TYPES OF AKKARAM)

“உலகினச்சர மோதி நேழ்தாம்

இலகு சூலியு மியன்ற நீதியும்

அலகில் சோதியும் வீமி குண்டியும்

சூலக பாலியும் குமரியும்மரோ”

உள் அக்கரம்

ஈத லாமலும்

ஓத வாருளில்

போது மச்சரம்

நீதி யாளரே

- பாலவாகடம் பக்கம் 271

- ❖ Suli **Akkaram** - (சூலி அக்கரம்)
- ❖ Neethi **Akkaram** - (நீதி அக்கரம்)
- ❖ Soothi **Akkaram** - (சோதி அக்கரம்)
- ❖ Veemi **Akkaram** - (வீமி அக்கரம்)
- ❖ Kundi **Akkaram** - (குண்டி அக்கரம்)
- ❖ Kabaali **Akkaram** - (கபாலி அக்கரம்)
- ❖ Kumari **Akkaram** - (குமரி அக்கரம்)
- ❖ Ul **Akkaram** - (உள் அக்கரம்)

சூலியக்கரக் குறிகுணம் (Typhoid Meningism)

சூலியது நாவில்வரி னந்தா வெந்து

சூழுமே யடையாக வெளுத்து மாப்போல்

சூலியெனும் பேர்க்கொக்கச் சூலத் தாலே

சூட்டலென வந்நாவிற் குத்த லாதல்

மேலுமதில் வழுவழுத்த வெண்ணீ றுறல்

வெள்ளாவி யுவர் மண்ணின் நாற்றமாதல்

காலுதல்வெள் ளோக்காளம் தண்ணீர் வேட்கை

கால்கைக ளுடலமெலாங் கருமை யாமே.

- ❖ Burning sensation with pricking pain in the tongue
- ❖ White coating of the tongue
- ❖ Foul smell
- ❖ Vomiting
- ❖ Headache

நீதியக்கரக் குறிகுணம் (GI infection - Acute)

நீதிநா வில்வரினோ வுயர் தாழ்வு மின்றிநடு நிலையாய் நாவும்
கோதின்றி யுட்சிவந்து வெளியில்மாப் போலுற்றுக் கூறு மாவும்
தீததா யுலர்ந்துவாய் வாளலொடு கைத்தனெஞ் செரிவு குளிரல்
ஓதுதலை வலித்தல்சுர மிகுந்துமேல் வீசலிவை யோதி னாரே.

- ❖ Moderate ulceration in the tongue
- ❖ Redness with white coated tongue
- ❖ Dryness of the month
- ❖ Headache
- ❖ Fever

சோதியக்கரக் குறிகுணம் (Ischemic Colitis)

சோதியது நாவில்வரி னாவும் வேதல்
தொடர்நிறமும் பல்லழுக் குறுமுந் நாடி
வேதனையாய்த் துடிதுடித்தல் தலையு மிடிபோல்
வேகமா யிடித்தல்வலி கணுகால் கணைக்கால்
தீதுபுரிந் துளைதல்சுரம் வீசலுடன் கழிதல்
திகழ்வாந்தி மிகவெடுத்தல் வயிற்றி னுள்ளும்
ஓதுகின்ற மேற்புறமு மோய்வின்றி யெரிதல்
மேவலென மருந்து நூல் விளம்புகின்றே தன்றே .

- ❖ Ulceration of the tongue
- ❖ Claudication pain
- ❖ Fever

- ❖ Dysentry
- ❖ Vomiting with burning sensation in the mouth

வீமி அக்கரக் குறிகுணம்

நன்றான வீமியது நாவில்வரி னதுபரும னற்றா ழையின்
கன்றான் குரத்தைமெல் நிறமாதல் வேதல்வாய் கருமை மேனி
முன்றாவு தலைநோத லிவையென்று முன்னோர்கள் சொன்ன
வன்றாக நெஞ்சடைப் பீரலதி னோதல் குளிர் வாய்தல் மிகவேதாமே.

- ❖ Thickening of the tongue
- ❖ Redness and ulceration of the tongue
- ❖ Headache
- ❖ Hepatic pain

குண்டியக்கரக் குறிக்குணம் (Scarlet Fever)

குண்டியது நாவில்வரி னீரலது வெந்துநாக் கொதித்தெ முந்து
மண்டுநாச் செம்மையாய் வாய்கூச லிருமுதல் வயிறு கழிதல்
விண்டுடல் கடுத்தனெஞ் சிற்கரித் தெதிரெழல் விலாவி னோர்சார்
கண்டுநோ தலினுடன் னீர்வேட்கை யிவைவந்து கதிக்கு மன்னே

- ❖ Affected liver produce redness of the tongue
- ❖ Dysentry
- ❖ Body tiredness
- ❖ Nausea
- ❖ Excess thirst
- ❖ Pain in one side of the thoracic cage

கபாலியக்கரக் குறிகுணம் (Typhoid Fever or Amoebi Hepatitis)

கபாலியது நாவில் வரின் குடலீரல் னோய்

கனநெஞ்சு காடிச்சோ றதுபோற் பொங்கல்

அபாயநா வெந்தைந்தா நாள்வெ டித்தே

யதிலிருந்து குருதிநீர் வடித றலைநோய்

உபாயமா யுடல்வலித்தல் கனமு நீங்கா

துறுசுரமாய் வரனெஞ்சு நோதல் வயிறும்

விபாகமாய் நொந்திரைந்து பேதி யாதல்

வெகுண்டுவரு மென்முனிவர் விளம்பி னாரே.

- ❖ Intestine and liver both are affected
- ❖ Burning sensation in the throat
- ❖ Feeling of weightness of the body
- ❖ High fever
- ❖ Diarrhoea

குமரியக்கரக் குறிகுணம் (Diphtheria)

குமரியது நாவில்வரி னாகூசல் தடிப்பேறல் கூறுஞ் சதைநோய்

அமர்துயர்க னோதல்சுரம் வாய்கைத்தல் வாந்திமிகல் ஆர்ந்தவுண்ணா

அமர்மிக வளர்தல்பல் மஞ்சளுறல் தலைத் தோன்றி வளரு மூக்கில்

குமுறிரத்த மூன்றுநாள் வடிதலா மென்முனிவர் கூறி னாரால்.

- ❖ Dysphagia
- ❖ Feel bitter taste
- ❖ Fever
- ❖ Frequent vomiting

❖ Yellowish teeth

❖ Rhinitis

உள் அச்சரக் குறிகுணம்

மூக்குநீர்ப் பாய்ச்ச லாகும் முகமிக வெளிறிப் போகும்

நாக்குமே வெளுத்துப் பூக்கும் நாபிவா யாவி தோன்றும்

தூக்கமுஞ் சரமு மெத்தத் துணுக்கெனத் தண்ணீர் வாங்கும்

தீர்க்கவிக் குணங்கள் கண்டால் திகமுள்ளச் சரமு மாமே.

❖ Rhinitis

❖ Pale of the face - Pallor face

❖ White coated tongue

❖ Drowsy

❖ Excess thirst

❖ Fever

II. In Pararasasekaram – Balaroga nithanam

அக்கரத் தொகுப்பு (Types)

“கறுப்புடன் சிவந்த வெள்ளை காட்டுமுள்ளீரல் வாயிற்

பொறுத்திடு மக்க ரங்கள் போந்தவக் கரத்தின் மேவிச்

செறுத்திடு சரமுஞ் சன்னி சேருமக் கிரந்தி

ஒறுத்திடு குணஞ்சி கிச்சை யோது வலுணர்ந்து கொள்ளே

(பா-157)

❖ Karutha **Akkaram** - கறுத்த அக்கரம்

❖ Sivnadha **Akkaram** - சிவந்த அக்கரம்

❖ Vellai **Akkaram** - வெள்ளை அக்கரம்

❖ UI **Akkaram** - உள்ளக்கரம்

❖ Eral**Akkaram** - ஈரலக்கரம்

❖ Vay**Akkaram** - வாயக்கரம்

III. In Aathmarakchamirtham

“ சொன்னா ரட்சர வகுப்புதன்னைச் சூட்டும் நீலி சூலியென

மன்னே சோதி வீமியென வகுத்த சூலிக பாலியெனப்

பொன்னே குமரியுள்ளட்சரம் போற்றித் தொகையதெட்டே

அன்னே வகுப்பு நாமுரைத்தோ மறைந்தோ மாந்தற்கிதுவாமே”

These Types are same as Balavagadam

IV. In Roganirayasaram

1. வாதமுக பாகம் (Vatha mugha bhagam)

வியான வாயுவினால் வாயில்

- சிவப்பான ரணமாகி (Redness)

- உதடுஉப்புதல் (Swelling tips)

- நாக்கு வெளுத்து வெடித்தல் (Fissure & coated tongue)

- வாய் முள் போன்று அருகுதல்

2. பித்த முகபாகம் (Pitha Mugabhagam)

பித்தத்தினால் வாயிக்குள் ஆவியைப் போல புகை எழும்புதல், நோவு, (pain)

3. சிலேஷ்ம முகபாகம் [Slashma mugabhagam]

கபத்தினால்

- நாக்கில் ரணம் (Pain)

- தினவு (Irritation)

- வாயிலினிப்பு (Sweetness)

4. திரிதோஷ முகபாகம் (Trithoshamugabhagam)

வாதாதி மூன்று முகபாக ரோகங்களின் லக்ஷணங்கள் ஒரே காலத்தில் காணும்.

5. ஊர்த்துவ சூதம் (Uruthuva sutham)

அபாண வாயு மலஜலாதிகளில் தோய்ந்து மேல்நோக்கால் வாயில் துர்க்கந்தம் (Foul smell) உண்டாகும்.

6. கண்டாற்புதம் (Kandarputham)

ரணம் கண்டத்திலுண்டாகி கபாலத்தில் சேர்வதால். அங்கிருந்து கறுத்து (அ) வெளுத்து ஜலமாய் நாசி (அ) தொண்டை வழியாக வடியும்.

7. பூர்த்தியாசியம் (Poorthiyasiam)

- நெஞ்சில் துர்க்கந்தம்
- பற்கள் கறுத்து தூணல்

8. ரத்தமுக பாகம் (Rattha muga bhagam)

பித்தத்தினால் வாய்குள் ஆவியைப்போல புகை, வாய்ரத்தம் போல சிவந்த நிறமாயிருக்கும்.
தீராது - ஊர்த்துவ சூதம்.

