A STUDY ON

PITHA KARAPPAN
(ECZEMA)

DISSERTATION SUBJECT

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Certificate

This is to certify that I have gone through the dissertation submitted by ***Dr. R.JEYANTHI,*** a student of Final M.D. (Siddha) Maruthuvam Branch, Govt. Siddha Medical College, Chennai and the dissertation work ‘ ***PITHA KARAPPAN ”*** has been carried out by individual only.

Place : Chennai

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INDEX

INTRODUCTION

Siddha system of medicine is the oldest system in the world. This system of medicine dates back to over 2000 years before Christ. The great specialty of Siddha system is the adoptogenecity i.e the same drug can be prescribed successfully to various diseases by changing the *anupanam* accordingly.

The paramount endeavour of Siddha medical science is to attain the full span of healthy life through the principle of "Food itself is medicine"

" ¯½§Å ÁÕóÐ
ÁÕóš¾ ¯½× "

The ancient spiritual saints who lived in South India known by the name *Siddhars* are said to be the founders of the Siddha system of medicine. They were super nature human and who attained the true realization of soul which they achieved by intense meditation and yogic practice.

The great siddhar Thirumoolar says that

" ÁÚôÀÐ ¯¼ø §¿¡ö ÁÕó¦¾É Ä¡Ìõ
ÁÚôÀÐ ¯Ç §¿¡ö ÁÕó¦¾É Ä¡Ìõ
ÁÚôÀÐ §¿¡Â¢É¢ ÅÃ¡¾¢Õì¸
ÁÚôÀÐ °¡¨ÅÔõ ÁÕó¦¾É Ä¡Ìõ"

\- ¾¢ÕÁó¾¢Ãõ

Medicine is one that treats physical illness, mental illness, prevent illness and postpone the death. From this quote we know that Siddha system of medicine not only treats the disease but also the soul.

The human body is a miniature of cosmos. Nature is man and Man is nature and both are essential one. Man is said to be the microcosam and the universe is macrocosam, because what exists in the universe exists in the man. Man is nothing but the universe in divine miniature, containing mega elements and various principles that constitute the mineral, vegetable and animal kingdom.

According to siddhars everything in the world, living and non- living all are made up of five *Boothas as* Earth, Water. Fire, Air and Space which by containing in different ratio that is by their mutual intraoccusion called *Pancheekaranam.*

From this Mukkuttram or Threedosha i.e Vatham, Pitham and Kapam is formed. They are in the ratio of $1:{}^{1}/_{2}:{}^{1}/_{4}$ respectively. The three humours maintain the human body through the combined functioning. If all factors work properly the body will be healthy. Imbalance due to astral influence poisonous substance and spiritual factors may also be important in causing imbalance in three humours. Medicines are prescribed to set right the imbalance in life factors either by addition, reduction and neutralisation since all matter containing mega elements.

Envagai Thervugal is the speciality of Siddha diagnosis. These are instruments for the physician to the diagnose disease. Among this Naadi is very important to diagnosis the disease.

Human being constantly struggle against changing environmental conditions to maintain optimum health and vigour though out the day and seasons.

The human body depends on the continuous holistic interaction between internal and external factors when this interaction is in a state of equilibrium, man enjoys health, when this falls, either due internal deficiency or hostile environmental factors, the disturbed balance leads to disease.

Disease of the skin is a common occurrence. Out of the whole patients, 10-20 % of patients are seeking medical advice for skin diseases. Skin disease is a great deal of misery, suffering incapacity and economic loss. Besides, they are looked as strangers in the society because the skin diseases are visible. It gives not only the physical defilement but also gives mental suffering.

The disease "***PITHA KARAPPAN"*** was selected for present study with the following trial medicines .

- **Karappan Choornam** – Internal
- **Karappan Ennai** – External

AIM & OBJECTIVES

Skin diseases are one of the most prevalent diseases encountered in general practice. 10-20 % of patience seeking medical advice is suffering from skin disease. Skin disease is a great deal of misery, incapacity and economic loss. Besides this they are a great handicap in the society because they are visible. Hence the study was carried out with an intention to formulate proper treatment of " ***PITHA KARAPPAN ".***

The poor socio-economic status, unhygienic dwelling and lack of personal hygiene tend to aggravate the dermatological problems.

Uncontrolled skin eruptions may further involve the other system making them vegetative individual in the society. Hence special attention in controlling and preventing the dermatological problem is necessary.

The aim of the present study is to assess the effectiveness of Siddha medicine both clinically and experimentally for the selected disease "***PITHA KARAPPAN"*** with the trial medicine.

- **Karappan Choornam** (Internally)
- **Karappan Ennai** (Externally)

I have been very much interested in dermatological disorder especially Karappan from my clinical practice. I also witnessed early cure of Karappan at Anna Hospital of Indian Medicine, Chennai.

The aim of the treatment is not only cure the disease but also to rule out the cause of the disease.

There is no perfect & complete solution for this disease in medical field. The recurring nature and chronic of this disease, cause many problem including physical and mental attention.

The aim of present work is to study "***PITHA KARAPPAN***" in various aspects with modern comparison and to find out the relief that could be given to the patients with Siddha medicine.

OBJECTIVES

To collect various trustworthy details about "***PITHA KARAPPAN***" with deep observation of the aetiology, clinical feature, diagnosis and complication based on both Siddha and Modern aspects.

- To have an idea about the prevalence of "***PITHA KARAPPAN***" with reference to age, sex, socio economic status, family history etc.
- To expose the Siddha diagnostic principles in diagnosing the disease.
- To evaluate the pharmacological study and bio chemical analysis of the trial medicines.
- To have a clinical trial in patients with selected medicine along with proper diet supporting the treatment.

- Current methodology incorporates all possible diagnosis investigatory procedures for conformation of clinical condition and also assesses the response to treatment.

- The main objective of the present study is to enlighten the efficacy of Siddha medicine and to create awareness about the Siddha science among the public.

REVIEW OF LITERATURE

SIDDHA ASPECT

KARAPPAN

Karappan is clinical condition which is manifested in the skin and it differs from the other skin disorders such as the 18 varieties of Kuttam in its Aetiology, symptomatology, pathology and therapeutic measures. It has been classified and dealt with separately by siddhars in their literature.

I. IYAL

This clinical condition is characterised by itching followed by the appearance of redness (Erythema) and papules. These papules may be transferred to vesicles. Other symptoms such as Oedema, scaling, irritation , ulceration and oozing may or may not be present in one or other types of karappan.

II. NOI VARUM VAZHI

Derangement of three dosham i.e vatham, Pitham and Kabam are the cause for all the disease. The general aetiology of all disease can be summarised as

- Improper, excess, poor, perverse contact of the sense organs with their respective objects.
- Violation of the normal regiment regarding all the activities of the body, mind and speech. In other words doing them in excess, poor or perverse manner.
- Effect of the season or the normal climatic condition becoming excess, poor or perverse.

The specific aetiology of karappan involves as number of factors as narrated by various siddhars in their literary work.

According to Yugi Vaidhya Chinthamani

" ²Æ¡É ¸ÃôÀ¡É¢ý ¯üÀò¾¢ §¸Ç¡ö
²üÈÁ¡ö Á¡Á¢°í¸û Ò°¢ì¨¸Â¡ÖõÜÆ¡É ¸õÒ ¾¢¨É ÅÃÌ °¡¨Áì
¦¸¡Ê¾¡É ¸¢ÆìÌÅ¨¸ ÂÕó¾Ä¡Öõ
À¡Æ¡É ¦ÀñÁ¡¨Â ¾ýÉ¢ü °¢ìÌõ
À¡í¸¡É Å¢Ã¾ò¾¢ý ÓÂü°¢Â¡Öõ
¾¡Æ¡É Àñ¼í¸û °¨ÁòÐ ¾¢ýÉø
¾¡ìÌ§Á ¸ÃôÀ¡ý ¾ý°¡Âø ¾¡§É
°¡ÂÄ¡öò ¾ÉìÌ¾¡ý ãò¾ ¦Àñ¨½ò
¾¡Å¢§É¡÷ ¾¡úî°¢Â¡ó °¡¾¢¾ýÉ¢ø
¸¡ÂÄ¡öì ¸ÄóÐñ§¼¡÷ ¸Ä¸õ ¦°ö§¾¡÷
¸üÒ¨¼Â ÁÍ¨¸Â¨Ãì ¸Õ¾¢§É¡÷¸û
ÁÕòÐÅ÷¸û Åñ½¡÷ ¿¡Å¢¾÷¸û ÜÄ¢ì
ÜÂÄ¡öì ¦¸¡¼¡§¾¡÷¸û ÌÕ¿¢ó¾¢ò¾
¦¸¡ÎõÀ¡Å¢ ¸ÃôÀ¡É¢ü ÌÈ¢¦¸¡ûÅ¡§Ã "
- ä¸¢ ¨Åò¾¢Â °¢ó¾¡Á½¢, Àì¸õ 299

According to Yugimuni, excessive intake of meat, fish, cereals such as Kambu, Thinai, Varagu & Samai, some tubers, excessive indulgence and many antisocial activities that cause psychological disturbances may cause karappan.

According to Pararaasasegaram

" Å¡¾À¢ò¾í ¸ÀÁ¢¨Å ãýÈÅ÷
§ÃÐ Å¡Â¢ø ¦ÅÇ¢Â¡ø Á¢ÊÂ¡ÐÅ£É÷
§¸¡¨¾Â¡÷ÊÂ À¡÷¨ÅÂ÷ Å¡÷ÌÇ¢÷
§À¾¿£¡¢¨Å Â¡ÖÉ §ÀÍ §¸û
§Å¸ì ¸üÈ¾¢É÷ À¨É¦ÅøÄò¾¡ø
À¡¸ Á¢ì¸Ä¡ý §Á¾¢ôÀ¡ ¦ÅöÂ¡ø
¾¡¸Á¡É ÅÕì¸¾¢ °¡÷¾Ä¡ø

§À¡¸ Å¡¨Æ ÅØ¾¨Ä ÓûÇ¢ì¸¡ö
¸¡Ôõ ÀøÅ¢½ò ¾¡üÍÃó ¾¡ü¸É¢ø
²Ôõ Åñ¦¼Ä¢Â¡ø ÅÕ§ÁÐ ¦ÅÇ¢
ÌÊ ¿øÄÈ¢Å¡É ±ÕÅ¢É¡÷
Â¡ÔÁ¡É ¸ÃôÀ¡ý Å¨¸¸§Ç "
- ÀÃÃ¡° §°¸Ãõ °¢Ã§Ã¡¸ ÀÌ¾¢,
(ÀÌ¾¢-1) Àì¸õ 67

Living in torrid climate, using contaminated water, excessive intake of palm jaggery, fish, mangoes and some poisonous bites are the factors that may cause the disease.

According to Agasthiyar Kanma Kandam-300

" ¯ñ¨Á¦ÂýÈ ¸ÃôÀ¡§É¡Î ÅñÎ¸Ê Ìð¼õ
¯Ä¸¢ÖûÇ¡÷ì ¸¢ÐÅò¾ ¯ñ¨Á §¸Ù
¾ñ¨Á¦ÂýÈ ¾¢øÄ¡Áø ¯¾¡°¢Éí¸û §À°ø
°üÌÕ¨Åò à¼½¢ò¾ °ñ¼¡Çò¾¡ø
Åñ¨Á¦ÂýÈ ÅÆ¢Â¢§Ä ÓýÉ¢ðÎ ¨Åò¾ø
ÁÃó¾¨Æ¸û â×¾¢Ã ÅÊò¾ À¡Åõ
¦ÀñÁÂ¢§Ä ÅñÎ¸Ê Å¢¼Óï §°÷óÐ
À¢Äò¾ ¦°¡È¢ Ìð¼ÁÐ À¢Äò¾Å¡§È "
- «¸Š¾¢Â÷ ¸ýÁ ¸¡ñ¼õ - 300 , Àì¸õ-37

It is clear from the above poem that all types of bad mannerisms, anti social activities and some poisonous bites cause this disease.

According to Kuru Nadi Nool

" °í¨¸Â¢ø Å¢„ì ¸ÃôÀ¡ý ÅÕÁ¡§ÈÐ
°¡ÃÓ¼ý ¸¢ÕÁ¢ Å¢Øó¾ý¨Á §ÂÐ
¯ðÊ½§Á «¾¢¸õ ÅÕ§Áó¾¢¡¢Â §À¡¸ò¾¡ø
¯ÆÚÐÕ¸¢Â ¾¾¢Â¢§Ä §Å× ¦¸¡ñÎ

¿ð¼½Á¡ö ¦Åó¾¦¾¡Õ ÁÎ¨°¾ýÉ¢ø
¿¡ð¼Á¢ð¼ ¸¢ÕÁ¢ÂÐ ÂÏÌõ §À¡Ð
ÁðÎ¼§É ¸¢ÕÁ¢¦ÂøÄ¡õ ÀÈó¾¡ö §¸È¢
Å¨¸Ô¼§É Á¡í¸¢°ò¨¾ò Ð¨ÇòÐ §Á×õ
¾¢ð¼Ö¼ý Å¢¼ì¸ÃôÀ¡ý ÀÈóÐ ¦Á§Ä
¾¢ý Å¢¼¦ÉÉ ÀÃÀÃòÐÎ ¦°¡È¢Ôñ¼¡§Á
ÁÂÄÐ×í ¸¢ÕÁ¢ ¾¡ý ¿¼òÐ Òì¸¢ø
§ÁÉ¢ÂÐ °Ã°Ã¦ÃÉ ¦ÅÊòÐô Òñ½¡ü
¸Âø ¦ÀÕÌõ ÌÆøÁ¼Å¢÷ ¦°¡øÄì§¸Ç¢÷
¸Ã¸ÃòÐÎ ¦°¡È¢ ¦ÀÕÌí ¸ÃôÀ¡ý ¾¡§É "
- ÌÕ¿¡Êáø Àì¸õ 38

Micro organisms enter the body of a person whose udalthathu are debilitated due to excessive indulgence in sexual act. These organism then cause karappan noi and its secondary infection resulting in symptoms such as ulceration and related science of karappan noi.