Vitiation of Mukkutram

According to siddha system of medicine, a disease is caused because of the disequilibrium in one (or) more among the Tridoshas namely Vatham, Pitham, Kapham that exist in human as Uyir thathukkal. The vitiation of vatham is due to irregular inadequate food habits and physical activities results indigestion, pain in abdomen, excesses salivation, vitiation of pitham results indigestion loss of routine activity, vitiation of kapham results tastelessness and indigestion.

In **Akkaram** (அக்கரம்) pitham is first got vitiated from its normal condition due to excess heat, spicy foods etc., Pitham and Kapham also gets vitiated and the symptoms are produced like Redness of the tongue, fissure in the tongue and lips, ulceration headache, prinking pain fever etc.

பிணியறி முறைமை (Diagnosis)

It is the method of diagnosing a disease Siddha system has a very unique methods of diagnosis, which solely depends upon the clinical skills of the physician. There are three methods. They are

- ❖ பொறியாலறிதல் (Inspection)
- ❖ புலனாலறிதல் (Palpation and percussion)
- ❖ வினாதல் (Interrogation)

1. Poriyalarithal is understanding by the five organs of perception namely- nose, tongue, eyes, skin and ears.

2. Pulanalarithal is understanding by the objects of sense namely smell, taste, light, touch and sound

3. Vinadhhal is a method of enquiring the details of the patients problem from his / her own words or from attendants.

The prime method to diagnosis the disease is by means of “Enn vagai Thaervugal” இவற்றை

“நாடி ஸ்பரிசம் நா நிறம் மொழி விழி

மலம் மூத்திரமிவை மருத்துவ ராயுதம்”

“மெய்க்குறி நிறந் தொனி விழிநா விருமலம் கைக்குறி”

என்பதால் அறியலாம்

- தேரையர்

In Agathiyar Vaidhya Vallathi – 600

“தொடுக்கலுற்ற அட்டவிதப் பரீட்சை தன்னை
துலுக்கமுறும் பண்டிதரே தெளிவாகப்
பகுக்கரிய நாடியை நீ படித்துப்பாரு
பகர்கின்ற வார்த்தைப்பார் நாவைப்பாரு
வகுக்கரிய தேகமெனத் தொட்டு பாரு
வளமான சரீரத்தின் நிறத்தைப் பாரு
சகிக்கரிய மலத்தைப் பார் சலத்தைப்பாரு
சார்ந்த விழி தனைப் பார்த்து தெளிவாய்காணே”

Enn Vagai Thaervugal (எண்வகைத் தேர்வுகள்)

It is a method which helps the physician to come to correct diagnosis

They are:

- ❖ ஃ i (Tongue)
- ❖ ஃஃஃஃ (Colour)
- ❖ |Á iÆஃ (Speech)
- ❖ ÅஃÆஃ (Eye)
- ❖ ŠÀÃஃ°õ (Sense of touch)
- ❖ ஃ iÊ (Pulse)
- ❖ ÁÃõ (Stools)
- ❖ ãð¾ஃÃõ (Urine)

1. Naa (Tongue)

By seeing the colour of the tongue coated or not and ulcers, the diagnosis made. The damaged humour can be found. In **Akkaram (அக்கரம்)** the tongue is coated and tissues and there in tastelessness

2. Niram (Colour)

The colour indicates if the disease is due to the vatha, pitha or kapha. In **Akkaram (அக்கரம்)** the skin is normal in colour

3. Mozhi (Speech)

The volume, clarity and any disturbance in speech is useful to diagnose. In **Akkaram (அக்கரம்)** there is normal to speech.

4. Vizhi (Eye)

Here the colour changes lacrimation visual disturbances are to be noted. In **Akkaram (அக்கரம்)** there is no specific change of vision.

5. Sparisam (Sensation)

By the temperature of the skin, smoothness, dryness, any swelling, tenderness can be felt for diagnosing. In **Akkaram (அக்கரம்)** there is fever some times.

6. Naadi (Pulse)

This is an unique diagnostic method in siddha system of medicine. It is responsible for the existance of life. In **Akkaram (அக்கரம்)** pithakapha.

It is felt one inch below the wrist on the radial side by means of palpating with the tip of index finger, middle finger and ring finger which denotes vatham, pitham and kapham

“கரிமுகனடியை வாழ்த்தி
கைதனில் நாடி பார்க்கில்
பெருவிரலங்குலத்தில்
பிடித்தடி நடுவே தொட்டால்
ஒரு விரலோடில் வாதம்
உயிர் நடுவிரலில் பித்தம்
திருவிரல் மூன்றிலோடில்
சிலேத்தும நாடி தானே”

- அகத்தியர் நாடி

Vatham, Pitham, Kapham are in the ratio of 1: ½ : ¼ If the ratio changes disease occur also many criteria are to be put in mind while using naadi as a diagnostic tool. In male it should be felt in the right hand and in female it should be felt in the left hand. This is because of the position of the Nabi Koormam it is upward in female and downward in male .

“உறுதியுள்ள பித்தமது தோன்றி வெப்பு
உண்ண வாயு அத்தி சுரமதிசாரங்கள்

.....

7. Malam (Stools)

The colour, odour, consistency, tightness of the stools and taken as criteria.

In **Akkaram (அக்கரம்)** constipation may be noted.

Methods

To see Neikuri before collecting the urine, the doctor advise to the patient to take a balanced diet and have a good sleep. After waking up from the bed in the morning, the first urine is collected in a clean glass container and examined within one hour. A drop of gingely oil is to be dropped in the urine and seen in direct sunlight.

À;¼ çÉÃçý ¼ý" Á, ù

“அரவென நீண்டின.:தே வாதம்”

When the drop of oil spreads like a snake it indicates vathaneer.

Àçò¼ çÉÃçý ¼ý" Á, ù

“ஆழிபோல் பரவின் அ.:தே பித்தம்”

It spreads like a ring, it denotes pithaneer.

, Ì çÉÃçý ¼ý" Á, ù

“முத்தொத்து நிற்கின் மொழிவதன் கபமே”

If the oil drop remains like a pearl it is kaba neer

|¼;ò¼ çÉ÷

“அரவிலாழியும் ஆழியால் அரவும்

அரவின் முத்தும் ஆழியில் முத்தும்

தோற்றல் தொந்த தோடங்களாமே”

If the dropped oil shows a combination of two shapes it indicates Thonthaneer. In **Akkaram** the urine is pithaneer.

§ç;ö ,¼çòò ÅçÅ;¼ö (DIFFERENTIAL DIAGNOSIS)

Akkaram (அக்கரம்) should be differentiated from the following diseases which resemble **Akkaram** (அக்கரம்) .

1. «î °Ã Ā; 6¼õ

- ❖ Fever with rigor.
- ❖ Dysentry
- ❖ Fissure and ulcer in lips and mouth.
- ❖ Emaciation

In **Akkaram** (அக்கரம்) all symptoms are not present.

Except fissure and ulcer in lips and mouth.

2. °Đ Ā; 6¼ , ½õ

- ❖ Generalised Edema
- ❖ Ulcer in the tongue
- ❖ Fever
- ❖ Anorexia
- ❖ Fatigue
- ❖ Tachypnea

In **Akkaram** (அக்கரம்) all symptoms are not present. Except

ulcer in the tongue and fever.

3. ೆ£÷ , ½õ

- ❖ Intermittent fever
- ❖ Excessive thirst
- ❖ Sweating
- ❖ Shunkeneye

- ❖ Fissure and dryness of the mouth.
- ❖ Watery stools
- ❖ Shining of the face and leg.

In **Akkaram (அக்கரம்)** all symptoms are not present.

Except Fissure and dryness of the mouth.

4. யீர்ஊர், ½ஓ

- ❖ Ulceration in throat, tongue and oral cavity
- ❖ Cough
- ❖ Flatulence
- ❖ Does not feed breast milk.
- ❖ Tachypnea

In **Akkaram (அக்கரம்)** all symptoms are not present.

Except ulceration in throat, tongue and oral cavity.

Final diagnosis

Akkaram (அக்கரம்) is confirmed by comparing the identities and differences of the signs and symptoms and results obtained by Envagai thervugal, Naadi and Mukkutram.

Prognosis

According to Balavagadam, Suli **Akkaram (அக்கரம்)**, Neethi, Soothi, Veemi, Kundi, Kabali, Kumari and Ul **Akkaram (அக்கரம்)** are curable varieties of **Akkaram (அக்கரம்)** by proper treatment.

Treatment (மருத்துவம்)

According to siddha system, the line of treatment is divided into three types

They are

- ❖ , i ô ò (prevention)
- ❖ ç Æ î , ò (Management)
- ❖ ç ç " È × (Restoration)

Kappu (Prevention)

"§ ç i ò ç i Ê § ç i ò Ó ç ò ç i Ê « Ð ç ç ì ì ò
 Å i ò ç i Ê Å i ò ô Æ î | ° Æ ø "

Sage Thiruvalluvar also says some preventive measures.

1. Á Ò ó | ç Ê § Æ ñ ç i Å i ò Å i î " , î
 , Ò ó ç ç Æ ç ü È Ð § Æ ; ü È ç Ô ç ç ý .
2. þ Æ ç Æ È ç ó Ð ñ Æ ; ñ , É ç ý Æ ò § Æ ; É ç ü ì ò
 , Æ ç § Æ Æ ç " Æ Æ ; ý , ñ § ç i ò .
3. Á ; ú Æ ; Ê ø Æ ; ç - ñ Ê Á Ò ò Ð ñ ç ç ý
 ° ú Æ ; Ê ø " Æ - Æ ç ÷ ì ì

Prevention of disease is the basic principles of any medical system .
 Siddhars have told us a rational and scientific way for prevention of illness.
 Protection of child afrom disease starts from conception and goes in as the
 child grows up in intra uterine life and also after birth Siddhars have dealt
 elaborately with the specific diet of pregnant women their daily habits and
 medicines to be taken in every month. They have also laid down the
 environmental conditions in which they should stay.

Prevention is also classified into primary and also secondary

Primary prevention

It is defined as action taken prior to the onset of disease which removes the possibility that diseases will never occur.

Naal Ozhukkam, Kaala Ozhukkam and Noi anuka vethi have been described in Siddha text as primary prevention.

Secondary prevention

It is defined as action which halts the progress of a disease at its initial stage and prevents complications. The specific interventions are early diagnosis and adequate treatment.