Dietary factors

" ¦ÀÕÌï §°¡Ç Á¢ÚÌõ ¦ÀÕí¸õÒ
ÅÃÌ ¸¡Õ¼ý Å¡¨ÆÂ¢ý ¸É¢¦Â¡Î
¯¨Ã¦¸¡û À¡¸ü ¦¸Ç¢üÚÁ£ý ¯ñÊ¼ø
Å¢¡¢Å¾¡öì ¸ÃôÀ¡Û Á¢Ìó¾§¾ "
- À¡ÄÅ¡¸¼õ ¾¢ÃðÎ , Àì¸õ - 241

Cholam, Kambu, Kar arisi , unriped Banana, Bitter guard and certain types of fish aggravate the cause of diseses.

Kanmam

" Å¢Ãø ÌÚÌí ¸¡ø ¿¢Á¢Úõ
Å¢„õ §À¡§ÄÚõ ¦ÁöÂØóÐï
¾¨Ä ÍÆÖõ ¦ÅÕìÌ §ÁÉ¢

ÀÃÁ¡É §¾¸¦ÁøÄ¡ó ¾ÊòÐì ¸¡Ïõ
À¡¾¦ÁøÄ¡õ ¦ÅÊòÐ Á¢¸ôÒñÏí ¸¡Ïó
°Ã°Ó¼ý ¦°¡È¢¸ÃôÀ¡ý Òñ §À¡ø §¾¡Ïó
°¡ó¨¾Â§¾ Å¢ó¨¾ ¦¸Îò¾Ê Å£íÌõ
¿¡ÕÄ¸¢Ä¢ó §¿¡öìÌ ÁÕó¾£Â¡§Á "

- «¸Š¾¢Â÷ À¡¢âÃ½õ 400, Àì¸õ 41

According to the above poem "Kanmam" is also one of the causes for this disease.

À¢ÈìÌõ §À¡§¾ §¿¡Ôõ À¢Èó¾Ð :

" ¾¢í¸û Àò¾¡¸¢ü §¾ö¦Å¡Î Å¡Ôï §°÷óÐ
¾í¸¢ ÁÄ÷ò¾¢ ÂÁÉ¢Â¡öì ¸£ú§¿¡ì¸¢ô
¦À¡í¸¢ô À¢Èó¾¿¡û Ò¸ú À¡÷¦ÀÚÅ£½÷
¾í¸¢ ¦°É¢ì¨¸Â¢ü §¿¡Ô ÓüÈ§¾ "

- §¿¡ö ¿¡¼ø §¿¡ö Ó¾ø ¿¡¼ø, (À¡¸õ-1 Àì¸õ - 32)

The cause for the disease is attributed to entering the gene at the time of fertilization itself.

In common practice the aetiology of karappan are varied. Cosmetics like face creams, deodorants, lipsticks, nail polish, hair dye and oils shampoo etc are some of the common causes. Rubber chapels, nylon spectacle frame, synthetic dyes, buttons and plants such as cashew nut, marking nut etc and some chemicals and medicines also cause karappan. Often the aetiology of karappan can be traced to the occupational exposure to all.

III. NOI ENN – CLASSIFICATIONS

Various siddhars have classified the varieties of karappan differently in their literature.

In Yugi Vaidhya Chinthamani

" ¬¦Áýü ¸ÃôÀ¡ý ¾¡ý ²ØÅ¢¾Á¡Ìõ
«¼í¸¡¾ Å¡¾ò¾¢ý ¸ÃôÀ¡§É¡Î
¸¡¦ÁýÈ ¸ñ¼Á¡í ¸ÃôÀ¡É¡Ìõ
¸Õ¾¢Â§¾¡÷ ÅÈð°¢Â¡í ¸ÃôÀ¡§É¡Î
§¾¡¦ÁýÈ ¾¢Á¢÷ Å¡¾ì ¸ÃôÀ¡ýÈ¡Ûõ
°¢Ã°¢É¢§Ä ¦ÂØ¸À¡Äì ¸ÃôÀ¡ý
§À¡¦ÁýÈ À¢ò¾Á¡í ¸ÃôÀ¡§É¡Î
¦À¡¢Â §°òÐÁì ¸ÃôÀ¡ý ¦ÀÂ÷¾¡§ÉØ "
- ä¸¢ ¨Åò¾¢Â °¢ó¾¡Á½¢, Àì¸õ 298

Karappan is classified into 7 types. They are

- Vatha karappan
- Pitha karappan
- Kaba karappan
- Thimir vatha Karappan
- Kanda karappan
- Kabala karappan
- Varatchi karappan

In Balavakada Thirattu

The 18 types of Karappan are noticed in children

" ¦°í¸ÃôÀ¡ý «Éü¸ÃôÀ¡ý ¾¡ÛõÁñ¨¼î

°¢ÃíÌ ÀñÏõ «¡¢¸ÃôÀ¡ý ¾¡ÛõÁ¢ì¸
«ÉÃ¡õ ¯¾¢Ãì ¸ÃôÀ¡ý ¸ðÊ§Â¡Î
¦À¡í¸Á¡ö Å£í¸¢ ¸ÃôÀ¡Ûó ¾¡ý
Ò¸Ä¡¢Â °ð¨¼ ¾Ê¦ÅÊ ¸ÃôÀ¡ý
°¢í¸Ó¸ ±¡¢¸ÃôÀ¡ý À¢ò¾ì¸ÃôÀ¡ý
§°òÐÁò §¾¡§¼ ¸ÃôÀ¡ý À¾¢¦Éð¼¡§Á
±ñÅ¨¸ì ¸ÃôÀ¡ý þ¨°ó¾¢¼ì §¸Ù "

- À¡ÄÅ¡¸½ò ¾¢ÃðÎ - Àì¸õ 247

The 18 varieties of karappan are

- ❖ Vatha karappan
- ❖ Pitha karappan
- ❖ Soolai karappan
- ❖ Vedi karappan
- ❖ Mandai karappan
- ❖ Sattai karappan
- ❖ Oodu karappan
- ❖ Karung karappan
- ❖ Pori karappan
- ❖ Ari karappan
- ❖ Oothu karappan
- ❖ Seng karappan
- ❖ Sethuma karappan
- ❖ Kolli karappan
- ❖ Thoda karappan
- ❖ Vali karappan
- ❖ Veenku karappan
- ❖ Varal karappan

In Agasthiyar 2000

" Å¢ÇõÀ¢Î Å¡ò §¿¡× ±ñÀòÐ ¿¡Ö Á¢ì¸
¯ûÇí¸û °ýÉ¢ ÓôÀ§¾¡í Ì¼øÅ¡Ô ¦ÁðÎ
¸Æí¸Ó ÓôÀò§¾Ø ¸ÃôÀ¡ÛõÁÚÀò¾¡Ú
¾Éí ¦¸¡ûÇ¢ô ÒÕ¾¢ ¿¡Ö °¡üÚ¨ÇÌÈ¨Å¦Âð§¼ "

- «¸Š¾¢Â÷ 2000 Àì¸õ 46

According to this poem karappan are 66 in numbers.

In Siddhar Aruvai Maruthuvam

Karappan is classified into 6 types. They are

- Vatha karappan
- Ven karappan
- Pitha karappan
- Sen karappan
- Kaba karappan
- Karung karappan

In Agasthiyar Rathina Surukka Nadi Nool

It was mentioned that karappan are 90 in numbers.

" À£Ä¢Ô¼ÛÚ Å°¢ÂÁï°¾¡Ìõ
¦À¡¡¢¸ÃôÀ¡ý ¦¾¡ñßÚ ¦¸¡ñ¨¼ ÀòÐ "

In Agasthiyar Rana Nool

It is stated that there are 80 varieties of karappan.

" ±ñÀÐ ¸ÃôÀ¡ý ¾ý¨É Â¢ÂõÀ¢ÎÁ¡Ú §¸Ç¢÷
¿ñÀ¢Îõ Å¡¾õ À¢ò¾õ ¿Äí¦¸ðÎò ¾¡Éõ Å£íÌõ
ÒñÀÎõ ¸Ãí¸û °óÐ Ò¨Äó¾¢¼ø ¸ØòÐ §¿¡Ìõ
Åý¨ÁÔ¼ý ¦ÅÊòÐî Ý¨Ä ÅÕÅÐ Ã½Á¢¦¾ýÉ§Å "
- «¸Š¾¢Â÷ þÃ½ áø - Àì¸õ 3

In Guru Nadi Sasthiram

Karappan is classified into 85 types as follows

" ÀÎÅý ÓôÀò¾¢ÃñÎ ÀÕ¦ÅÙ ¿¡üÀò¦¾¡ýÚ
ÓÊ¸¢Îõ Å¢„ÀÁ¡Ú ÁüÚ §Á¡„°¢ ãýë÷
¾¢Îì¸¢Îõ À£Ä¢ ãýÚ °¢Ã°¢É¢ü °¢ÅóÐ ¦°¡øÄ¢ø
ÌÎ¸¢Î ¨Á¼õ Àò¾¡Ú ¸ÃôÀ¡Û ¦ÁýÀò¨¾óÐ "
- ÌÕ¿¡Ê °¡Š¾¢Ãõ-Àì¸õ 11

IV. KURI GUNAM

General Signs & Symptoms of karappan

" ±ñÀÐ ¸ÃôÀ¡ý ¾ý¨ÁÂ¢ÂõÀ¢ÎÁ¡Ú §¸Ç£÷
¿ñÀ¢Îõ Å¡¾õ ¿Äõ¦¸ðÎò ¾¡Éõ Å£íÌõ
ÒñÀÎí ¸ÃôÀ¡ý °óÐ Ò¨Äò¾¼í ¸ÎòÐ §¿¡Ìõ
Åý¨ÁÔ¼ý ¦ÅÊòÐî Ý¨Ä ÅÕÅÐ Ã½Á£¦¾ýÉ "

" ¯¨ÇïÍ§Á ÅÂ¢Ú¾¡ý °£¾í¸¡Ïõ
¯‰½Á¡ö ãò¾¢Ãó¾¡ý ÓÚì¸¢Å£Øõ
«¨ÉïÍ§Á Âí¸¦ÁøÄ¡õ ¦°¡È¢Ôñ¼¡õ
«ÊÅ¡¸ ¦ÅÐôÀÄ¡öì ¸¡ì¸ §Â¡×õ
Ò¨¸ï° §ÁÉ¢Âí¸ò¾¢ü Òñ¦À¡ÄÕì¸¢ô
¦À¡Ê ¦À¡ÊÂ¡ö Íñ½¡õÒ ¸ü§À¡ø Å£Øõ
¸¨ÇïÍ§Á ¿£¦Ã¡Î ÁÄÓï °¢ìÌõ
¸°¢Ô§Á ¸ÃôÀ¡É¡õ "
- «¸Š¾¢Â÷ þÃ½ áø - Àì¸õ 3

Apart from generalized itching the signs and symptoms of Karappan are ulceration, pain in the joints, constipation and scanty micturation.

The signs and symptoms of "*PITHA KARAPPAN"* have been defined by various siddhars.

According to Yugi Vaidhya Chinthamani

" ¾¡É¡¸ì ¸ñ àí¸¢ ¦¿Î× ¯ó¾¢
¾Ç÷óÐ§Á ¯ðÍÃóÐ ¦ÅÐôÒñ¼¡Ìõ
àÉ¡¸ ¸¢Ú¸¢ÚìÌ Ó¼Äï §°¡Õõ
¦°¡¡¢óÐ§Á ¯¼õÒ Áï°Ç¢ìÌõ
§ÅÉ¡¸ ÅýÉò¨¾ þÈí¦¸¡ð¼¡Ð
Á¢Îì¸¡É ¾£ÀÁó¾¢òÐô §À¡Ìõ
§ÀÉ¡¸ °ÕÅÐ §À¡Äì ¸¡Ïõ
À¢ò¾ ¸ÃôÀ¡ý Ì½ò¾¢ý ¦ÀüÈ¢Â¡§Á "
- ä¸¢ ¨Åò¾¢Â °¢ó¾¡Á½¢, Àì¸õ 252

- Extreme tiredness
- Distended abdomen
- Body heat
- Giddiness
- Indigestion
- Loss of appetite
- Crawling sensation
- Erythma ć itching

According to Balavagada Thirattu

“ ¦°ôÒò ¾¨Ä¦¾È¢òÐ §°Õõ ¸¡öî°ø ¾¢É×
´ôÀî °¢Åó¦¾¡¢òò Ðð½½Óó ¾ôÀ¡Áø
Å¡ó¾¢ ÅÕõ ¿£÷°¢ÅìÌõ ÅóÐÁÄï °¢ì¸¢Å¢Î
§°÷ó¾ À¢ò¾Š ¦°í¸ÃôÀ¡ý ¾¢ñ½õ ”

- À¡ÄÅ¡¸½ò ¾¢ÃðÎ - Àì¸õ 248

The following signs and symptoms of pitha karappan are

- Headache
- Fever
- Redness of skin
- Itching
- Vomiting
- Straw coloured urine
- Constipation

V. NAADI

Naadi is the main diagnostic scale of the siddhas system. The examination of Naadi is used in diagnosis and prognosis of the disease. Naddi is defined as

¯¼Ä¢ø ¯Â¢÷ ¾¡¢ò¾¢ÕôÀ¾üÌ ¸¡Ã½Á¡É °£Å °ì¾¢ ±Ð§Å¡ «Ð§Å ¾¡Ð «ÄÄÐ ¿¡Ê ±ÉôÀÎõ.

" ¸¡¢Ó¸ÉÊ¨Â Å¡úò¾¢ì
¨¸¾É¢ø ¿¡Ê À÷÷ì¸¢ø
¦ÀÕÅ¢ÃÄíÌÄò¾¢ø
À¢Êò¾Ê ¿Î§Å ¦¾¡ð¼¡ø
´Õ Å¢Ã§Ä¡Êø Å¡¾õ
¯Â÷ ¿Î Å¢ÃÄ¢ø À¢ò¾õ
¾¢ÕÅ¢Ãø ÓýÈ¢§Ä¡Êø
°¢§Ä¡òÐõ ¿¡Ê ¾¡§É "

- «¸Š¾¢Â÷ ¿¡Ê, §¿¡ö ¿¡Ê §¿¡ö Ó¾ø ¿¡Ê À¡¸õ - 1 Àì¸õ- 86

Naadi can felt at one inch below the wrist on the lateral side by means of palpation with the tip of index , middle and ring finger correspond to vatham ,pitham,and kabam

" Åó¾ ¸¨Ä ãýÈ¢ø Å¡ÔÅ¡ÁÀ¡ÉÛ¼ý
¾ó¾ À¢Ã¡½ý °Á¡ÉÛõ-°ó¾ÓÈì
ÜðÎÈ×§Ã°¢ò¾ø ÜÚõ Å¡¾õ À¢ò¾õ
¿¡ðÎí¸À§ÁÂ¡õ ¿¡Î "

- ¸ñÏ°¡Á¢Âõ, §¿¡ö ¿¡¼ø §¿¡ö Ó¾ø ¿¡¼ø À¡¸õ-1 Àì¸õ 88

The three uyirthathukkal are formed by the combination of

Edakalai + Abanan = Vatham

Pinkalai + Pranan = Pitham

Suzhumunai + Samanan = Kabam

The ratio between vatham, pitham,&Kabam are 1:1/2:1/4 respectively.

In pitha karappan the following types of naadi is commonly seen. Kaba nadi & Vatha uttinam.

1. **KABA NAADI**

" ¾¡ÉÓûÇ §°òÐÁó ¾¡É¢Ç¸¢ø ¦ÅôÒ
°ÂÁ£¨Ç þÕÁø Áó¾¡Ã ¸¡°õ
®ÉÓÚï°ýÉ¢ Å¢¼§¾¡¼õ Å¢ì¸ø
Â£Õò§Ã¡°õ ¸ÃôÀ¡ý Å¢Ã½ §¾¡ð¼õ
Á¡É¨ÉÂ£ü Ý¨Ä¾¢Ãû Å¢Â¡¾¢ Å£ì¸õ
ÅÕï °ò¾¢ ÍÅ¡°õ ¦¿ï°¨¼ôÒ àì¸õ
²ÉÓÚí ¸¡Á¡¨Ä ÀñÎ §°¡¨À
²Ø ÍÃí¸û ÀÄÐì¸õ Å¢¼ Óñ¼¡§Á "

- °¾¸ ¿¡Ê, §¿¡ö ¿¡¼ø §¿¡ö Ó¾ø ¿¡¼ø
À¡¸õ-1 Àì¸õ 169

2. **VATHA UTTINAM**

" °¢ÈôÀ¡É Å¡¾ò¾¢ÖðÊÉ¸¡ø ¾¡§É
§°÷ó¾¢Î ¸¢Ä¾¢°¡Ã Ó¨Çî°ø
¯¨ÃôÀÀ¡É ¦À¡ÕÁ§Ä¡Î «ì¸¢É¢ Áó¾õ
¯ñ¼Ìõ ¿£÷î°¢ÅôÒ À¢Ã§Á¸í¸û
À¢ÈôÀ¡Î Á¾¸¡¢ ¸ÃôÀ¡ý Ãò¾õ
.....Åó¾¼íÌó¾¡§É
"

- °¾¸ ¿¡Ê, §¿¡ö ¿¡¼ø §¿¡ö Ó¾ø ¿¡¼ø
À¡¸õ-1 Àì¸õ -178

Apart from these vatha kabam and kaba vatham may also be present.

VI. THEERUM THEERA NILAI

" ã÷ì¸Á¡õ °¡ò¾¢Âò¨¾ ¦Á¡Æ¢ÂÌ §¸Ç¡ö
¦Á¡Æ¢¸¢ýÈ Å¡¾ ¸ÃôÀ¡ýÈý§É¡Î
°÷¸Á¡õ À¢ò¾ ¸ÃôÀ¡ÛÁ¡Ìõ
¯Â÷¸¢ýÈ ÅÈð°¢Â¡í ¸À¡Äì¸ÃôÀ¡ý
¾¡÷ì¸Á¡Â£Ð ¿¡Öï °¡ò¾¢ÂÁ¡ö
¾Éì¸¡É §°ðÀ ¸ÃôÀ¡ý ¸ñ¼õ
¾£÷ì¸Á¡ï §°ðÀ ¸ÃôÀ¡ýÈý§É¡Î
¦°ôÀ¢Â§¾¡÷ þÐ ãýÚõ «°¡ò¾¢ÂÁ¡§Á "

- ä¸¢ ¨Åò¾¢Â °¢ó¾¡Á½¢
Àì¸õ-302

Curable Types :-

- Vatha karappan
- Pitha karappan
- Varatchi karappan
- Kabala karappan

Incurable Types :-

- Thimir Vatha karappan
- Kanda karappan
- Sethuma karappan

VII. DIFFENTIAL DIAGNOSIS (§¿¡öì ¸½¢ôÒ Å¢Å¡¾õ)

Karappan	Region affected	Mukkuttram	Prominent signs symptoms	Peculiar character	Prognosis
Varatchi Karappan	Extremities, rarely trunk	Kabam + Vatham + Pitham	Veekam, Kuthal, Ooral, Udal Vattral, Mayakkam, Pithatral	Pulal Natram	Good
Vatha Karappan	Extremities	Kabam + Vatham	Veekam, Kudaithal, Punpolvali, Vedippu, Pun Varazhalal	Mootu Mudakkam	Good
Kaba Karappan	Non-Specific	Kabam + Pitham	Kaathiraichal, Pralabam, Adhiga Moochu	Kural Kammal,	Bad
Kabala Karappan	Head	Kabam	Kanneer, Peezhai, Mookku Neer, Thummal, Sirasil sori, Pechu Mantham	Netri thudippu kan, Kaadhu, Thinavu, Annakkil Soodu	Good
Kanda Karappan	Neck & Body	Kabam	Vali, Thalai Kanappu Udambil Sori, Kan Koosal	Kuzhir, Thondai Karakarappu, Naathadippu	Bad
Thimir Vatha Karappan	Extremities	Kabam + Vatham + Pitham	Kal, kai, Eduppu, Santhu Vali, Vedhithu pun, Oodhal, Uzhhaichal, Soodu	Karadu kattal, Thaagam	Bad

VIII. MUKKUTRA VERUPADUGAL

In Siddha system, the manifestations of all disease are the result of derangement of three doshas in vatham, pitham and kabam. In Pitha karappan, kabam is deranged. Then it accompanied pitham and caused the disease.

IX. PINIYARI MURAIMAI (Diagnosis)

Diagnosis is the most important one for any physician by which it deals the disease by finding its causes and is helpful to treat and also prognosis.

This is done by

- Poriyal arithal – Inspection
- Pulanal arithal – Palpation
- Vinathal - Interrogation
- Envagai Thervugal
- Alavaigal

Poriyal Arithal

Physician pori and pulan are used as the tools for examining the pori and pulan of the patient. Pori is the 5 organs of the perception. They are

- Nose
- Tongue
- Eyes
- Skin
- Ear

Pulanal Arithal

Pulanal arithal is the examination of the pulan of the patient by the physician. Pulan is the 5 objects of sense. They are

- ❖ Smell
- ❖ Taste
- ❖ Sight
- ❖ Sensation
- ❖ Hearing

Vinathal

By interrogation, the physician known about the patient's name, age, occupation, native place, socio economic status, family history, diet habit, prone for any allergens, period of suffering his complaints, history of previous illness, frequency of attacks by change of season, relevant history of treatment of habits etc.

X. ENVAGAI THERVUGAL (Eight tools of diagnosis)

Envagai thervugal is the specialty of Siddha diagnosis. These are the instruments for the physicians to diagnose the disease. This is described in various Siddha literature as follows.

" ¿¡ÊôÀ¡¢°õ ¿¡¿¢Èõ ¦Á¡Æ¢Å¢Æ¢
ÁÄõ ãò¾¢ÃÁ¢¨Å ÁÕòÐÅÃ¡Ô¾õ "
- §¿¡ö ¿¡¼ø §¿¡ö Ó¾ø ¿¡¼ø, À¡¸õ 1
Àì¸õ 253

" ¿£ÊÂ Å¢Æ¢Â¢É¡Öõ ¿¢ýÈ ¿¡ìÌÈ¢Â¢É¡Öõ
Å¡ÊÂ §ÁÉ¢Â¢É¡Öõ ÁÄ¦Á¡Î ¿£¡¢É¡Öõ
ÝÊÂ Å¢Â¡¾¢ ¾ý¨Éî Í¸õ ¦ÀÈ «È¢óÐ ¦°¡ø§Ä "
- «¸ò¾¢Â÷

" ¦ÁöÌÈ¢ ¿¢Èó§¾¡É¢ Å¢Æ¢ ¿¡Å¢ÕÁÄõ ¨¸ìÌÈ¢
"

- §¾¨ÃÂ÷, §¿¡ö ¿¡¼ø §¿¡ö Ó¾ø ¿¡¼ø
À¡¸õ 1 Àì¸õ 253

" ¦¾¡ì¸ÖüÈ «ð¼Å¢¾ô À¡¢ð¨° ¾ý¨É
ÐÄì¸ÓÚõ ÀñÊ¾§Ã ¦¾Ç¢Å¡¸ô
Ò¸ü¸¢ýÈ Å¡÷ò¨¾¨Âô À¡÷¿¡¨Åô À¡Õ
ÅÌì¸¡¢Â §¾¸¦ÁÉò ¦¾¡ðÎô À¡Õ
ÅÉÁ¡É °¡£Ãò¾¢ý ¿¢Èò¨¾ô À¡Õ
°¸¢ì¸¡¢Â ÁÄò¨¾ô À¡Õ °Äò¨¾ô À¡Õ
°¡÷¾Å¢Æ¢¾¨É À¡÷òÐ ¦¾Ç¢Å¡öì¸¡§½ "

- ¸ñÏ°¡Á¢ ÀÃõÀ¨Ã ¨Åò¾¢Âõ Àì¸õ-1

In Kannu samiyam paramparai vaithiyam Envagai thervugal has been mentioned as “Asttavitha Pareetchai”.

Envagai Thervugal is

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

1. Naa (Tongue)

By noting the tongue, the colour, dryness or wetness, coated or not, excessive salivation, redness, ulceration, pallor, yellowish discolouration of the tissues, any malignant growth, predominant taste in the tongue, speech and movement of the tongue.

2. Niram (Colour of the skin)

Colour indicating vatham, pitham, kabam, yellow, pallor or blue or redness of the skin, any bluish discolouration of the face, conjunctiva and nail bets.

In pitha karappan hyper pigmentation can be noticed in the affected areas.

3. Mozhi (Voice)

Clarity of speech or any disturbance, loud voice, slurring, crying, talk induced by hallucination, undue arguments, breathlessness can be made out. Deficient respiratory sounds and abnormal sounds are also observed.

4. Vizhi (eyes)

Any abnormal colour change indicating the affected kutram pallor, excessive lacrimation and accumulation of secretion at the angles of eye. Sub-conjunctival bleeding, visual disturbance and specific disease of the eyes.

5. Sparisam

Dryness of the body, excessive sweating, oozing, enlargement of viscera, palpable tumour, tenderness, ability of identifying the touch and oedema.

In pitha karappan, thickening roughness, blackish discolouration of the skin, crawling sensation, erythema with itching are found.

6. Malam (Faeces)

Quantity, colour, odour, froth, abnormal consistency including indigestion, frequency, constipation, presence of blood etc.

In pitha karappan indigestion is noted in some cases.

7. Moothiram (Urine)

Quantity, colour, odour, froth, frequency, retention, deposit, heaviness, presence of abnormal constituents such as sugar, albumin and deposits etc are to be noted. In pitha karappan urine sugar, deposits are noted in some cases.

The diagnostic value of urine is derived from the changes that are observed in peculiar studies. " The Neer kuri & Neikuri".