Noi Neekam (Management)

The aim of Noi Neekam is based on

1. Bringing the mukkutram to equilibrium
2. Treatment of the disease with medicines
3. Diet restriction

Siddha system medicine is based on the mukkuutra theory and hence the treatment is mainly aimed to bring down the tridhasas to their equilibrium state and thereby restoring the physiological condition of various thathus.

"ÀÇÛÃ°ÉÒ¼;ø Å;¼õ ¼;Øõ
ÅÁ½Ò¼;ø ÀÇÒ¼õ ¼;Øõ
¿°ÇÂ «i°ÉÒ¼;ø ,Àõ ¼;Øõ"

Treatment of disease under study

After the tridhosas where brought down to their equilibrium state. The signs and symptoms of disease should be treated properly.

For this study *Athemathura nei* has been selected for the treatment. It was given internally about 4gm two times daily after meals for each patients. Depending upon age and severity of the disease.

Age	Dosage
3 – 5 years	2mg to times daily
5 – 7 years	4mg to times daily

Other Medicines of Akkaram

1. Akkra sanjeevikuligai – 1 tds with hoeny
2. Akkara kuligai – 1 tds with honey
3. Amuthathi kuligai – 1 bd with breast milk
4. Thuthu valai nei – 4ml bd

Dietary Restriction (பத்தியம்)

During the course of treatment all the patients where given uniform hospital diet. The patients were also advised to follow certain precautions in diet and physical activity. They were advised to get rid off spicy food, roughaged diet, semi-cooked and unhygienic diet.

ஆகும் பதார்த்தங்கள்

- * வெள்ளரி
- * புடல்
- * பீர்க்கு
- * அவரை
- * கல்யாணபூசணி
- * கத்தரி
- * சிறுகீரை
- * வாழைப்பூ
- * முருங்கை இலை
- * தூதுவளை
- * வல்லாரை
- * மணத்தக்காளி

- பதார்த்த குண சிந்தாமணி

ஆகா பதார்த்தங்கள்

- * காரமான உணவு பதார்த்தங்கள்
- * எண்ணெய் பதார்த்தங்கள்
- * புளிப்புடன் கூடிய பொருள்கள்
- * மணப்பொருள் நிறைந்த உணவு.

- பதார்த்த குண சிந்தாமணி

Niraivu (Restoration)

After the treatment efforts should be taken to clear the residual effects of the disease to bring back the normal body condition of the patient . Patient should also be advised to adhere to the preventive methods like

- * To avoid spice foods
- * To avoid fried food substance
- * To avoid pungent food substance
- * To use only boiled water
- * To have timely diet

All the above restriction were adhered to by the patients under study during the course of treatment.

MODERN ASPECT

The term pediatrics is derived from the Greek word. Pediatric is concerned with the health of infants, children and adolescent their growth and development and their opportunity to achieve full potential as adults. It has come to mean the science child care in the present day and includes planned preventive and curative care of children.

Hippocrates of Greece (460 – 370 BC) the father of modern medicine had devoted a great part of his treatise to children and made many significant observation on diseases found in children. The world first pediatrician kashyapa an jeevaka were indians who lived in sixth century BC and whose pioneering works on child care and children's diseases are as relevant today as many of the modern concepts of child health.

In early histories of topical countries, many practices in child care which were different from those of the west became traditional. Some of these practices are beneficial in condition existing today such as prolonged breast feeding and demand feeding infants while many, which still continue. Now the traditional habits started replacing old one. Coffee and tea used first by the adults are given to childrens in the weaning period especially when milk is not available unfamiliar infants foods like condensed milk, often too dilute leads to malnutrition.

Population dynamics

Estimated population of in India as per 2001 – 2010 census was 100 crores which of the child population was forming 40% of the total. In the child population 17% are under the age of 5 yrs.

Pre school period (1-5 yrs)

The size of family, and the incidence of calorie malnutrition, vitamin deficiencies, common infection and morbidity rate are found higher after the second child. Family income, housing condition, environmental sanitations, education and availability of medicare for children are also important factors.

Low family income is directly related to low birth weight, high frequency of protein calorie malnutrition and vitamin deficiencies.

Riboflavin, a vitamin essential to embryonic growth, is transported across the fetoplacental membranes by riboflavin carrier protein.

Scientists suspect that riboflavin deficiency affects psychomotor functions and impairs collagen maturity and wound healing.

A greater number of infants, if exclusively breast fed without vitamin supplementation, may not meet their daily need for riboflavin. I have may be correlate the disease **Ariboflavinosis** in modern aspects.

Anatomy of the oral cavity (Mouth)

The cavity of the mouth (oral or buccal cavity) is placed at the commencement of the digestive tube. It is nearly oral shaped cavity consist of two parts. An outer smaller portion the vestibule and an inner layer part the mouth cavity proper vestibule.

The Vestibule (Vestibulum oris) is a slit like space, bounded externally by the lips and cheeks internally by the gums and teeth. It communicates with the surface of the body by the rima of the mouth. Superiorly and inferiorly it is limited by the reflexion of the mucous membrane from the lips and cheeks to the gums covering the upper and lower alveolar arches respectively. It receives the secretion from the parted salivary gland.

Mouth cavity proper

It is bounded laterally and ventrally by the alveolar arches with their contained teeth dorsally it communicates with the pharynx by a constricted aperture termed the isthmus faucium. It is roofed in by the hard and soft palates. While the greater part of the floor is formed by the tongue, the remainder by the reflection of the mucous membrane from the sides and under surface of the tongue to the gum lining the inner aspect of the mandible. It receives the secretion from the submandibular and sublingual salivary gland.

Lips

The lips (labia oris), the two fleshy folds that surround the rima or orifice of the mouth, are covered externally by integument and internally by mucous membrane between which are found the orbicularis oris muscle, the labial vessels, some nerves, areolar tissue, fat and numerous small labial glands. The inner surface of the lips is connected in the mid line to the corresponding gum by a median fold of mucous membrane, the

frenulum. The labial glands are situated between the mucous membrane and the orbicularis around the orifice of the mouth.

Cheeks

The cheeks (buccae) form the sides of the face and are continuous anteriorly with the lips. They are compared externally of in tegument and internally of mucous membrane between the two are a muscular stratum a large quantity of fat [corpus adiposum buccae]. coreolar tissue, vessels nerves and buccal glands. The buccal glands are placed between the mucous membrane and buccinator muscle.

Structure of the cheeks

The mucous membrane lining the cheeks is reflected above and below upon the gums and is continuous behind with the lining membrane of the soft plate. The muscle of the cheek in the buccinator but other muscles enter into its formation viz. The zygomaticus, risorius and the platysma muscles.

Gums

The gums (gingivae) are composed of dense fibrous tissue that is closely connected to the periosteum of the alveolar processes and surrounds the necks o the teeth . They are covered by a smooth vascular mucous membrane.

Palate

Palate forms the roof of the mouth. It consists of two portions. The hard palate anteriorly and soft palate posteriorly

Hard palate [Palatum durum]

The hard palate forms the roof of the mouth and separates the oral and nasal cavity. It is bounded anteriorly and the sides by the alveolar arches and gums. Posteriorly it is continuous with soft palate

Soft Palate

The soft palate (Palatum molle) is suspended from the posterior border of the hard palate. It consists of a fold of mucous membrane that encloses muscular fibers and aponeurosis, vessels, nerves, lymphoid tissue and mucous glands. When elevated as in swallowing and in sucking, it completely separates the nasal cavity and nasopharynx from the posterior part of the oral cavity and oral portion of the pharynx. Anterior surface is concave and continuous with the roof of the mouth posterior surface is convex and continuous with mucous membrane that covers the floor of the nasal cavities.

The tongue

The tongue (lingua) is the principal organ of the sense of taste and an important organ of speech it assists in the mastication and deglutition of food. It is situated in the floor of the mouth within the curve of the body of the mandible.

Borders and surfaces

Root

The posterior part of the tongue is connected with the hyoid bone by hypo glossus and genioglossus muscles and hyoglossal membrane

Apex

It is some what attenuated anterior and which rest against the lingual surface of the lower incisor teeth.

Inferior surface

It is connected with mandible by the mucous membrane which is reflected over the floor of the mouth to the lingual surface of the gum

Dorsum

It is convex and marked by a median sulcus

Papillae

The papillae of the tongue are projection of the corium, thickly distributed over the anterior 2/3 of its dorsum.

The varieties of papillae are

- ❖ Vallate papillae – Circumvillate papillae – dorsum of the tongue
- ❖ Fungi form papillae – Sides and apex of the tongue.
- ❖ Filiform papillae – conical papillae – anterior 2/3 of the dorsum
- ❖ Papillae simplices – similar to those of skin and cover the entire mucous membrane of the tongue.

Muscles

Extrinsic Muscles	Intrinsic muscle
1. Genio glossus	1. Superior longitudinal
2. Hyo glossus	2. Inferior longitudinal
3. Chondro glossus	3. Transverse
4. Stylo glossus	4. Vertical
5. Palato glossus	

Taste Buds

Its end organs of the gustatory sense are scattered over the mucous membrane of the mouth and tongue.

Vessels and nerves

Artery

1. Lingual branches of External carotid artery.
2. Facial and ascending pharyngeal arteries.

Vein

Internal Jugular vein.

Nerves

1. Lingual branch of mandibular nerve
2. Chorda tympani branch of facial nerve
3. Lingual branch of Glossopharyngeal nerve.
4. Superior Laryngeal nerve

Lymphatic vessels from the mouth

Hard Palate – submandibular nodes

Soft Palate – Retro pharyngeal and sub parotid nodes

Floor of the mouth – Interior nodes of the superior deep cervical group.

Lymphatic vessels from tongue

1. Apical – Supra hyoid node, jugulo omohyoid node
2. Lateral or marginal – Sub mandibular node, superior deep cervical node
3. Basal – Superior deep cervical node
4. Median or central – superior and inferior deep cervical lymph node.

Physiology of the Mouth:

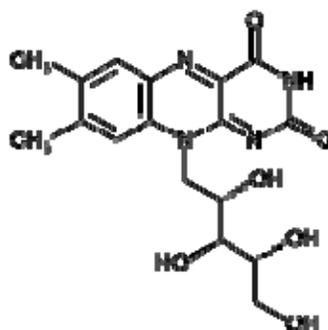
The functions of mouth are the ingestion of food materials, chewing and mixing the food with saliva, appreciation of the taste of food and transfer of food to esophagus by swallowing, digestive juice present in the mouth is saliva. It is secreted by the salivary glands.