Neer Kuri & Neikuri

Based on the clinical features of disease and Naadi, the diagnosis is further confirmed by the support of Neer kuri & Neikuri test.

Collection of urine for the determination of Neer kuri & Neikuri

" «ÕóÐ Á¡È¢ Ã¾ÓÕ «Å¢§Ã¡¾Á¾¡ö
«·¸ø «Ä÷¾ø «¸¡Äçñ ¾Å¢÷ó¾Æø
ÌüÈÇÅÕó¾¢ ¯Èí¸¢ ¨Å¸¨È
¬Êì ¸Ä°ò ¾¡Å¢§Â ¸¡Ð¦Àö
¦¾¡Õ ÓÜ÷ò¾ì ¸¨ÄìÌðÀÎ ¿£¡¢ý
¿£÷ìÌÈ¢ ¦¿öìÌÈ¢ ¿¢ÕÁ¢ò¾ø ¸¼§É "

- §¾¨ÃÂ÷, §¿¡ö ¿¡¼ø §¿¡ö Ó¾ø ¿¡¼ø
Àì¸õ 265

The patient must take only well cooked food in the previous day. The intake must be proportional to the degree of his appetite. Food intake should be taken at appropriate time. He must have sound sleep in the previous night. After waking up in the morning, the first urine voided by the patient is collected in a glass container and closed immediately to prevent from the contact of external atmosphere. This specimen must be examined within 1 ½ hours. This procedure

should be followed strictly in order to get accurate reading of Neer kuri & Neikuri.

Neer Kuri

Urine has the following features.

- ❖ Niram – Indicates the colour of the urine.
- ❖ Edai - Indicates the specific gravity of urine
- ❖ Manam - Indicates the smell of urine
- ❖ Nurai - Indicates the frothy nature of urine.
- ❖ Enjal - Indicates the quantity of urine

Nei Kuri

Neikuri is a method of urine analysis. A drop of gingely oil is dropped into the container without shaking. The nature of the neikuri should be noted in direct sun light.

" ¿¢ÈìÌÈ¢ì Ì¨Ãò¾ ¿¢ÕÁ¡É ¿£¡¢ü
°¢Èì¸ ¦Åñ¨½ §Â¡÷°¢Ú ÐÇ¢ ¿ÎÅ¢ü
¦¾ýÚÈò ¾¢Ãó¦¾¡Ä¢ §Â¸¡ ¾¨Áò¾¾¢
É¢ýÈ ¾¢Å¨Ä §À¡õ ¦¿È¢Å¢Æ¢ÂÈ¢×õ
¦°ýÈÐ Ò¸Öó ¦°ö¾¢¨Â Ô½§Ã "
- §¿¡ö ¿¡¼ø §¿¡ö Ó¾ø ¿¡¼ø, À¡¸õ -1 Àì¸õ 279

The process of oil indication

The urine specimen when collected in the above stated procedure can be analysed in the following method.

The specimen is kept open in a glass dish well exposed to sunlight but the movement of wind should not disturb it. Then add 1 drop of gingely oil by a glass rod. Observe the position and spreading of the oil drop.

" «Ã¦ÅÉ ¿£ñÊÉ ·¸§¾ Å¡¾õ "
" ¬Æ¢§À¡ü ÀÃÅ¢ý «·§¾ À¢ò¾õ "

" Óò¦¾¡òÐ ¿¢ü¸¢ý ¦Á¡Æ¢Å¦¾ý ¸À§Á "
- §¿¡ö ¿¡¼ø §¿¡ö Ó¾ø ¿¡¼ø,
À¡¸õ - 1 Àì¸õ - 279 & 280

If the drop of oil spreads like a snake it indicates vatham
If the drop of oil spreads like a ring it indicates pitham
If the drop of oil spreads like a pearl it indicates kabam.

In pitha karappan the drop of oil spreads like a pearl and like a ring. Hence it indicates kabaneer and pithaneer .

Naadi

In pitha karappan the following types of naadi is commonly seen. Kaba nadi & Vatha uttinam.

XI. PARUVAKAALAM (Seasons)

The whole year is constituted by 6 seasons. They are known as

1. Kaar kaalam (Aavani & Purattasi) – August & September
2. Koothir kaalam (Iyppasi & Karthigai) – October & November
3. Munpani kaalam (Markazhi & Thai) – December & January
4. Pinpani kaalam (Masi & Panguni) – February & March
5. Elavenil kaalam (Chithirai & Vaigasi) – April & May
6. Mudhuvenil kaalam (Aani & Aadi) – June & July

Kabam gets thannilai valarchi in Pinpani kaalam and vetrunilai valarchi in Elavenil kaalam. Pitham gets thannilai valarchi in Kaar kaalam and vetrunilai valarchi in Koothir kaalam. Vatham gets thannilai valarchi in Mudhuvenil kaalam and vetrunilai valarchi in Kaar kaalam

XII. THINAI

In the Siddha system, the history regarding the patient's native place has specific significance.

S.NO	LAND	AILMENTS
1	Kurunji (Mountain Region)	Kaba Noigal
2	Mullai (Forest Region)	Pitha & vatha Noigal
3	Marutham (Fertile Region)	No disease
4	Neithal (Coastal Region)	Vatha Noigal
5	Paalai (Desert Region)	Vatha , Pitha & Kaba Noigal

XIII. MUKKUTRAM

Classification of Vatham, Pitham and Kabam

The description in anatomical and physiological vatham has been made in ten forms with various functions whereas pitham and kabam have been classified in five forms in different functions.

VATHAM

Location of Vatham

Vatham is located in abanan, stool, idakalai, spermatic cord, pelvic bone, skin , nerves, hairs and muscles.

The types of Vatham

1. **Piranan (Uyirkkaal**)

This control knowledge, mind and five object of sense, responsible for breathing and digestion.

2. **Abanan (Keezhnookukaal**)

Responsible for all downward movements such as passing urine, stools, sperm including menstrual flow. Gets the ingested food extracts to their respective places.

3. **Uthanan (Melnookukaal**)

Cause transportation of the ingested food in different parts of the gut. Responsible for all upward visceral movements such as vomiting, eructation's etc

4. Viyanan (paravukkal)

Viyanan spreads all over the body in all nerve endings and cause constriction and relaxation of muscles. This is also responsible for movement of all parts of the body.

5. **Samanan (Nadukkal**)

This is the neutralizing force for the above four vayus and aids proper digestion.

6. Nagan

Responsible for higher intellectual functions learning , thinking , singing etc opening and closing of the eyes.

7. **Koorman**

Responsible for vision and yarning, lacrimal secretion is also attributed to Koorman.

8. **Kirukaran**

Responsible for salivation, nasal secretion, appetite and concentration of mind.

9. **Thevathathan**

Responsible for laziness, sleeping and anger.

10. **Dhananjiyan**

Produces bloating of the body after death. It escapes in the third day after death by bursting the cranium.

In pitha karappan samanan and viyanan are affected.

PITHAM

Location of pitham

Pitham is located in pirana vayu, pingalai, bladder, moolakkini, heart, umbilical region, abdomen, sweat, saliva, blood, eyes and skin.

The types of Pitham

1. **Anar Pitham**

This is responsible for the change of liquid state into solid state of food substances and for proper digestions.

2. **Ranjaga Pitham**

Converts the food extracts into blood. Gives red colour to the blood.

3. Sathaga Pitham

This is responsible for coordination and proper functioning of other types of pitham. Causing determination and memory.

4. Alosaga Pitham

This is responsible for vision

5. Prasaga Pitham

Gives complexion and colour to skin.

In pitha karappan anar Pitham, sathaga Pitham and prasaga Pitham are affected.

KABAM

Location of kabam

Kabam is located in samana vayu, sperm, head, tongue, uvula, fat, bone marrow, blood, nose, chest , nerve, bone, brain, eyes and joints.

The types of Kabam

1. Avalambagam

It aids the proper functions of other 4 types of kabam. Helps respiration and causes fitness of the limbs.

2. Kilethagam

It makes the food **moist and soft to help for digestion.**

3. **Pothagam**

It is responsible for identifying the taste in tongue.

4. Tharpagam

Present in the head. Giving cooling sensation **to eyes.**

5. **Santhigam**

It is responsible for lubrication and free movement of the joints.

6. In pittha karappan , Avalambagam**,** kilethagam is affected.

XIV. EZHU UDAL THATHUKKAL (Seven physical constituents)

The seven physical constituents constitute the physical body. They are basic tissues of our body. Each has its own specific structures and functions.

1. Saram

It is the final product of the digestive process which strengthens the body and nourishes the blood.

2. Senneer

After absorption the saram is converted into senneer. It is responsible for knowledge, strength, boldness and healthy complexions. Impair colour to body and nourishes the mussels.

3. Oon

It gives structure and shape to the body and is responsible for the movement of the body.

4. Kozhuppu

Lubricate the organs and thus facilitate their functions. Maintains oily matter of the body.

5. Enbu

Forms the basic skeletal structure of the body. Responsible for locomotion and production of vital organ.

6. Moolai

Present inside the core of the bone which strengthens and maintains the normal condition of the bone.

7. Suckkilam & Suronitham

Responsible for the propagation of species.

In pittha karappan saram and saneer are affected.

XV. PININEEKAM (Treatment)

In Thirukkural, Tiruvallur explained the disease and its prevention and diet region. They are

" ÁÕó¦¾É §Åñ¼¡Å¡õ Â¡ì¨¸ìÌ "
" «üÈ¡ÄÇ ÅÈ¢óÐñ¸ Å·Ð¼õÒ "
" «üÈÈ¢óÐ ¸¨¼ôÀ¢ÊòÐ Á¡ÈøÄ "
" ¾£ÂÇÅ¢ýÈ¢ò ¦¾¡¢Â¡ý ¦À¡¢Ðñ½¢ý "
" Á¡ÚÀ¡ÊøÄ¡¾ ¯ñÊ ÁÕóÐñ½¢ý "
" þÆ¢ÅÈ¢ó ÐñÀ¡ý ¸½¢ýÀõ §À¡É¢üÌõ "

Pinineekam is not only for removal of the disease but also prevention and improving the body condition, This is stated as follows

- ❖ Kappu (Prevention)
- ❖ Neekam (Treatment)
- ❖ Niraivu (Restoration)

Kappu (Prevention)

" ÅÕÓýÉ÷ ¸¡Å¡¾¡ý Å¡úì¨¸

±¡¢ÓýÉ÷ ¨ÅòàÚ §À¡Äì¦¸Îõ "

- ¾¢ÕìÌÈû -±ñ 435
-

"Prevention is better than cure"

One who follows a balanced regular diet, good habits and environmental adaptation leads a better, healthy long life. Prevention and cure of disease are the basic aim of any medical system. Prevention aspect is very much stressed in all Siddha literature. They have general preventive measures.

" ÁÕó¦¾É §Åñ¼¡Å¡õ Â¡ì¨¸ìÌ «Õó¾¢ÂÐ
«üÈÐ §À¡üÈ¢ ¯½¢ý "

" ±¾¢Ã¾¡ì ¸¡ìÌõ «È¢Å¢É¡üì ¸¢ø¨Ä
«¾¢Ã ÅÕÅ¾¡õ §¿¡ö "
- ¾¢ÕìÌÈû

" Óì¸¡ø ÁÄÁÐ ¦À¡øÄ¡¾ Å¡Ô× ãýÚÐõÁø
°¢ì¸¡ÁÄ¡Ú °Ä¾¡¨Ã Å¢ðÎî °¢Õ¾¨¼Ôõ
¨Áì¸¡Î ¦¸¡ñ¼ Å¢Æ¢Â¡ö ÁÉ¢¾÷ìÌ Å¡öôÀ¦¾É¢ø
±ì¸¡Ä Óõ À¢½¢ Å¡Ã¡Ð ¸¡Âõ þÕõ¦À¡ìÌõ "

-°¢ò¾ ÁÕòÐÅ¡í¸ ÍÕì¸õ
Àì¸õ 192

These denote siddhar's giving more important to preventive aspect.

Neekam (Treatment)

A good physician should about the derangement of kuttram and should treat the patient in the basis of altered kuttram.

- To bring the three dosha normal

- To treat the disease according to its symptoms thro' medicines
- Diet and prevention of disease.
- To increase the natural immunity

Four responsibilities of successful treatment are explained by Tiruvalluvar.

" ¯üÈÅý ¾£÷ôÀ¡ý ÁÕóÐ¨Æî ¦°øÅ¡¦ÉýÚ
«ôÀ¡Ä ¿¡üÜü§È ÁÕóÐ "
- ¾¢ÕìÌÈû

Management

- **KARAPPAN CHOORANAM** - 1 gram with water 2 times a day (internal)
- **KARAPPAN ENNAI** - External

Anupanam

" «ÛÀ¡Éò ¾¡§Ä ÂÅ¢ú¾õ ÀÄ¢ìÌõ
þÉ¢¾¡É ÍìÌ ¸ýÉø þï°¢À¢É¢Ó¾¸í
§¸¡ÁÂõ À¡ø Ó¨ÄôÀ¡ø §¸¡¦¿ö
¬Á¢¨¾ Â¡Ã¡öóÐ ¦°öÂÄ¡õ "

- §¾¨ÃÂ÷ ¦ÅñÀ¡ Àì¸õ 210

Anupanam which is also known as thunai marunthu can be translated as vehicle, adjuvant and supporting medicine therapy.