The disease **Akkaram** (**அக்கரம்**) occurs in oral cavity hence the different parts of oral cavity are above explain.

VITAMIN

The word vitamins refers to organic compound required in minute amounts of catalyze cellular metabolism essential for growth or maintenance of the organism.

Riboflavin (B₂)



Systematic name	:	Riboflavin
Chemical formula	:	C ₁₇ H ₂₀ N ₄ O ₆
Molecular mass	:	376.369 g/mol
Melting point	:	290 °C (dec.)
CAS number	:	[83-88-5]

Riboflavin, also known as vitamin B₂, is an easily absorbed micronutrient. It is sparingly soluble in water sensitive to light and alkali and stable to heat, oxidation and acid. It is the central component of the cofactors FAD and FMN, and is therefore required by all flavoproteins. As such, vitamin B₂ is required for a wide variety of cellular processes. Like the other B vitamins, it plays a key role in energy metabolism, and is required for the metabolism of fats, carbohydrates, and proteins.

Source of Vitamin B₂

- Milk
- Cheese
- Meat
- Egg
- Fish
- Liver
- Kidney
- Leafy green Vegetables
- legumes (mature soybeans)
- Yogurt
- Yeast
- Almond
- Asparagus
- Okra
- Chard

are good sources of vitamin B₂, but exposure to light destroys riboflavin. Riboflavin is not toxic when taken orally, as its low solubility keeps it from being absorbed in dangerous amounts from the gut. Although toxic doses can be administered by injection, any excess at nutritionally relevant doses is excreted in the urine, imparting a bright yellow color when in large quantities. Riboflavin is continuously excreted in the urine of healthy individuals, making deficiency relatively common when dietary intake is insufficient. However, Riboflavin deficiency is always accompanied by deficiency of other vitamins.

In processed foods it is very likely to have been produced synthetically using genetically modified *Bacillus subtilis*, altered to both increase the bacteria's production of riboflavin and to introduce an antibiotic (ampicillin) resistance marker.

Riboflavin is yellow or orange-yellow in color and in addition to being used as a food coloring it is also used to fortify some foods. It can be found in baby foods, breakfast cereals and pastas, sauces, processed cheese, fruit drinks and vitamin-enriched milk products , and is widely used in vitamin supplements.

Physiology

It is a constituents of flavo protein enzymes important in hydrogen transfer reactions, amino acids, fatty acids and carbohydrate metabolism and cellular respiration. It is also a constituent of retrival pigment for light adaptation.

Bio – Chemical reaction

It is in the form of coenzymes and takes part in various oxidation reduction reaction.

Daily requirements

Children - 1 – 1 to 1 – 3 mg / day

Pregnant or nursing women - 1-6 mg / day

ARIBOFLAVINOSIS

It is the medical condition caused by deficiency of riboflavin. It is most often seen in association with protein and energy malnutrition and other members of the vitamin B-complex group. It was originally known as pellagra sin pellagra, as it exhibits certain similarities to the niacin deficiency pellagra.

Etiology

- Mal nutrition (Primary due to not getting enough of the vitamin from the diet)
- Malabsorption (Secondary affects the absorption in the intestine).

Clinical Manifestation

Signs and Symptoms

- ❖ Sore throat with redness.
- ❖ Swelling of the mouth and throat mucosa
- ❖ Glossitis [meganta tongue with atrophy]
- ❖ Cheilosis [scaling and fissures at the corners of the mouth]
- ❖ Nasolabial dysbasia
- ❖ Circum corneal vascularization
- ❖ Keratitis
- ❖ Altered temperature and pain sensation
- ❖ Watering of eyes
- ❖ Photophobia

- ❖ Blurring of vision
- ❖ Normochromic Normocytic anaemia
- ❖ If the pregnant mother is riboflavin deficient growth and development retarded.

Differential Diagnosis

- ❖ Herpes simplex
- ❖ HIV (Hairy Leukoplakia)
- ❖ Oral Candidiasis
- ❖ Aphthous ulcer
- ❖ Cancer of the oral cavity

Complication

- ❖ Diarrhea
- ❖ Peripheral neuropathy
- ❖ Seborrheic dermatitis

Diagnosis

- ❖ Urinary riboflavin excretion < 30 µg in 24 hrs.
- ❖ A positive diagnostic test for measuring levels of riboflavin in serum is ascertained by measuring erythrocyte levels of glutathione reductase.

Clinical uses

Riboflavin has been used in several clinical and therapeutic situations. For over 30 years, riboflavin supplements have been used as part of the phototherapy treatment of neonatal jaundice. The light used to irradiate the infants breaks down not only the toxin causing the jaundice, but the naturally occurring riboflavin within the infant's blood as well.

More recently there has been growing evidence that supplemental riboflavin may be a useful additive along with beta-blockers in the treatment of migraine headaches.

Development is underway to use riboflavin to improve the safety of transfused blood by reducing pathogens found in collected blood. Riboflavin attaches itself to the nucleic acids (DNA and RNA) in cells, and when light is applied, the nucleic acids are broken, effectively killing those cells. The technology has been shown to be effective for inactivating pathogens in all three major blood components: (platelets, red blood cells, and plasma). It has been shown to inactivate a broad spectrum of pathogens, including known and emerging viruses, bacteria, and parasites.

Treatment

3 – 10 mg riboflavin PO daily.

MATERIALS AND METHODS

The dissertation work on *Akkaram* (அக்கரம்) was carried out during 2006 – 2007 post graduate department of Kuzhanthai maruthauvam Govt. Siddha Medical college palayamkottai

Selection of Patients

The children affected by *Akkaram* (அக்கரம்) for clinical study were selected in 20 cases of both sexes at the age group of 3 – 7 years (paruvangal namely (ஈஓ", ஈஓஈஓ, «ஓஓஈஓ, °ஓஓஓஓ, °ஓஓஓஓ, °ஓஓஓஓ, °ஓஓஓஓ, °ஓஓஓஓ) for admission inpatients ward according to the signs and symptoms mentioned in Balavagadam.

Parameters of Case Selection

- ❖ Redness of the tongue
- ❖ Fissures in lips and angle of the mouth
- ❖ Excess salivation
- ❖ Headache
- ❖ Pricking pain
- ❖ White coated tongue
- ❖ Fever

In this study certain criteria were followed based on clinical symptoms nutritional status, seasonal variation, economic status and family history. The confirmation of clinical diagnosis was using on both siddha and modern parameters.

Investigation Methods

The diagnosis of **Akkaram** more or less got correlated with the disease called Ariboflavinosis in modern medicine . Under siddha aspect diagnosis was made under the following criteria.

- ❖ Mukkutra nilai
- ❖ Ennvagai thaervu
- ❖ Udal Kattukgal
- ❖ Kaalam
- ❖ Nilam
- ❖ Neerkuri
- ❖ Neikuri

Under modern methods routine laboratory Investigations which were mentioned below were depended upon.

a) Haematological Investigation

- ❖ Total WBC count
- ❖ Differential WBC count
- ❖ Packed Cell Volume
- ❖ Haemoglobin percentage

b) Urine Analysis

- ❖ Albumin
- ❖ Sugar
- ❖ Deposits

SELECTION OF DRUG

Athemathuranei – 4 gm two times daily after meals depending upon the age and severity of the disease.

The Pharmacological and Biochemical study of drug was conducted at the Department of Pharmacology and Department of Biochemistry, Govt. Siddha medical college, Palayamkottai respectively.

All the patients admitted for the study were given uniformly regular diet provided by the hospital. During discharge all the patients advised to attend the outpatients ward of the department of Kuzhandai Maruthuvam Branch, Govt. Siddha Medical College Hospital, Palayamkottai for further follow up.

RESULTS AND OBSERVATION

Results were observed with respect to the following criteria

1. Sex distribution
2. Age distribution
3. Religion distribution
4. Socio Economic status
5. Food habits
6. Mukkutra kaalam
7. Paruva kaalam
8. Thinai
9. Mukkutra theory
10. Udal Kattugal
11. Ennvagai Thaervugal
12. Neikuri
13. Udal vanmai
14. Duration of disease
15. Aetiological factors
16. Clinical features
17. Investigation
18. Results

BRIEF PROFILE OF THE PATIENTS UNDER STUDY

1. Sex Distribution

S.No	Sex	No.of Cases (out of 20)	Percentage
1.	Male	19	95
2.	Female	1	5

Out of the 20 patients, majority (95%) of the cases were male and 5% of cases are female.

2. Age Distribution

S.No	Age (In years)	No. of Cases	Percentage
1.	3-5 ÅÕ", ÆÕÅõ, «õÒÄç, °çüÈçø, °çÚÀ"È, °çÚ§¼÷ ÅçÎ¼ø	7	35
2.	5-7 §À"¼ – female, °çÚÀ"È – Male.	13	65

Among the 20 cases, majority (65%) of the cases were in the age group 5-7 years and 35% of the cases were in the age group 3 -5 years (35%).

3. Religion distribution

S.No	Religion	No.of Cases	Percentage
1.	Hindu	14	70%
2.	Christian	3	15%
3.	Muslim	3	15%

Among the 20 cases, 70% of the cases were Hindu, and 15% of cases were Christian and Muslim.

4. Socio – Economic Status

S.No	Socio - Economic status	No.of Cases	Percentage
1.	Poor	15	75
2.	Middle class	5	25

In the study 75% of the cases were form poor economic status and 25% of the cases were formed middle class.

5. Food Habits

S.No	Food habits	No.of Cases	Percentage
1.	Vegetarian	4	20
2.	Non –Vegetarian	-	-
3.	Mixed	16	80

Among the 20 cases, food habits of the respondents show that majority (80%) used to take both vegetarian and non-vegetarian in their daily diet. 20% of cases were vegetarian only.

6. Mukkutra Kaalam

S.No	Mukkutra kaalam	No.of Cases	Percentage
1.	Vatham	20	100
2.	Pitham	-	-
3.	Kapham	-	-

According to siddha system 1/3 of 100 years of human life are referred to as vatha kaalam – referred to age from birth to 33 yrs 4 months.

Pitha kaalam – referred to age from 33 yrs 4 months to 66 yrs 8 months.

Kapha kaalam – referred to age from 66 yrs 8 months to 100 yrs.