Diet

During the course of treatment according to the medicine administered to the patient and the nature of the disease, the patients were advised to follow

certain precautions regarding diet and physical activities. This type of medical advice in Siddha system of medicine is termed as "PATHIYAM". This diet control was applied whenever necessary.

Siddhar's advice regarding the diet regimen for kabam patients is explained below. The item should be avoided are Katherikkai, Payaru vagaikal, Agathi keerai, Karunai, Peerkku, Kattupoosani, shell fish, tomato, bitter guard and green plantain.

The food items can be taken are Vallarai, Manathakkali, dry ginger, Senkeerai etc.

Arivurai (Medical advice)

- Avoid allergic and dust atmosphere
- Avoid karappan pandangal
- To advice the patient to do the Thiyanum practice for being down their stress and strain
- The patients were advised to use Nalanguma instead of soap and other detergents to find out which agents makes allergy and avoid them.

REVIEW OF LITERATURE

MODERN ASPECT

SKIN ANATOMY

The skin in composed of superficial epithelial layer the Epidermis and underlying connective tissue layer, the Dermis or Corium. Beneath the Corium is another connective tissue layer rather using in texture-the Hypodermis or subcutaneous layer.

Epidermis

The epidermis is formed of non-vascular stratified epithelium. Its usual thickness is between 0.07 mm and 0.12 mm. The cells of the epidermis are mainly of two types, the keratinizing or Malpighian system (Keratinocytes), which forms the bulk, and the pigmentary system (Melanocytes), which produces the pigment.

There are five layers in the epidermis.

1. Stratum Germinativum or Stratum Basale
2. Stratum Malpighii or the prickle cell layer.
3. Stratum Granulosum
4. Stratum Lucidum
5. Stratum Corneum

❖ **Stratum Germinativum or Stratum Basale**

This is the deepest of the portion of the epidermis and composed of columnar cells placed perpendicular to the skin surface. The whole of the epidermis germinates from this stratum, hence the Stratum Germinativum.

❖ **Stratum Malpighii or the prickle cell layer**

It is superficial to the basal cell layer and is composed of several layers of polyhedral cells connected to each other by intercellular bridges.

❖ **Stratum Granulosum**

It is composed of flat, fusiform cells which are one to three layers thick.It is superficial Stratum malpighii. These cells contain granules of Keratohyalin.

❖ **Stratum Lucidum**

It is pale and wavy looking layer, present superficial to Stratum Granulosum. This layer contains refractile droplets of eleidin.

❖ **Stratum Corneum**

This is the most superficial layer, the outer surface is exposed to the atmosphere. It consists of many layers of non- nucleated , flattened, cornified cells.

Dendritic cells of epidermis.

These are melanocytes, Langerhan's cells and indeterminate cells. The melanocytes are the pigment producing cells. The cells of Langerhan's are found in the middle of epidermis.

Basal lamina (Basement Membrane)

Dermal side of the Basal lamina contains of few scattered collagen fibres.

Dermis

The dermis is bounded superficially by its junction with the epidermis and deep relation by the subcutaneous fat. The base of the dermis is a supporting

matrix or ground substance which contains polysaccharides.the matrix contains two kinds of proteins. They are

Collagen - Which has great tensile strength

Elastin - which has considerable elasticity

Hair follicles, sebaceous and sweat glands, plain muscle fibres, sensory end organs like Pacinian corpuscles and adipose tissue are seen in the microscopic section of the dermis.

The dermis contains few cells which are fibroblasts mast cells, histiocytes or macrophages, lymphocytes or other leucocytes and melanocytes. In the deeper layer of dermis there is an arterio-venous anastomosis surrounded by pericapillary sphincters under autonomic control.

Sebaceous glands

They are situated in the upper half of the corium. The glands are derived from the epithelial cells of the hair follicle and are present everywhere in the skin except on the palms and soles.

They are multilobulated and covered by a connective tissue capsule within which is a layer of small epithelial cells. As these cells mature towards the centre of the globules, they enlarge, their cytoplasm becoming arranged in a delegate network surrounding globules of fat (Sebum).

Sweat glands

These are found in all areas of the skin. The sweat glands originate as down growth from the epidermis. These consist of a single un-branched cube which terminates in the form of a coil in the mid corium.

The coil is the secretary segment and is lined by a single layer of epithelial cells. The duct runs straight upwards from it to the epidermis which it traverses in

a corkscrew manner to open on the surface at the pore. The latter is covered by a loose mess work of Horny cells.

Apocrine glands

They occur in the axillae, areola and nipples of breasts, umbilicus, around the anus and the genitalia. There are myoepithelial cells are highly developed and more abundant in these glands. They are specialised sweat glands and their secretion is odourtferous with a secondary sexual significance.

Hair

Hair is on almost every part of the body surface except on the palms and soles, the dorsal surface of the terminal phalanges, the inner surface of the labia, the inner surface of the prepuce and glands penis. Hair growth development is under endocrine control.

Hair is made up of hard keratin and is analogous to nail. It is formed by the hair matrix, a layer of specified epidermal cells. Capping papilla, the two structures make up the hair bulb. Melanocytes are present in the matrix and form the pigment of hair. The portion of the hair below the surface of the scalp is known as the hair root. Above the surface of the scalp, the hair is composed of the medulla, cortex and cuticle.

The medulla consists of seven rows of soft keratin, but is discontinuous or even absent in most human hairs. The cortex is the main structural component and is made up of tightly packed fusiform keratinized cells.

Nails

These are semi transparent plate like structures, covering the dorsal surface of the distal phalanges of the fingers and toes. The nails are composed of many layers of flattened Keratinizes cells fused into a homogenous mass.

They arise from epidermal at lining of invagination of skin at the base of the nail, this specialised epidermis being known as the nail matrix . The invagination of skin at the base of the nail is called nail fold.

The anterior border encroaches upon the nail plate as a flattened keratinous rim, the cuticle and forms a protective barrier against irritants and infections.

Blood vessels

The blood supply of the skin originates from the large number of arteries forming anastomosis in the deepest part of the dermis. From here single vessel run upwards and form a second network in the upper dermis. Finally terminal arterioles ascend into the papillae ending in capillary loops, which drain into connective venules. The blood is returned to the large veins in the subcutaneous tissues.

Lymphatics

The skin contains a rich network of lymphatics which drain into a few a larger vessels in the hypodermis.

Nerve supply

The nerve supply of the skin consists of a motor sympathetic portion derived from the sympathetic ganglia and sensory spinal portion arising from the dorsal root ganglia. The sympathetic fibres innervate the blood vessels, erector pilorum muscles and apocrine ducts, where the fibres are adrenergic and cause contraction.

PHYSIOLOGY

- **Protective function**

The epidermis and subcutaneous fat play important role in the protective functions. The mechanical properties of the skin depend mainly on the dermis. It

protects the penetration of harmful substance and bacterial invasions. Another function is to protect against sunlight by synthesis of melanin pigment.

- **Immunological function**

The skin is the front line of the defence of the body. In essence, the defence involves the production of antibody which binds with the offensive antigens. Langerhans cells probably play a crucial role in contact sensitisation, immuno surveillance against viral infections and neoplasms.

- **Sensory function**

The skin is richly supplied with nerves and various types of specialised sensory end-organs, which provide information regarding environmental changes, so that the body can adjust its activity accordingly. In some animals the hairs at certain situations have specialised sensory receptors located at the vase of the hair follicles, which serve to enhance sensory appreciation.

- **Secretion and excretion**

The skin possesses various types of glands, which pour secretion on the surface. The more important glands are the sweat and the sebaceous glands. The eccrine glands which are scattered all over the body surface secret a thin transparent watery fluid known as true sweat, while the apocrine glands secret a thicker rather milky and odoriferous solution.

Sweat in its composition consists of 1.2% solids and 98.8% water. The substances excreted in it are sodium chloride, sodium phosphate, sodium bicarbonate and small amount of urea. The skin can excrete medicines administered to the individual for e.g mercury, arsenic, iodine etc.

The sebaceous glands of the skin secrete sebum, which is composed of fatty acids, cholesterol, alcohol etc. Fatty acids have a mild fungistatic activity. The sebum acts as a lubricant for the drying effect of the atmosphere.

- **Synthesis of Vitamin D**

Vitamin D is synthesised in the skin as a result of exposure to ultra violet B (UVB) radiation and it is carried in the blood attached to a binding protein to exercise a specific effect at a different site. Vitamin D3 is essential for skeletal development and it contains anti rachitic properties. Vitamin D3 is formed principally in the stratum spinosum and the stratum basale, from the precursor 7 dehydro cholesterol by way of a pro vitamin D3.

- **Body heat regulation**

The skin place the most important role in the regulation of heat loss. It loses heat to the external environment in three ways by conduction, by radiation, and by evaporation. Heat loss by the two mechanisms takes place when the environmental temperature is lower than that of the skin. The heat loss when the environmental temperature is higher than that of the skin by the body to evaporation of the sweat by the surface of the skin. About 90 % of the total loss of the body heat is regulated by the skin. The heat loss through the skin is regulated by various physiological mechanism which include

1. The reaction of the cutaneous vessels
2. The reaction of the smooth muscle fibres of the skin and
3. Perspiration.

- **Endocrine functions**

Hair follicles and sebaceous glands are target for the organic steroids secreted by the gonads and the adrenal cortex and melanocytes are directly influenced by polypeptide hormones of the pituitary.

- **Storage function of skin**

Blood stored in the rich sub papillary plexuses of the dermis, is about one litre. The skin is also a good store house of ergo sterol which is irradiated by the ultra violet light of the sun and converted into vitamin D.

The junction between dermis and hypodermis has a considerable capacity for storing fat and is a permanent store of subcutaneous adipose tissue. Certain substance like glucose and chlorite may also be stored in the skin temporarily. Cornified layer also acts as a reservoir for the topically applied cortico-steroids or other hormones which are absorbed slowly for many days from the skin surface.

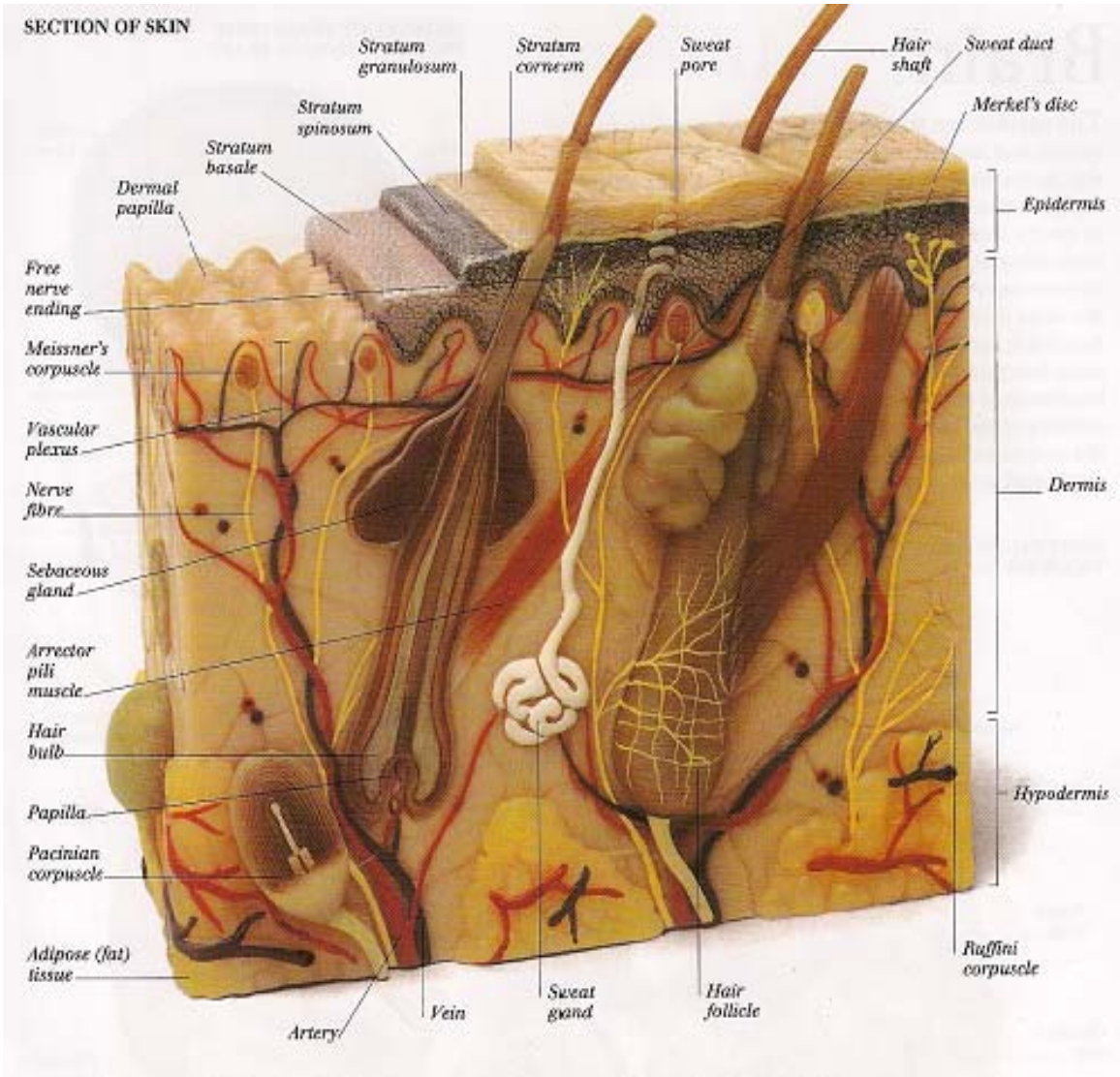
- **Absorption**.