All of the cases were under Vatha Kaalam and none under Pitham and Kapham.

7. Paruva kaalam

S.No	Paruvakaalam	Mukkutra Valarchi	No. of cases	Percentage
1.	Karkaalam Aug – oct Avani – puratasi	Vatham – Vetrunilai valarchi -↑↑ Pitham – Thannilai valarchi ↑	-	-
2.	Koothirkaalam oct – dec lyppasi – karthikai	Vatham – Thannilai adaithal (-) Pitham - Vetrunilai valarchi ↑↑	1	5

3.	Munpani Dec – Feb Markazhi – Thai	Pitham - Thannilai adaithal (-)	12	60
4.	Pin pani Feb – Apr Masi – Panguni	Kapham - Thannilai valarchi ↑	2	10
5.	Elavenil Apr – June Chitirai, Vaigasi	Kapham - Thannilai adaithal ()	3	15
6.	Muthuvenil June – Aug Aani, Aadi	Vatham - Thannilai valarchi ↑ Kapham - Thannilai adaithal ()	2	10

↑↑ - Vetrunilai Valarchi

↑ - Thannilai Valarchi

(-) - Thannilai

Of the 20 cases, 60% were seen to develop the disease during Munpani kaalam 15% were seen to develop during Elavenil, 10% of case in Muthuveni and 5% of the cases were seen to develop the disease in muthuvenil kaalam.

9. Thinai

S.No	Thinai	No.of Cases	Percentage
1.	Kurinji	-	-
2.	Mullai	-	-
3.	Marutham	20	100
4.	Neithal	-	-
5.	Paalai	-	-

- Kurinji – Hills and its surroundings
Mullai – Forests and its surroundings
Marutham – Fields and its surroundings
Neithal – Sea and its surroundings
Paalai – Desert and its surroundings

All of the cases under study are found hailing from Marutha nilam, none under other types.

10. Mukkutra Theory

A) Derangement in the types of vatham

S.No	Types of vatham	No. of Cases	Percentage
1.	Pranan	-	-
2.	Abanan	-	-
3.	Viyanan	-	-
4.	Uthanan	15	75

5.	Samanan	20	100
6.	Nagan	-	-
7.	Koorman	-	-
8.	Kirukaran	20	100
9.	Devathathan	15	75
10.	Dananjeyan	-	-

- Piranan - Maintaining Respiratory Function
- Abanan - Expelling faeces, urine, semen, menstrual bleeding
- Viyanan - Locomotor activity
- Uthanan - Digestion & absorption
- Samanan - Balancing 6 taste & water
- Nagan - Eye opening & closing
- Koorman - opening & closing of eye lids & yawning & closing of mouth
- Kirukaran - Saliva secretion, Nasal secretion, Sneezing & Cough
- Devathathan- Tiredness, Laziness, Sorrow, Sleep, Argument
- Dananjeyan - Intracerebral pressure

All of the 20 cases were affected in samanan, and Kirukaran and ,
75% were affected in Udhanan and Devathathan.

B. Derangement in types of pitham

S.No	Types of pitham	No.of Cases	Percentage
1.	Analam	20	100
2.	Ranjagam	-	-
3.	Saathagam	20	100
4.	Pirasagam	-	-
5.	Aalosagam	-	-

Analam - Digestion

Ranjagam - Colour to blood

Prasagam - Gives complexion to the skin

Alosagam - Clarity of vision

Saathagam - Controls whole body

All the 20 cases (100%) were affected in Anala pitham and Saathaga pitham and none under other types

C. Derangement in types of Kapham

S.No	Types of Kapham	No.of Cases	Percentage
1.	Avalambagam	-	-
2.	Kelaethagam	15	75
3.	Pothagam	20	100
4.	Tharpagam	-	-
5.	Santhigam	-	-

Avalambagam - Control the Heart & Lung function

Kelaethagam - Helps digestion

- Pothagam - For taste
- Karpagam - Cooling of eyes
- Santhigam - Response for joint movements

Among the twenty cases pothagam were affected in 100% . & 75% cases were affected Kelaethagam.

11. Udal kattugal

S.No	Udal kattugal	No.of Cases	Percentage
1.	Saaram	20	100
2.	Senneer	20	100
3.	Oon	-	-
4.	Kozhuppu	-	-
5.	Enbu	-	-
6.	Moolai	-	-
7.	Sukkilam / Suronitham	-	-

- Saram - Fortifies the body and mind
- Senneer - Knowledge, Strength, Healthy complexion
- Oon - Movement of the body
- Kozhuppu - Lubrication of the joints
- Enbu - Protecting vital organs
- Moolai - Strengthen and maintain normal condition
- Sukkilam - Responsible for reproductive function

All of the twenty cases were affected by saaram, and senneer none under other types.

12. Ennvagai Thaervugal

S.No	Enn Vagai Thaervugal	No.of Cases	Percentage
1	Naa	20	100
2	Niram	-	-
3	Mozhi	20	20
4	Vizhi	-	-
5	Sparism	-	-
6	Malam	-	-
7	Moothiram	-	-
8	Naadi	-	-

- Naa - Fissure, wasting
- Niram - Colour of the tongue
- Mozhi - Type of speech
- Vizhi - Colouring of eyes
- Malam - Colour and consistency
- Moothiram - Frothy, Sedimentation and colour
- Sparisam - Soft or Rough, hot, cold
- Naadi - Type of pulse, Rate, Rhythm

All the 20 cases are affected Naa, Niram & Naadi none under others.

13. Neikuri

S.No	Character of urine	Neikuri Reference	No.of Cases	Percentage
1.	Spreads like snake	Vathaneer	-	-
2.	Spread like ring	Pithaneer	20	100
3.	Spreads like pearl	Kabaneer	-	-
4.	Spreads like snake in ring	Thontha neer	-	-

In Neikuri 100% of the cases fell in the category called pithaneer

14. Udal Vanmai

Mostly Kaala vanmai was affected Eyarkai vanmai was also affected.

The affected Mukkutram and udal vanmai had come to normal condition after treatment, Kaala vanmai was improved by seyarkai vanmai, that is by medicines and diet.

15. Duration of Treatment

S.No	Duration of Treatment	No. of Cases	Percentage
1.	5 – 10 days	16	80%
2.	10 – 15 days	4	20%

Among the 20 cases, majority (80%) of cases had duration of treatment ranging from 5 – 10 days 20% of the cases had duration of treatment 10 – 15 days

16. Aetiological factors

S.No	Aetiological factors	No. of Cases	Percentage
1.	Mal Nutrition	16	80
2.	Mal absorption	4	20

Mal Nutrition - Missing from diet components of Carbohydrate Fat, Protein, Minerals and Vitamins

Mal Absorption - Diarrhoea, Abdominal distension and failure to thrive

Among the twenty cases 80% of the case were developed disease due to malnutrition and 20% of the cases were due to mal absorption.

17. Clinical Features

A) Symptoms

S. No	Symptoms	No.of Cases	Percentage
1.	Sore Throat	15	75
2.	Fissure in lips and tongue	20	100
3.	Excess salivation	15	75

4.	Headache	10	50
5.	Malaise	12	60
6.	Fever	15	75
7.	Difficulty in Swallowing	15	75

Among the twenty cases, All (100%) had fissure in lips and tongue, 75% of the cases reported excess salivation, fever, difficulty in swallowing sore throat, 60% of the cases had Malaise, and 50% of the cases complaints of of having Headache.

17.Clinical Features

B) Signs

S. No	Signs	No.of Cases	Percentage
1.	Redness of the tongue	20	100
2.	White coated tongue	15	75
3.	Angular stomatitis	20	100
4.	Keratosis	-	-
5.	Nasolabial dysbasia	-	-
6.	Blurring of vision	-	-

All the 20 cases, (100%) had redness of the tongue, angular stomatitis and 75% of the cases had white coated tongue.

18. Investigation

S.No	Cells	Count
1.	WBC	Normal
2.	RBC (Reticulocyte)	Decreased (less than normal)
3.	Hemoglobin	Normocytic, Normochronic Anemia

All the 20 cases (100%) of the cases had decreased reticulocyte count.

20. Results (Progress of the disease)

S. No	Results	No. of Cases	Percentage
1.	Good	14	70
2.	Moderate	6	30
3.	Poor	-	-

Good - Complete subsiding of all signs & symptoms of the disease.

Moderate - Relieved from most of the signs & symptoms of the disease.

Poor - Persistence of all signs & symptoms of the disease.

The management of the treatment:

The internal drug *Athemathura nei* amounting 4gm two times daily was given to each patients after meal as per the weight and age of the child and severity of the diseases. All the cases were treated for an average of 5 – 10 days clinically. It is proved that the drug was free from adverse effect on the patients. Relief from signs and symptoms of the disease were observed from the second day of starting and the treatment. There was no complications of any symptoms during the course of the treatment in any cases. All the patients were advised to take bed rest and drink boiled water during the course of treatment.

DISCUSSION

Akkaram (அக்கரம்) is one of the nutritional deficiency disease in Peaditric population affecting children. If it is not properly treated, it is leads to serious complications like aneamia, peripheral neuritis, seborrheic dermalitis, diaorrhoea. It is a main problem of pediatric community.

The reseacher has selected **Akkaram (அக்கரம்)** as research topic. For this purpose the reseacher has selected patients affected by **Akkaram (அக்கரம்)** they were admitted in the post graduate Kuzhanthai maruthuvam. In patients ward Government siddha medical college Palayamkottai. A case sheet (based on siddha and modern aspect) was prepared and maintained individually for each patient.

For diagnostic purposes the parameters used in siddha system were [Poriyal arithal, pulanalairthal, Vinaathal, Uyir thathukkal, Udal kattugal, Enn vagai thaervu, Neerkuri, Neikuri etc] Regarding modern parameters, laboratory investigations were used for diagnostic purpose.

Sex distribution

Out of the 20 cases, 19 cases were male and 1 was female

Age distribution

Among the 20 cases, 65% of the cases belong to the age group of 5-7 yrs and 35% were in the age group of 3 -5 yrs.

Socio economic status

The study of 20 cases, majority (75%) of the cases, of the cases belongs to the poor family for whom dwelling places are congested they have reported inadequate intake of healthy diet.

Paruvakaalam

Of the 20 cases, 60% were seen to develop the disease during Munpani kaalam 15% were seen to develop the disease Elavenil, 10% of cases were seen to develop the disease in Muthuveni and 5% of the cases were seen to develop that disease in muthuvenil kaalam .