The skin can absorb substance dissolved in the fatty solvents like vitamins and hormones. Inflammation greatly increases the skin permeability. Substances that are completely insoluble in water and liquids do not penetrate.

- **Gaseous exchange through skin.**

A small amount of gaseous exchange occurs through the skin. In man the amount of CO_2 exchange through the skin is negligible compared to the amount of exhaled from the lungs.

STRUCTURE OF SKIN



ECZEMA

DEFINITION

Eczema is a non contagious inflammation of the skin, characterized by erythma, scaling, oedema, vesiculation and oozing. It is a specific type of allergic cutaneous manifestation of antigen- antibody reaction, characterized by

superficial inflammatory oedema of the epidermis associated with vesicle formation.

AETIOLOGY

The two main factors causing eczema are

- Allergic or sensitive skin
- Exposure to an irritant

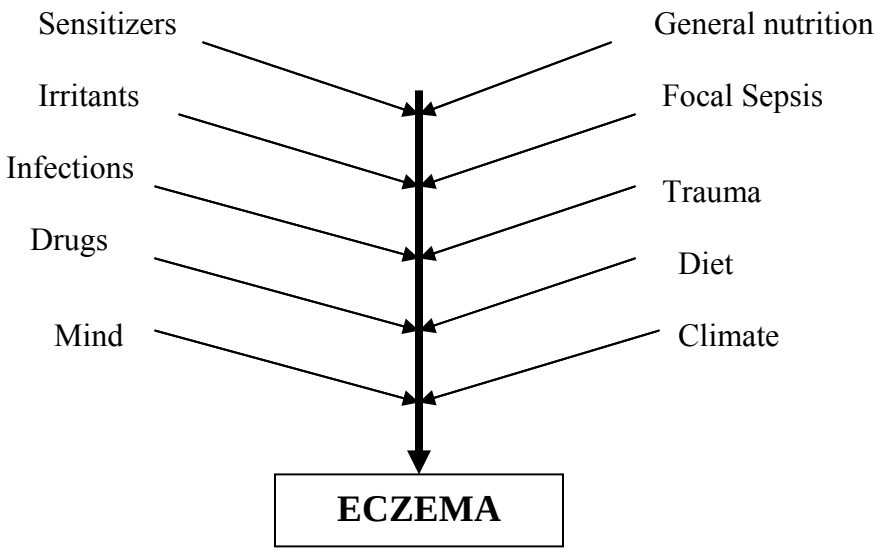
The general predisposing causes are

- Age
- Familial predisposition
- Allergy
- Debility
- Climate
- Psychological factors
- Xeroderma or ichthyosis
- A greasy skin
- Hyperhidrosis
- Varicose veins causing congestion and focus of lowered resistance
- Hypostasis

Aggravating factors

- Irritants – physical, chemical or electrical
- Sensitizers – plants, Cosmetics, Clothing, Medicaments & Occupational hazards.
- External – Strepto cocci, Staphylococci, fungus etc.
- Mental and emotional conflicts, Strain and stress

- ❖ Internal septic focus shedding toxins or causing bacteraemia
- ❖ Diet and state of digestion
- ❖ Daithesis – Allergic, Xerodermic, hyper hydrotic or sebrorrhoeic
- ❖ Medicines given for disease or otherwise
- ❖ State of local or general nutrition
- ❖ Climate, temperature and humidity.



HISTOPATHOLOGY

Characteristic features intracellular oedema (Spongiosis) and vesicle formation. There may be mild to moderate dermal reaction. In chronic cases, hyper kerotosis, acanthosis and inflammation of upper dermis with lymphocytes are seen.

MORPHO CLINICAL CLASSIFICATION OF ECZEMA

- ❖ Acute stage
- ❖ Sub acute stage
- ❖ Chronic stage

ACUTE STAGE

It is characterised by itchy erythma followed by oedema, papules and vesicles, oozing and crusting. This stage does not last long and the lesions start to heal in about a couple of weeks.

SUB ACUTE STAGE

It is in between the acute and chronic stages characterized by papules and scaling with moderate oedema and erythma. Acute eczema may pass through this stage before it heals completely or becomes chronic.

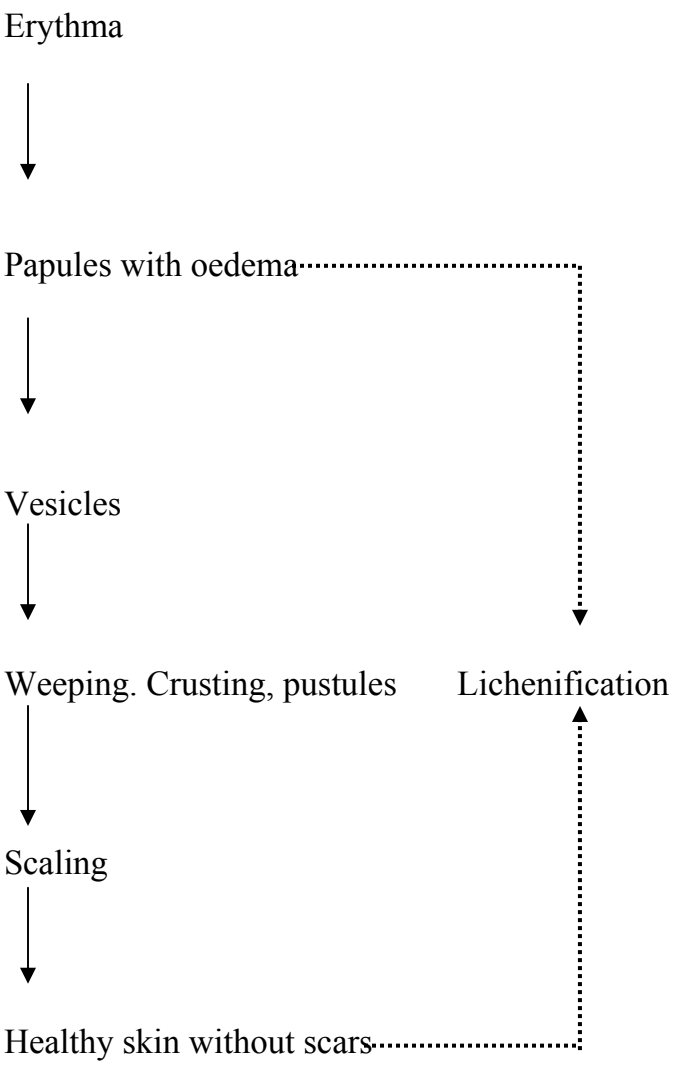
CHRONIC STAGE

It occurs when the cause persists and the eczema lasts over months or years. Here the integument appears thickened and pigmented with prominent criss – cross markings (Lichenifications).

COMMON CLINICAL FEATURES

The signs and symptoms of eczema are diagrammatically represented as follows.

Itching

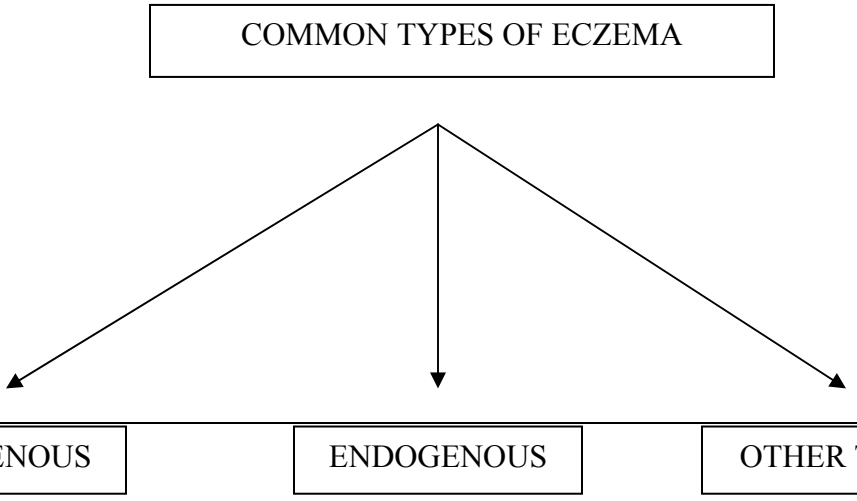


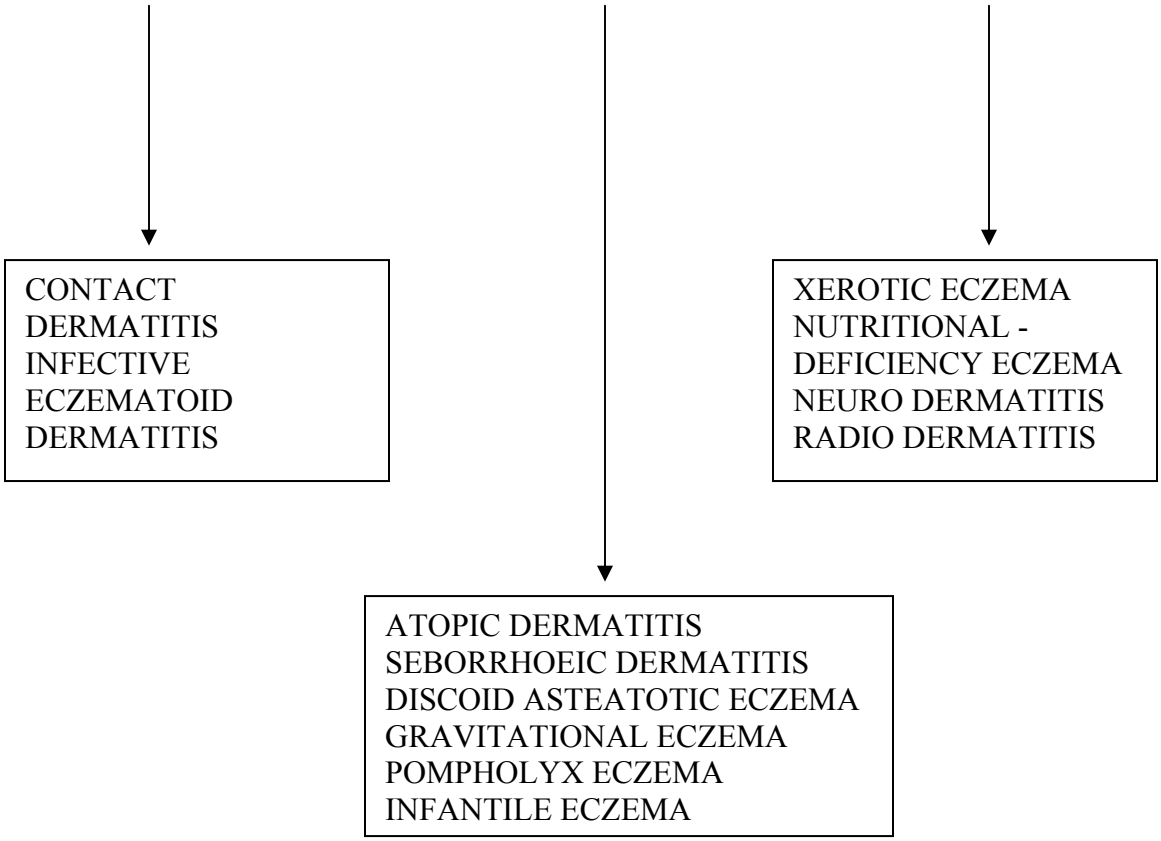
ACUTE CLINICAL FEATURES

- Redness and swelling .usually with ill defined margins
- Papules, Vesicles and more rarely large blisters
- Exudation and cracking
- Scaling

CHRONIC CLINICAL FEATURES

- ❖ May show all of the above features, though it is usually less vesicular and exudative
- ❖ Thickening. lichenification.a dry leathery thickening with increased skin markings is secondary to rubbing and scratching and is most often seen in atopic eczema.
- ❖ Fissures and scratch marks.
- ❖ Pigmentations





ENDOGENOUS ECZEMA

I. ATOPIC ECZEMA

Synonyms – Asthma – Eczema syndrome, Besnier's prurigo

There is a strong familial predisposition in allergic diseases like asthma and hay fever.

Aetiology

- Allergic – Diet, External contacts and inhalants
- Emotional status

Clinical Features

Clinically there are three stages of Atopic eczema.

- Infantile type
- Child hood type
- Adult type.

General instruction for Atopic eczema patients

- The patients should have a warm starch bath in winter and cold Condy's bath in summer. After the both he/she should blot himself / herself with a smooth towel and avoid rubbing. Olive oil or Lanolin cream may be applied on the dry, thickened skin after the bath.
- The patients should avoid extreme of climate. Where it is not possible to change the place of residence air conditioning is the answer.
- The patient should not scratch and keep his / her nails short.
- The diet should be light

- The exact composition of diet depends upon the history of the patients, the diet diary and the results of the allergic tests. Allergic food stuffs should be avoided.
- Health hobbies and playing should be encouraged. They help to divert the attention and speed up the recovery.