Thinai

All the 20 cases belong to Marutha nilam. Eventhough as per siddha literature Marutha nilam is said to be free from disease, here the patients developed the diseases due to alteration in their food habits.

Uyir thathukkal

Uyirthatthukkal include 3 vital humours namely Vatham, Pitham and Kapham. The derangement in any of the above three causes disease. Derangedment was noticed in the cases and they are discussed below.

Vatham

Samanan, Kirukaran were affected in 100% of the cases. Udhanan and Devathathan are also affected in 75% of the cases Samanan is affected and hence there was there is loss of appetite. When kirukaran is affected there is fissure in tongue. When Udhanan is affected there is loss of digestion and devathathan is affected there is tiredness. All the above symptoms were present in the cases studied.

Pitham

Anala pitham and sathaga pitham were affected in all of the cases. The affected Anala pitham produces loss of appetite. The affected sathagapitham led to restriction in routine work.

Kapham

Pothagam was also affected in all the cases and kelaethagam was affected in 75% of the cases. The affected pothagam produces tasteless . The affected kelaethagam produce loss of appetite. The cases reported both tasteless and also loss of appetite.

Udal Kattugal

Saram and Senneer were affected in all the cases which shows general debility. This was found present in all the cases.

Ennvagai thaervugal

Naa was affected in 100% of the cases as taste was affected and the tongue had fissures and coated. Niram was affected in all the cases, tongues had redness and fissure. Naadi was also found in all the cases as they had pitha Kapham

Neikuri

All the 20 cases showed pithaneer. This proves that the disease was due to derangement of pitham

Aetiological factors

Among the 20 cases, 80% of the cases were developed the disease due to malnutrition and remaining 20% of the cases due to mal absorption.

Onset of disease

The disease manifested gradually in all of the cases.

Clinical manifestations

In all the 20 cases (100% of the cases had fissure was found in the lips and tongue and 75% of the cases had sore throat and , excess salivation, fever, and also difficulty in swallowing.

Investigation

Besides siddha based investigation the researcher had tried to compare the cases with ***Ariboflavinosis*** Routine examination of blood and urine was done during the admission and also before discharge.

Analysis of the management

All the cases were treated with ***Athemathura nei*** internally . The result of treatment was assessed clinically on the basis of reduction of symptoms such as fissure in lips and tongue, sore throat, fever, headache, difficult in swallowing. The patients were treated for 5 – 10 days . At the end of the treatment.

The results are categorised as **good, moderate** and also **poor**.

In 70% of the cases the improvement was good.

In 30% of the cases it was moderate.

None were came under the category poor .

At the end of the treatment there was a normal reticulocyte count in all cases.

From the description of individual drug in siddha text, it is well known that the ***Athemathura nei*** has demulcent, cooling the tonic action on patients.

Athemathuram is one of the ingredients of the drug for fissure in lips and tongue and sore throat, **Athemathuranei** has the **Enippu** taste and **seethaveeriyam** in it will reduce excess pitham to bring normal.

Manipungam pazham is the other ingredient used in the preparation of the medicine. It has the taste of **kaippu**, **Thubarppu** and **veppaveeriyam**, it cures soarthroat and tissue in lips and tongue.

Cow's milk contains more vitamins and minerals like protein, fact, lactose, ca, phospharous, iron. It act as a cooling agent and also tonic. It cures the fissure in lips tongue and produce more strength.

Cow's ghee has demulant action. It will cure ulcers and give more energy.

From it is obvious that all the ingredients of *Athematura nei* have all the qualities which are proved to be effective in curing **Akkaram**.

The pharmacological studies revealed that ***Athemathura nei*** possessed good demulcent, cooling and tonic actions.

Bio-chemical analysis of drug revealed *Athimathura nei* had calcium, sulphate, starch, albumin, unstructured compounds reducing sugar and Amino-acids are present.

Thus clinically there was satisfactory improvement in all the cases and no toxic effects or side effect were noted.

All the patients were advised at the end of the treatment to take qualitative and quantitative diets.

The cases were advised to avoid oily substance and spicy foods and fried food substance. They were advised to take more green leafy vegetables and vegetables, egg, milk, cheese, fish. They were advised to drink only boiled water.

SUMMARY

Health means a state of total physical mental & social well being and not merely the absence of disease and infirmity

Child survival strategies have to combat problems of malnutrition, poor maternal health, Female illiteracy and deficiency of food supplements.

Children's are future citizen over they form 2.3 billion world wide. They represent boundless potential for future as per the WHO. **Akkaram (அக்கரம்)** is one of the disease affecting the children.

For the purpose of study children affected by **Akkaram (அக்கரம்)** patients in both sexes were selected into the age group of 3-7 years.

The study revealed that of the 60% of the cases seemed to develop the disease during Munpani Kaalam and 15% of the cases seemed to develop the disease during Elavenil kaalam. 10% of the cases seemed to develop the disease Pinpani and Muthuvenil and 5% of the cases were in Koothir kaalam. 75% cases belonged to poor socio economic status.

Regarding the aetiology, 80% of cases were developed disease due to mal nutrition and remaining due to mal absorption.

In the study of 20 cases majority had gradual onset of the disease. Majority of the cases had fissure in lips and tongue, Excess salivation, fever, headache, difficult in swallowing, loss of appetite and redness of the tongue.

Regarding the Uyir thathukkal saman, Kirukaran were affected in 100% of the cases, Udhanan and Devathathan were affected in 75% of the cases. In all the cases Analapitham and Sathaga pitham were affected. 100% of the cases pothagam was affected and keleathagam was affected in 75% of the cases.

In Udal Kattugal saaram and senneer was affected. Ennvagi thaervugal, Naa, Niram, Naadi are affected in 100% of the cases naadi has found in pitha kapham.

Neikuri indicated pithaneer in all cases. All the cases show normal TC, DC, Hb. But peripheral smear shows normo cytic and normo chromic anemia (decreased Reticulocyte).

Regarding the treatment, all the cases were treated with ***Athemathura nei*** internally for an average of 5-7days

The observation made during the study showed that the trial medicine was clinically effective and control the disease.

The potency of the drug was studied by pharmacological and Biochemical analysis. It showed that the drug has good demulcent, cooling and Tonic action.

Majority of the patients showed a good response and not showed developed any adverse effect during the course of treatment.

CONCLUSION

In this study, result was found to be good in 70% of the cases.

No adverse effect were noticed during the treatment, further follow up of these patients showed good recovery and fine improvement

The preparation of the medicine is very simple as well as effective and economical and the drug expiry is **six months**. So the drug can be used in children the disease of ***Akkaram (அக்கரம்)*** .

The trial medicine has been good demulcent, cooling, and Tonic action

Avoiding the malnutrition and malabsorption factors causing the disease and prompt management prevents the children from the disease as well as form it's complications.

So it is concluded that for the disease ***Akkaram (அக்கரம்)***, the treatment with ***Athemathura nei*** is good, in the view of its efficacy and also safety.

ANNEXURE - 1

PREPARATION OF THE TRIAL DRUG

அதிமதுரம் பூவந்திப் பழமி ரண்டும்

அவைவகைக்கு வராகனென் றறிந்து மேலும்

நிதிமுலைப்பால் வார்த்தரைத்து முலைப்பால் தன்னில்

நினைவாக கரைத்துப்பசு நெய்யு ழக்கு

கதியாக வேகலந் தொன்றாய்க் காய்ச்சிக்

கடுகுமெழு குப்பதத்தி லிறக்கி வைத்துத்

துதியாக வராகனெடை நெய்கொ டுக்கச்

சூருள்ளச் சுரக்காய்ச்சல் கணமும் போமே.

- பால வாகடம் - 274

தேவையான சரக்குகள்

அதிமதுரம்	-	4கி
மணிப்புங்கம்பழம்	-	4கி
தாய்ப்பால்	-	350 மி.லி
பசுவின் நெய்	-	350மி.லி

முறை

கற்கமாக்கி நெய்யில் கலந்து காய்ச்சி எடுத்தல்

செய்முறை

ஒவ்வொரு சரக்கையும் தனித்தனியே சுத்தி செய்து கொள்ள வேண்டும்.

பின் அதிமதுரத்தை பொடித்து தாய்ப்பால் விட்டரைத்து எடுத்துக் கொள்ள

வேண்டும். பின்னர் மணிப்புங்கம் பழத்தை தாய்ப்பால் விட்டரைத்து எடுத்துக் கொள்ள வேண்டும். பின்னர் இரு கற்கங்களையும் பால் மற்றும் பசு நெய்யுடன் கலந்து அடுப்பில் வைத்து சிறுக எரித்து கடுகு மெழுகு பதத்தில் வரும் பக்குவ பாகத்தில் இறக்கி வைத்து கொள்ள வேண்டும்.

அளவு	:	4 கி இருவேளை
தீரும் நோய்	:	அக்கரம்
ஆயுள் காலம்	:	6 மாதங்கள்
வயது	:	3 முதல் 7
ஆதாரநூல்	:	பாலவாகடம் பக்கம் - 269

சரக்குகளின் குணம்

1. அதிமதுரம்

வேறுபெயர்கள்	:	அதிங்கம், அட்டி (அஷ்டி) மதுராகம், குன்றிவேர்
பயன்படும் உறுப்பு	:	வேர்
சுவை	:	இனிப்பு
தன்மை	:	சீதம்
பிரிவு	:	இனிப்பு

சுத்திமுறை

பாலில் வேகவைத்து எடுத்தல்

குணம்

கத்தியரி முப்பிணியால் வருபுண்

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குத்திருமல் ஆசியங்கம் இதழ்நோய்

- குணப்பாடம் முலிகை

இது முப்பிணியால் வரும் புண், இருமல், வாய்நோய்கள் இவற்றை போக்கும்.

Botanical Name : Glycyrrhizae glabra, Linn

Family : Papilionaceae

Chemical constituents

Glycyrrhizin, Asparagin, Sugar, Starch, acid resin, gum, mucilage, phosphoric, sulphuric mailc acid, calcium, magnesium salts.

Action

Cooling , Demulcent, Tonic.