- ❖ Any side effect while taking medication should be reported to the physician. Local medicaments should be properly employed.
- ❖ Relatives must be advised to respect the patients' weakness of the skin and his sensitivities.
- ❖ The patient should learn to live within his limits of the mental and physical strength, knowing his inborn weakness. It is a chronic but not a serious disease and therefore, should not depress him. He should avoid anger, resentment and frustration.

II. INFANTILE ECZEMA

Age group: 3 months to 2 years.

Causes

- ❖ Digestive upsets
- ❖ Change of season
- ❖ Dietetic indiscretion

Clinical features

It is usually starts on the cheeks, spreading slowly to the fore head, chin, scalp, arms, trunk and legs, on the buttocks and in the groins, napkin- rash like dermatitis may develop.

The typical lesions are characterized by erythma, vesicles, exudation and crusting. Pruritis is a prominent symptom.

There are two types of infantile eczema.

1. With high familial pre disposition to an allergic disease- The atopic variety.

   The infant become restless and fatigued. Very irritable and pruritic.

   The conditions develop latter into typical atopic dermatitis.

2. without familial predisposition – The simple variety
    A. The infants are plump and good natured.
    B. Itching is moderate
    C. They do well with treatment. The child recovers completely by the age of two

III. INFECTIVE OR SEBORRHOEIC ECZEMA IN INFANCY

This type of eczema starts as cradle cap on the scalp which develops slight exudation and thick crusting. Eczema spreads from the scalp to the auricular region, the periphery of the face and neck sparring the centre of the face .

Aetiology

- Dietic allergies
- Over fed and are too rapidly introduced to adult food.

Distinguishing features of infantile and seborrhoeic eczema

S.NO	INFANTILE ECZEMA	SEBORRHOEIC ECZEMA
1	Disease develops at 3 – 6 months after.	'Cradle cap' at the time of birth, Seborrhoeic dermatitis afterwards.
2	Child is irritable and weak.	Child is usually healthy.
3	Oozing more. Areas look clean	Crusting more and the areas have a dirty appearance
4	Starts from cheeks and extends to for arm and legs	Starts from the scalp and posterior auricular folds and involves neck and trunk flap macular erythmatous or hypo pigmented and scaly rash
5	Family history of atopic disorders except simple variety.	Family history of Seborrhoeic disorder.
6	Itching is severe and sposmodic	Itching mild to mopderate.
7	Recurrent frequent and usually independent of season	Recurrent mostly seasonal i.e summer and monsoon. At times winter also.
8	Poor response to treatment	Comparatively better response

IV. NUMMULAR ECZEMA

Synonym: Discoid eczema

Aetiology

- ❖ Psychogenic stresses
- ❖ Focal sepsis
- ❖ Food allergies
- ❖ Alcohol
- ❖ Debility
- ❖ Drugs

Clinical features

It is characterized by circular coin – shaped plaques of papules, vesicles and cresting , distributed bilaterally and symmetrically on the dorsum of the fingers, the hands, the fore arms, the arms, the legs and thighs.

V. VARICOSE ECZEMA

Synonym : Gravitational eczema

Cause : The predisposing factors are chronic congestion and stasis which lower local resistance.

Clinical features

The dorsum of the foot and lower part of leg so telangiectases, oedema and pigmentation produced by varicose veins. Itching in varicose legs may start eczema.

Complications: Thrombophlebitis

Management

1. Controlling the congestion and stasis by avoiding long hours of standing.
2. Elevating the legs while resting and food exercise
3. Crepe bandages or elastic stockings.
4. Injections or surgery for varicose veins.
5. symptomatic treatment of eczema

VI. DYSHIDROSIS

Synonym: Cheiropompholyx

Causes

1. Neurotic individuals with the hyper hydrosis of the hands
2. Psychogenic stress
3. Focal sepsis
4. Changing of season particularly in spring and summer

Clinical features:

It consists of bilaterally symmetrical eruption affecting palms and hands and less frequently the sides and souls of feet.

Lesions consist of deeply set vesicles, looking embedded sago grains accompanied by tingling, burning and itching. The interdigital space, the sides of fingers and the palms are the typical sites.

EXOGENEOUS ECZEMA

I. CONTACT DERMITITIES

Synonym : Chemical eczema

Causes

1. Plants
2. clothing and foot wears
3. Cosmetics
4. Occupational chemical
5. Medicaments

TEN COMMON ALLERGENS COME ACROSS IN PRACTICE

1. Paraphenylene diamine
2. Nickel sulphate
3. Potassium di-chromate
4. Parthenium hysterophorus
5. Nitro furazon ointment
6. Neomycin sulphate
7. Formaldehyde
8. Turpentine
9. garlic
10. Epoxy resin

Causative agents of occupational dermatitis

OCCUPATIONS	CAUSATIVE AGENTS AND DERMATITIS
Agriculturist and gardeners	Plants, weeds, insecticides, fertilizers and oils – mechanical injuries and contact dermatitis.
Automobile	Oils, petrol, solvents, grease, paints, thinner-acne and dermatitis.
Building workers	Cement, lime, insecticides, fungicides, wood, paints, kerosene oil, turpentine oil etc
Chemical and pharmaceutical industries	Different dyes, Chemicals, pharmaceuticals, solvents, disinfectants, Detergents etc
Coal mines	Mechanical injuries
Dentists	Cocaine and derivatives
Engineering industries	Cutting oils , solvents , detergents
House wives	Soaps , detergents , vegetables , fruits , nickel polishes , keys , kerosene oil , wooden cutlery , flowers , rubber gloves , sensitizes added to foods like sodium bisulphide In salads, artificial, flavors, dyes, fluorescent whitening agents in laundry products.

Nurses and Doctors	Iodine , streptomycin , chlorpromazine , sulphonamide , benzoin , cocaine derives
Painters	Turpentine , paints , detergents
Photographers	Metal , bichromate
Plastic factory workers	Resins , hardeners , solvens , cellulose esters
Printers	Dyes , acrylic plates and inks
Rubber workers	Dyes , glues , oils
Tar workers	Dermatitis and tar acne
Textile workers	Formaldehyde , solvents , dyes , bleaches ,

A LIST OF COMMON REGIONAL CONTACTANTS

REGION	CONTACTANTS
Face	Face powder cream bindi Eye brow pencil, perfume, Soap, Shampoos, Dyes, Spectacle frame, hair bands, Volatile dust.
Lips	Lipsticks, Tooth paste, Cigarette holders, Pipes and balloons.
Neck	Scarf., dyed, fur, collar, collar buttons, marking inks, jewellery, hat strap, perfume.
Body	Clothing, buttons, marking ink.
Axillae	Dress, dyes, deodorants, astringents.
Genitals and anal region	Contraceptives, toilet paper, medicaments, feminine hygiene, Sprays, nylon/plastic under wear.
Buttocks	Toilet papers, lavatory seat, jute and straw mattresses, toy horses.
Hands	Occupational-primary irritants and sensitizers, Hobbies- gardening, photography, painting etc cutting vegetables like like garlic, onions, ladyfingers, tomatoes, steering wheel, ignition key, detergents, cigarette paper etc
Wrist	Watch and its strap, bracelet, and bangles.
Thighs	Clothing, things in pockets particularly match boxes
Feet	Foot wear, shoes, coloured socks, elastic shoe strap

INFECTIOUS ECZEMATOID DERMATITIS

Synonym : Infective eczema

Types

1. Post- traumatic infective eczema
2. Follicular infective eczema
3. Flexural infective eczema

Post- traumatic infective eczema

It starts with a crack in the integrity of the skin brought by an injury, a blister, an insect bite or exposure to severe cold wind etc.

Follicular infective eczema

It involves hairy region like the scalp, beard and legs. Streptococcus, staphylococci are the causative organism for Follicular infective eczema

Flexural infective eczema

The flexures are the site of predilection. Common samples are retro-auricular folds, the eye-lids, the neck folds, the axillae, the cubital fossae, the groin and the popliteal fossae.

OTHER TYPES OF ECZEMA

- Xerotic eczema
- Nutritional deficiency eczema
- Photo dermatitis
- Neuro dermatitis
- Radio dermatitis

IMMUNOLOGY OF ECZEMA

Atobic type of eczema is due to malfunction of immune regulation. Sensitization develops when a different clone of T-lymphocyte activated. The sensitized T-lymphocyte yield two sub population of lymphocytes. They are

1. Memory cell – Responsible for the persistence of contact allergy.
2. Effector cell - It initiate the allergic response when appropriately challenged.

Reaction time

It is the time taken by a sensitized individual to manifest a clinical reaction following contact with known sensitizers. It is usually 12- 24 Hrs but may vary from 1 Hr – 120 Hrs. This reaction time is inversely proportional to the severity of allergy.

Dissemination reaction

It is a fleeting, erythematous, macular reaction, involving the face and flexures seen in some cases of contact dermatitis. There are some evidence that dissemination reaction is caused by the escape of lymphokines in the circulation resulting vasodilatation at a distant site.

Flare reaction

Another clinical feature of contact dermatitis reaction or a positive patch test reaction following renewed challenge or exposure to some allergence at another site. This is because of persistence of sensitized lymphocytes as the site of earlier reaction, which reacts to minite amounts of antigen that sometimes escape in the circulation from the new site and find its way to the old site. Longerhan's cells are responsible for antigen processing in contact allergy.

Patch tests

They are done in cases of contact dermatitis to establish etiological agents. It is simply a reproduction in miniature of small area of contact dermatitis (Sheldon). It is artificial and does not necessarily duplicate the clinical exposure in which sweating, maceration and multiple applications play great roles.

Test reading should be taken 20 minutes to 1 Hr after removal of patches. This time interval allows pressure effect and erythema from tape removal to subside.

The original dermatitis of the patient must be completely under control before the tests are undertaken. The patient should not be taking any immuno-suppressive drugs and systemic steroids. The back or the arms are the sites of choice, preferably as close to the original site of the diseases as possible. The affected part is cleaned with water and allowed to dry. Patches are placed at distance of 2- 3 inches in rows- about 20 patches can be applied at one time. The material for testing should be cut about 5 mm in diameter and moistened with normal saline or distilled water, liquid contactants can be applied directly. The testing material is covered with a piece of lint 1 square inch in size and an adhesive tape applied firmly, each patch being numbered. A control patch of lint dipped in normal saline is also applied.

The patient should be advised to report after 48 Hrs or earlier if itching starts and again , after 96 Hrs. test will have to be modified according to tested agents. The reading is done when the patients reports after 48 Hrs or earlier in case of acute sensitivity.

In every patient, there is mild redness and folliculitis under the adhesive tape. A binder bandage may be employed for patient allergic to adhesive and scotch tape. The small area in the centre of the patch should be examined and recorded. Be careful about false positive reactions.

+	Only redness
+ +	Marked redness & swelling
+ + +	Marked redness, swelling & papules.
+ + + +	redness, oedema and vesicles.

If there is no reaction in 48 Hrs, the patches should be reread in 96 Hrs for delayed positive reactions. Sometimes, the original healed area of contact dermatitis flares up during a test, particularly when there exists a severe degree of hyper sensitivity.

COMPLICATIONS

1. Super infection – Most often with bacterial (Staphylococcus aureus) may be along with yeast (Candida albicans) and viruses (Papilloma virus), Herpes simplex and molluscum contagiosum.
2. Focal sepsis
3. psychological factors – anxiety status, emotional stress.
4. Reaction to local medicaments.

TREATMENT

It consists of

- Reassuring the patient and his relatives that then disease is curable, non- infectious and non – scarring. Tactful bedside psycho therapy will be useful.
- Elimination of predisposing, exiting and complicating cause. In one individual, more than a single cost may be at play.
- To prevent recurrence, advice should be given to the patient regarding exposure to causes. Any one suffering from contact eczema, for instance, should be advised against exposure to the

possible sources of the causative allergance and immunologically related substance. Patients with infective eczema should be advised regarding the sources of infection. The building up of resistance against infection with specific autogeneous and stock vaccines, etc. Improving the general state of nutrition is also important.

- ❖ Palliative treatment must be properly carried out to affect a complete cure.

MATERIALS AND METHODS

The study on clinical evaluation of the disease ***" PITHA KARAPPAN "*** was carried out in the post graduate department of Maruthuvam, Government Siddha Medical college attached to Arignar Anna Hospital of Indian Medicine, Chennai. 40 patients were selected for the study.

SELECTION OF PATIENTS

The present study covers both male and female patients of varying age groups. 20 cases were selected from inpatients and 20 cases in out patient departments. All the cases were carefully examined before admission for co-existing illness. After discharge of these inpatients all of them were followed as out patients in the outpatient department.

EVALUATION OF CLINICAL PARAMETERS

During admission the cases were subjected to careful examination. The peculiar science and symptoms like erythma with itching, extreme tiredness, indigestion, loss of appetite, crawling sensation, lichenification, scaling and oozing were also taken as criteria for the selection of cases.

EXCLUDING CRITERIA

- Herpes Zoster
- Neurodermatitis
- Psoriasis
- Skin Cancer
- Chilblains
- Tinea pedis
- Scabies

STUDY OF SIDDHA CLINICAL DIAGNOSIS

The author prepared a case sheet on the basis of Siddha Methodology i.e Envagai thervugal and modern methodology to diagnose the disease. The individual case sheet was maintained for each and every patient.

The history of dietic habits, allergic details and the Nilam from which they come where also noted. The patients are examined for the Udal vanmai, and Mukkutra nilai.

Paruvakalam at which the disease occurred is also noted. In Vathakutram, Pranan, Abanan, Samanan, Udanan, Viyanan, Nagan, Koorman, Kirukaran, Thevathathan and Thananjeyan were noted.

Likewise in Pithakutram the states of Analam, Ranjagam, Sathagam, Alosagam and Pirasagam were noted.

In Kabakutram, Avalambagam, Kilethagam, Pothagam, Tharpagam and santhigam were noted. The above details were studied for arriving at correct diagnosis.

INVESTIGATIONS

The modern diagnostic tests such as blood test for TC, DC, ESR, HB, Urine analysis for Sugar, Albumin, Deposits and stools examination for Ova, Cyst to rule any co-existing illness. Blood sugar, serum cholesterol, Blood urea also carried out. Skin scraping, Skin clipping and patch tests are also done for the affected individuals. They were carried out regularly before and after treatment.

EVALUATION OF TRIAL MEDICINE

The trial medicine Karappan Chooranam was subjected to Qualitative analysis, Pharmacological activity & toxicological study were conducted by C.L.Baid Metha College of Pharmacy, Thoraipakkam, Chennai and it is elaborated in Preclinical Studies.

The Trial Medicine was subjected to bio-chemical study was also done at the above referred Institution.

STATISTICAL EVALUATION OF CLINICAL STUDY

Statistical evaluation of clinical study was conducted in the department of bio-statistics C.L.Baid Metha College of Pharmacy, Thoraipakkam, Chennai. It is elaborately explained in BIO-STATISTICS.

MICRO-BIOLOGICAL ANALYSIS

Micro-biological analysis was conducted by C.L.Baid Metha College of Pharmacy, Thoraipakkam, Chennai and it is elaborated in Preclinical Studies.

MODE OF ADMINISTRATION

The modes of administration for the test medicine are furnished below.

- **Karappan Choornam**: 1 gram two times daily with water after meals.
- **Karappan Ennai** : 30 to 60 ml applied externally over the affected area.

Pathiyam (diet control) is strictly followed by the patients.

DURATION OF TREATMENT

- Forty eight days.

PREPARATION OF TRIAL MEDICINE

1. KARAPPAN CHOORNAM

Reference ; «¸Š¾¢Â÷ 2000 À¡¸õ 3 Àì¸õ 73

2. KARAPPAN ENNAI

Reference ; ¬Å¢ÂÇ¢ìÌõ «Ó¾Ó¨Èî ÍÕì¸õ Àì¸õ 131

MEDICINE – 1

KARAPPAN CHOORNAM

INGREDIENTS

S.No	Common Name	Botanical Name	Part used
1	Chirakam	Cuminum Cyminum	seeds
2	Karunjirakam	Nigella Sativa	seeds
3	Kandam Kattari	Solanam Xanthocarpum	Root
4	Kadugu Rohini	Picrorrhiza Kuroa	Root
5	Chukku	Zingiber Officinalis	Rhizome
6	Chenkattari	Capparis Ahylla	Root bark
7	Chittaratai	Alpinai Officinarum	Rhizome
8	Perumarathu Pattai	Sterculia Foetida	Bark
9	Changam	Azima Tetracantha	Root

METHOD OF PREPARATION

The ingredients are taken in equal parts. They are purified and well dried in the shade. Then it was finely powdered & filtered by thin cotton cloth (Vasthirakayam).

DOSE

1 gram two times a day.

ADJUVANT

Water

1. °£Ã¸õ

Tamil Name	-	Chirakam
English Name	-	Cumin seeds
Botanical Name	-	Cuminum Cyminum
Family	-	Apiaceae
Part Used	-	Seeds
Suvai	-	Karppu , Enippu
Thanmai	-	Thatpam
Pirivu	-	Enippu

Actions:

Carminative, Stimulant, Stomachic, Astringent

Chemical constituents

Seeds contains carbohydrate (36.6 %), protein (18.7%), mineral (5.8%), copper (1.8%), phosphate (4.9%), iodine (31%). It contains volatile oil namely cumaldehyde. Besides the aldehyde, oil contain β cymenl cumene, cuminic alcohol. Seeds reduce inflammatory swelling in the body.

Ref : Wealth of India - Vol-3 , page no 396

2. ¸Õï°£Ã¸õ

Tamil Name	-	Karunjirakam
English Name	-	Black Cumin
Botanical Name	-	Nigella Sativa
Family	-	Ranunculaceae
Part Used	-	Dried fruits and seeds
Suvai	-	Kaippu
Thanmai	-	Veppam
Pirivu	-	Kaippu

Actions:

Carminative, Diaphoretic, Antibillious, Emolient, Antihelmintic, Parasiticide, Emmenagogue, Local anaesthetic

Chemical constituents:

Voatile Oil, essential oil, sugar, albumin, Organic acids, metarbin, toxic glucoside, cymene.

¦À¡Ð Ì½õ :

" ¸Õï°¢Ã ¸ò¾¡ü ¸ÃôÀ¡¦É¡Î ÒñÏõ ÅÕï °¢Ã¡öô À£¿°Óõ Á¡Úõ - «Õó¾¢É¡ü ¸¡öî°ø ¾¨ÄÅÄ¢Ôí ¸ñÅÄ¢Ôõ §À¡ÓÄ¸¢ø Å¡öî° ÁÕò¦¾¦É§Å ¨Å

- «¸Š¾¢Â÷ Ì½Å¡¸½õ, Ì½À¡¼õ ãÄ¢¨¸ ÅÌôÒ, Àì¸õ 463

¸Õï°¢Ã¸ò¾¡ø, ***¸ÃôÀ¡ý***, Òñ, ¯ðÝÎ, ¾¨Ä§¿¡ö, ¸ñÅÄ¢, °¢Ã¡öô À£¿°õ ¬¸¢Â¨Å¸û ¾£Õõ.

Seeds are useful to apply externally for skin eruptions. Alholic extracts of seeds have anti bacterial activity against micro cocus, pyogenes and various worms infections.

- Ref : Indian Materia Medica Vol – 1

3. ¸ñ¼í¸ò¾¢¡¢ §Å÷

Tamil Name	-	Kandam kattari
English Name	-	Wild egg plant
Botanical Name	-	Solanum Xanthocarpum
Family	-	Solanaceae
Part Used	-	Roots, fruits, whole plant
Suvai	-	Karppu
Thanmai	-	Veppam
Pirivu	-	Karppu

Actions:

Expectorant, Diuretic, Anti-protozoal, Alterative, Astringent,

¦À¡Ð Ì½õ :

" ¸¡°ï ÍÅ¡°í ¸Âï°£¾õ ÀøÄÃ¨½
Å£Í ¦°¡È¢¾¢É¨Å Å¢ðš¼¡ðÎõ - §ÀÍ
¯ò¾¡¢ìÌò ¾£ÀÉò¨¾ Ôñ¼¡ì ¸¢Îí¸ñ¼í
¸ò¾¢¡¢ôÀÆì Ì½ò¨¾ì ¸¡ñ "
- Ì½À¡¼ ãÄ¢¨¸ ÅÌôÒ - Àì¸õ 214

þÕÁø, þ¨ÃôÒ , þ¨ÇôÒ §¿¡ö, ³ÂôÀ¢½¢, ÀøÄÃ¨½, Ò¨¼, ¿¨Á þ¨Å¸¨Çô §À¡ìÌõ

4. ¸ÎÌ§Ã¡¸¢½¢

Tamil Name	-	Kadugurohini
English Name	-	Black Hellebore
Botanical Name	-	Picrorrhiza kurrova
Family	-	Scrophulariaceae
Part Used	-	Root
Suvai	-	Kaippu
Thanmai	-	Veppam
Pirivu	-	Karppu

Actions:

Stomachic, Antiperiodic, Cathartic, Anthelmintic

Chemical constituents

Glucose, glucoside, wax, picrorrhizin,

¦À¡Ð Ì½õ :

" Á¡ó¾ï ÍÃ¨ÁÂõ Å¡Ô¸Ãô À¡É¡Áï
§°÷ó¾ÁÄì ¸ðÎ ¾¢¡¢§¾¡¼õ - §À¡ó¾ ¦À¡ðÎô
ÒñÅÂ¢Ú §¿¡Â¢¨Å§À¡õ ¦À¡ü¦¸¡Ê§Â §À¾¢Ôñ¼¡õ
¾¢ñ¸ÎÌ §Ã¡¸¢É¢ìÌò §¾÷ "

- «¸Š¾¢Â÷ Ì½ Å¡¸¼õ
Ì½ À¡¼õ ÓÄ¢¨¸ ÅÌôÒ Àì¸õ- 199

Á¡ó¾õ, ÍÃõ, ³Âô¦ÀÕìÌ, ***¸ÃôÀ¡ý,*** *Òñ¸û,* °£¾ì¸Æ¢î°ø, ÅÂüÚ ÅÄ¢, ÅÇ¢ §¿¡ö¸û þ¨Å¸û §À¡Ìõ

5. ÍìÌ

Tamil Name	-	Chukku
English Name	-	Dried Zinger
Botanical Name	-	Zingiber officinale
Family	-	Zingiberaceae
Part Used	-	Rhizome
Suvai	-	Kaippu
Thanmai	-	Veppam
Pirivu	-	Karppu

Actions:

Stimulant, Stomachic, carminative

6. ¦°í¸ò¾¡¡¢ô ÀðÊ¼

Tamil Name	-	Chenkathari
English Name	-	Caper plant, caper Berry
Botanical Name	-	Capparis Aphylla
Family	-	Zingiberaceae
Part Used	-	Rhizome
Suvai	-	Kaippu
Thanmai	-	Veppam
Pirivu	-	Karppu

Actions:

Expectorant, Digestive, Carminative, Antihelmintic, Purgative, Antibacterial, Stimulant, Aphrodisiac.

Chemical constituent:

Glucoside – glococapparis composed of iso-thio cynate, glucose isolated from seeds , Arabinose, Galactose and Poly phenols present in plants.

Ref : Compendium of Indian Medicinal plants, Vol 2 page no 138

¦À¡Ð Ì½õ :

" ¦°í¸ò¾¡ ¡¢î°¨¼ìÌò ¾£Ã¡¾ Åý§Á¸õ
¦À¡í¸¢ ÅÕõ¸¢Ãó¾¢ ÒñÒ¨Ã¸û - ¾íÌ¸¢ýÈ
°ó¾¢¸°¢ §Å‰Áó ¾É¢ò¾ Á¸¡Å¡¾
Óó¾¢ Å¢ð §¼¡Î ¦Á¡Æ¢ "

- À¾¡÷ò¾ Ì½ Å¢Çì¸õ Àì¸õ- 391

À¢Ã§Á¸ ¿£÷, Òñ, Ò¨Ã¸û, ¸£ø¸¨Ç Å£í¸î ¦°ö¸¢ýÈ Á¸¡ Å¡¾õ þ¨Å ¿£íÌõ.

7. °¢üÈÃò¨¾

Tamil Name	-	Chittaratai
English Name	-	Lesser Galangal
Botanical Name	-	Alpinia Officinarum
Family	-	Zingiberaceae
Part Used	-	Rhizome
Suvai	-	Kaippu
Thanmai	-	Veppam
Pirivu	-	Karppu

Actions:

Expectorant, Febrifuge, Stomachic, Carminative,

Chemical constituent:

Volatile oil, Galangal

¦À¡Ð Ì½õ :

" Å¡¾À¢ò ¾í¸ÃôÀ¡ý Å¡¾ï °¢§Ã¡§Ã¡¸ï §°÷ó¾¸À Óò§¾¡¼ï °£¾¦Á¡Î - §¿÷ó¾ ÍÃõ ÁüÈÃò¨¾ì ¸¡ðÊ ÅÕÁ¢ÕÁ Öó¾£Õõ °¢üÈÃò¨¾ ÅýÁÕó¾¡ø §¾÷ "

- «¸Š¾¢Â÷ Ì½ Å¡¸¼õ
Ì½ À¡¼õ ÓÄ¢¨¸ ÅÌôÒ Àì¸õ- 37

ÅÇ¢, ³Âì ÌüÈí¸û, ***¸ÃôÀ¡ý,*** Àì¸ Å¡Ô, ¾¨Ä §¿¡ö, °£¾Çõ, þÕÁø, ÀÄ ÍÃõ ¬¸¢Â¨Å ¾£Õõ

Powder and paste made with any oil to apply locally in skin disease.

- Ref Indian Materia medica page no 78

8. ¦ÀÕÁÃòÐô Àð¨¼

Tamil Name	-	Perumarathupattai
English Name	-	Poon tree
Botanical Name	-	Sterculia foetida
Family	-	Sterculiaceae
Part Used	-	Heart Wood, Bark, seeds, leaves
Suvai	-	Kaippu
Thanmai	-	Veppam
Pirivu	-	Karppu

Actions:

Laxative, diuretic, diopharetic

Chemical constituent:

Procyanide-B-D-glucronide, 6-D-B- 10 glucocronyl luteolin from leaves

- Ref : Compendium of Indian Medicinal plants, page no 647

9. °í¸õ §Å÷

Tamil Name	-	Changam
English Name	-	Mistletoe berry thron
Botanical Name	-	Azima tetracantha
Family	-	Salvadoraceae
Part Used	-	Bark, roots
Suvai	-	Kaippu
Thanmai	-	Veppam
Pirivu	-	Karppu

Actions:

Diuretic, Stimulant, Astringent, Tonic, Antiperiodic , Expectorant

¦À¡