மணிப்புங்கப்பழம்

வேறுபெயர்கள்	:	பொன்னாங்காய், பூவந்தி, பொன்னாங்கொட்டை
பயன்படும் உறுப்பு	:	காய்
சுவை	:	கைப்பு , துவர்ப்பு
தன்மை	:	வெப்பம்
பிரிவு	:	கார்ப்பு

சுத்திமுறை

உள்ளே உள்ள கொட்டையை நீக்குதல்

குணம்

“நல்ல மணிப்புங்கால் நாயகமே நெஞ்சுகப்
வல்லவிவுபேதி வீன்மூர்ச்சை - அல்லலுறும்
வீக்கம் கணுக்கூலை வீறிட்ட வந்திவலி
ஏக்கமுற்று விட்டோடுமே”

- குணப்பாடம் முலிகை

ஂஂ, §À¼ஂ, Ó÷î"°, ஂஂî,õ, ,îÝ"Ä, -ó¼ஂ ஂÄஂ Ó¼ÄஂÄÉ
¿ஂîîõ.

Botanical Name	:	Sapindus Trifoliatus Linn
Family	:	Sapindacea
Chemical constituents	:	11.5% saponin, besides glucosepectin
Action	:	Tonic, Demulcent, expectorant.

பசுவின்பால்

“பாலர் கிழவர் பழஞ்சுரத்தோர் புண்ணாளி
சூலையர் மேகந்தோர் தூர்பலத்தேர் ஏலமிவர்
எல்லாக்கும் மாகும் இளைத்தவர்க்குஞ் சாதகமாய்
நல்லாய் பசுவின்பால் நாட்டு”

Action: (Breast milk) Astringent, Refrigerent, Demulcent, Nutritive, Strengthening

யாழ்பாண உணவுப்பழக்க வழக்கங்கள் நூலில்

வ.எண்	உணவுச் சத்துக்கள்	தாய்ப்பால்	பசும்பால் in gm
1.	புரதம்	1.5 – 2.0 கி	3.5 கி
2.	லேக்டோஸ்	6.5 கி	4.75 கி
3.	கொழுப்பு	3.5 - 5.0 கி	3.5 கி
4.	கால்சியம்	33 மி.கி	125 மி.கி
5.	பாஸ்பரஸ்	15 மி.கி	96 மி.கி
6.	இரும்பு	0.15 மி.கி	0.10 மி.கி
7.	உயிர்சத்து (A)	48 மை.கி	47 மை.கி
8.	தயமின் (B ₁)	0.02 மி.கி	0.04 மி.கி
9.	ரிபோபிளேவின் (B ₂)	0.04 மி.கி	0.18 மி.கி
10.	நிகோடின் அமிலம்	0.07 மி.கி	0.08 மி.கி
11.	போலிக் அமிலம்	1.3 மை.கி	5.6 மை.கி
12.	உயிர்சத்து (B ₁₂)	0.03 மை.கி	0.5 மை.கி
13.	உயிர்சத்து (C)	4 மி.கி	2 மி.கி
14.	சக்தி (கலோரி)	71 கி.கலோரி	69 கி.கலோரி

ANNEXURE – II

PHARMACOLOGICAL ANALYSIS

Anti Ulcer Activity of the Athemathuranei

Aim :

To study the anti ulcer activity of the Athiemathuranei by Pyloric ligation method.

Instruments :

Syringe, Needles, scissors, forceps, cork board 10 ml pipette, 500 ml volumetric flask, suturing thread, medicine.

Preparation of the test medicine :

1 gm of the test medicine was dissolved in 10ml of water. 1 ml contains 100 mgs.

Procedure :

Six adult female albino rat weighing 100 gms each were taken. It was fasted for about 48 hours. Then the abdomen was opened under the ether anesthesia and the pylorus of the stomach was ligated. At time of ligation 2 rats were given 2 ml of the prepared test medicine solution directly into the stomach, another 2 rates were given distilled water at the same dose in the same manner. The incision was closed and the rats were allowed to recover. Then they were sacrificed 18 hours after the pylorus ligation and the stomach contents were collected. The stomach was opened by cutting along the greater curvature and mounted on a moist

cork board. The ulcers were examined and graded as follows. The free acid, and total acid level of gastric juice were also analysed by using 0.01n Sodium hydroxide with **Topfer's reagent** as indicator.

The results of the above experiments are shown in the table. Effects of Athimathuranei on gastric acid secretion are as follows.

Sl. No	Name of medicine /groups.	Dose / 100 gm body weight.	Degree of ulceration.	Volume of gastric secretion.	Free HCL in units.	Total HCL in units.	Remarks
1.	Control (water)	1 ml	80%	7.00ml	87	205	
2.	Standard (Ranitidine)	20mg/1ml	10%	8.00ml	10	20	
3.	Medicine (Athimathuranei)	1ml	20%	10 ml	20	32	Significant

Ulcer grades:

0 Grade – Normal.

I Grade – Scattered haemorrhagic spots.

II Grade – Deeper haemorrhagic spots.

III Grade – Hemorrhagic spots and ulcers.

IV Grade – Restoration spots and ulcers.

Inference:

From the above tabulation the degree of ulceration as shown in the photographs. We came to know that the medicine Athimathuranei protects the gastric mucosa by neutralizing the excessive gastric acid and the test medicine has got a **significant anti ulcer** activity.

ANNEXURE - III

GOVT. SIDDHA MEDICAL COLLEGE, PALAYAMKOTTAI BIO-CHEMICAL ANALYSIS OF ATHEMATHURA NEI

Preparation of the extract for analysis:

5 gram of choornam was weighed accurately and placed in a 250 ml clean beaker. Then 50 ml distilled water was added and dissolved well. Then it was boiled well for about 10 minutes. It was then cooled and filtered in a 100 ml volumetric flask and then it was made up to 100ml by adding distilled water. This fluid was taken for analysis. Analysis shows the following results of the drug.

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.	A white precipitate is formed	Indicates trace amount of sulphate
3.	<u>TEST FOR CHLORIDE</u> The extract is treated with silver nitrate solution.	a white precipitate is formed	Indicates trace amount of calcium is present

4.	<u>TEST FOR CARBONATE</u> The substance is treated with concentrated Hydro Chloric Acid.	No brisk effervesce is formed	Absence of carbonate
5.	<u>TEST FOR STARCH</u> The extract is added with weak iodine solution.	Blue colour is formed	Indicates the presence of starch
6.	<u>TEST FOR IRON</u> The extract is treated with concentrated Glacial acetic acid and potassium ferro cyanide.	No Blue colour is formed	Absence of ferric iron
7.	<u>TEST OF FERROUS IRON:</u> The extract is treated with concentrated Nitric acid and ammonium thio cyanate.	No Blood red colour is formed	Absence 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 ferric chloride.	Yellow precipitate is formed	Indicates the presence of Albumin
10.	<u>TEST FOR TANNIC ACID</u> The extract is treated with. Esbatch's reagent	No blue black precipitate is formed	Absence of Tannic acid

11.	<u>TEST FOR UNSATURATION</u> Potassium permanganate solution is added to the extract.	It get decolourised	Indicates 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 and added 8-10 drops of the extract and again boil it for 2 mts.	Colour change occurs	Indicates the 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 it well. After drying, 1% Ninhydrin is sprayed over the same and dried it well.	Violet colour is formed	Indicates the presence of Amino acid

ANNEXURE – IV

PROFORMA OF CASE SHEET

Govt. Siddha Medical College & Hospital

Post Graduate Research Centre,

Palayamkottai.

Branch - IV Kuzhanthai Maruthuvam

Case sheet proforma for **AKKARAM [ARIBOFLAVINOSIS]**

I.P.No:	Nationality :
Bed No:	Religion:
Name:	Occupation :
Age:	Income :
Sex:	Date of admission:
Permanent Address:	Date of Discharge:
Informant:	Diagnosis:
	Results:
	Medical Officer

Complaints and Duration:

History of Present illness:

History of Past illness:

Antenatal History:

Birth and Neonatal history:

Developmental History:

Dietetic History:

Family History:

Social History:

Immunization history:

GENERAL EXAMINATION

1. Consciousness
2. General appearance
3. Decubitus
4. Stature
5. Nourishment
6. Skin changes
7. Facies
8. Pallor
9. Jaundice
10. Clubbing
11. Cyanosis
12. Koilonychia
13. Lymphadenopathy
14. Abdominal distention
15. Jugular venous pulsation

- 16. Engorged Veins
- 17. Pedal oedema
- 18. Generalised oedema
- 19. Temperature
- 20. Pulse

Rate _____/ min

Rhythm

Volume

Character

Peripheral pulses

- 21. Respiration
 - a. Rate _____/ min
 - b. Rhythm
 - c. Character

22. Heart Rate _____/ min

23. Blood Pressure

	Right	Left
Upper Limb		
Lower Limb		

- 24. Congenital abnormalities (if any)
- 25. Miscellaneous

Siddha Aspects

1. Nilam:

Kurinji

Mullai

Marutham

Neithal

Palai

2. Paruva kaalam:

Kaar (Avani – Puratassi)

Koothir (Iyppasi – Karthigai)

Munpani (Margazhi – Thai)

Pinpani (Masi – Panguni)

Elavenil (Chithirai – Vaigasi)

Mudhuvenil (Aani – Aadi)

3. Udal Nilai:

Vatham

Pitham

Kapham

Kalappu

4. Gunam

Sathuvam

Rasatham

Thamasam

5. Mummalam

Malam

Moothiram

Viyarvai

6. Poripulungal

Mei – Sensation

Vaai – Taste

Kann – Sight

Mooku – Smell

Sevi – Hearing

7. Kanmenthriyam / Kanmavidayam

Kai – Dhanam

Kaal – Kamanam

Vaai – Vasanam

Eruvai – Visarkam

Karuvaai – Anantham

8. Pira Uruppukalin Nilai:

Iruthayam

Puppusam

Eraippai

Kalleeral

Manneeral

Siruneeragam

Siruneerpai

Moolai

9. Uyir Thathukkal

(a) Vatham:

Pranan

Abanan

Viyanan

Uthanan

Samanan

Nagan

Koorman

Kirukaram

Devathathan

Dhananjeyan

b) PITHAM:

Analam :

Ranjagam :

Sathagam :

Aalosagam :

Prasagam :

c) KAPHAM:

Avalambagam:

Kelaethagam:

Pothagam :

Tharpagam :

Santhigam :

10) UADAL THATHUKKAL:

Saram :

Senneer :

Oon :

Kozhuppu :

Enbu :

Moolai :

Sukkilam / Suronitham:

11) ENVAGAI THERVUGAL:

Naa :

Niram :

Mozhi :

Vizhi :

Sparism :

Malam :

Niram :

Edai :

Erugal :

Illagal :

Moothiram :

Niram:

Manam:

Edai:

Nurai:

Enchal:

Naadi:

MODERN ASPECTS

Systemic Examination

Examination of Respiratory System

Examination of Upper Respiratory tract

General Examination

Sore throat

Fever

Dysphagia

Cough

Head ache

Local Examination:

Mouth:

 Tongue

 Surface

 Inflammation

 Redness

 Follicles

 Ulceration

 Mucous coating

Pharynx

 Inflammation

 Redness

 Ulceration

Gums

Gingivitis

Others

Past history of ***Akkaram***

Personal habits

In adequate intake of nutritional diet

Personal hygiene

Living condition

Examination of Cardiovascular system

Examination of Central Nervous System

Examination of Gastro intestinal System

Laboratory Investigation

Blood

Urine

Motion

TC

Albumin

Ova

DC

Sugar

Cyst

ESR – ½ hr -

Deposits

- 1 hr

Hb - %

Daily progress

Date	Symptoms	Drug

Govt. Siddha Medical College & Hospital
Post Graduate Research Centre,
Palayamkottai.

Branch - IV Kuzhanthai Maruthuvam

Admission – Discharge Sheet for ‘Akkaram’

I.P. No : Nationality :
Bed no : Religion :
Name : Occupation :
Age : income :
Sex : Date of Admission:
Permanent Address : Date of Discharge:

Informant : Diagnosis :
Result :
Medical Officer:

S.No	Clinical Pictures(Signs and Symptoms)	During Admission	During Discharge

Place :

Date : Signature of the Medical Officer

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In Patient Case Sheet Report

Signs and Symptomts

S.No	I.P.No	Name	Age	Sex	Before Treatment	After Treatment	Date of Admission	Date of Discharge	No. of days treated	Drug given	Result
1	677	Geetha	6	FC	Ulceration in side the oral cavity, fissure in the lips	Ulceration in side the oral cavity, fissure in the lips. All symptoms are well relieved	25.3.06	4.4.06	10	Athemat huranei	Well Relieved
2	1440	Sathesh	3	MC	Redness of the tongue, ulceration both angle of the mouth, excess salivation	Redness of the tongue, ulceration both angle of the mouth, excess salivation. All symptoms are well relieved	22.6.06	26.6.06	5	Do	Well Relieved
3	1442	Papeetha	3 ½	FC	Redness of the tongue, fissure in the lips and tongue, ulceration of the both angle of the mouth.	Redness of the tongue, fissure in the lips and tongue, ulceration of the both angle of the mouth. All symptoms are well relieved	22.6.06	29.6.06	7	Do	Well Relieved
4	2430	Balamurugan	7	MC	Sore throat, redness of the tongue, malaise, ulceration both angle of the mouth	Sore throat, redness of the tongue, malaise, ulceration both angle of the mouth. All symptoms are well relieved	11.11.06	25.11.06	15	Do	Well Relieved

5	2603	Meganathan	5	MC	fissure in tongue ulceration in oral cavity, redness of the tongue, excess salivation.	fissure in tongue ulceration in oral cavity, redness of the tongue, excess salivation. All symptoms are well relieved	20.11.06	24.11.06	5	Do	Well Relieved
6	2601	Sivakumar	7	MC	fissure in lips and tongue, sore throat, excess salivation, fever	Fissure in tongue , excess salivation in lips and tongue, excess salivation, fever. All symptoms are well releived.	20.11.06	24.11.06	5	Do	Well Relieved
7	2602	Pattan	5	MC	Fissure in tongue , excess salivation, redness of the tongue, ulceration of both angle of the mouth.	Fissure in tongue , excess salivation, ulceration of both angle of the mouth. symptoms are reduced.	20.11.06	24.11.06	5	Do	Reduced
8	2604	Sudhandiram	6	MC	Fissure in tongue , excess salivation, redness of the tongue, ulceration of both angle of the mouth.	Fissure in tongue , excess salivation, redness of the tongue are the symptoms are reduced.	20.11.06	24.11.06	5	Do	Reduced
9	2629	Jakkammal	7	FC	Fissure in lips and tongue, white coated tongue, fever, ulceration both angle of the mouth	Fissure in lips and tongue, white coated tongue, fever, ulceration both angle of the mouth. All symptoms are well relieved.	20.11.06	24.11.06	5	Do	Well Relieved
10	2699	Syed Musthapha	6	MC	Fissure in lips and tongue, white coated tongue, fever, ulceration both angle of the mouth	Fissure in lips and tongue, white coated tongue, fever, ulceration both angle	24.11.06	4.12.06	10	Do	Well Relieved

						of the mouth. All symptoms are well relieved.					
11	198	Raja	7	MC	fissure in the tongue, redness of the tongue, ulceration both angle of the mouth, headache	Fissure in the tongue, redness of the tongue, ulceration both angle of the mouth, headache. All symptoms are well relieved.	25.01.07	29.01.07	5	Do	Well Relieved
12	214	Phubalan	4	MC	Sore throat, redness of the tongue, malaise, ulceration both angle of the mouth	Sore throat, redness of the tongue, malaise, ulceration both angle of the mouth. All symptoms are well relieved.	25.01.08	29.01.08	5	Do	Well Relieved
13	216	Arun Prashad	7	MC	fissure in the tongue, ulceration both angle on the mouth	Fissure in the tongue, ulceration both angle on the mouth. All symptoms are well relieved.	25.01.09	29.01.09	5	Do	Well Relieved
14	263	Aru mugam	5	MC	Fissure in lips and tongue, white coated tongue, fever, ulceration both angle of the mouth	Fissure in lips and tongue, white coated tongue, fever, ulceration both angle of the mouth. All symptoms are well relieved.	30.01.07	03.02.07	5	Do	Well Relieved
15	264	Kavirayan	4	MC	fissure in tongue ulceration in oral cavity, redness of the tongue, excess salivation.	Fissure in tongue ulceration in oral cavity, redness of the tongue, excess salivation. . All symptoms are well relieved.	30.01.08	03.02.08	5	Do	Well Relieved

16	265	Prasanth	6	MC	Fissure in lips and tongue, white coated tongue, fever, ulceration both angle of the mouth	White coated tongue, fever, ulceration both angle of the mouth are the symptoms are reduced.	30.01.09	03.02.09	5	Do	Reduced
17	910	Anbarasan	7	MC	Sore throat, redness of the tongue, malaise, ulceration both angle of the mouth	Sore throat, malaise, ulceration both angle of the mouth are the symptoms are reduced.	05.04.07	20.04.07	15	Do	Reduced
18	1058	Alagumalai	7	MC	Fissure in lips and tongue, white coated tongue, fever, ulceration both angle of the mouth	Fissure in lips and tongue, white coated tongue, fever are the symptoms are reduced.	20.04.07	24.04.07	5	Do	Reduced
19	1100	Iruthayam	6	MC	Sore throat, redness of the tongue, malaise, ulceration both angle of the mouth	Sore throat, redness of the tongue, malaise, ulceration both angle of the mouth. All symptoms are well relieved.	25.04.07	30.04.07	6	Do	Well Relieved
20	1176	Ravi	4	MC	fissure in the tongue, redness of the tongue, ulceration both angle of the mouth, headache	fissure in the tongue, redness of the tongue, headache are the symptoms are reduced.	07.05.07	11.05.07	7	Do	Reduced

ANATOMY OF THE ORAL CAVITY

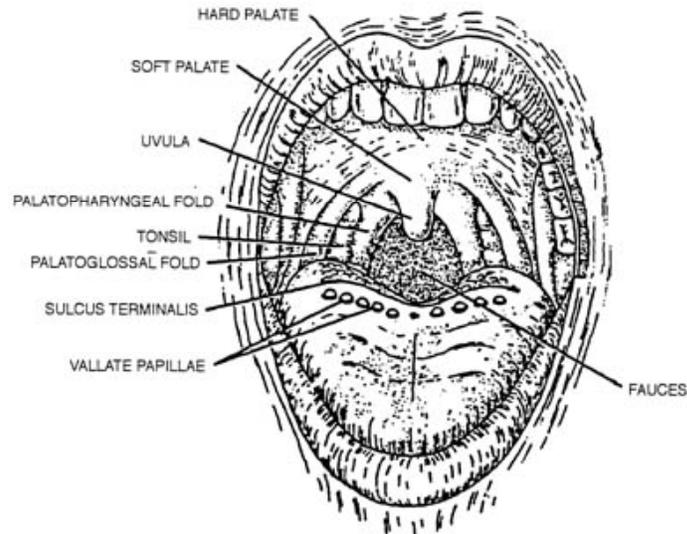
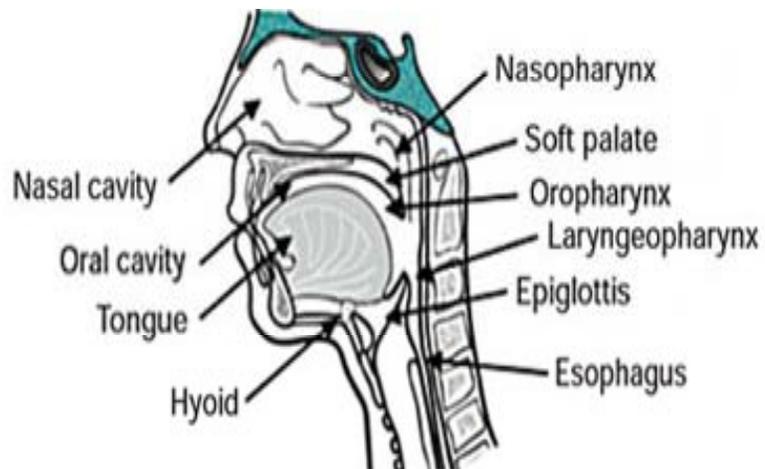


FIGURE 1

LATERAL VIEW OF ORAL CAVITY



சரக்குகள்



1. மணிபுங்கம் பழம்
2. பசுவின் பால்
3. அதிமதுரம்
4. பசுவின் நெய்

அதிமதுரநெய்



PATHOLOGY OF ORAL CAVITY



COATED TONGUE



REDNESS OF THE TONGUE

PATHOLOGY OF ORAL CAVITY



FISSURE IN THE TONGUE



GINGIVITIS

DRUG



CONTROL



STANDARD

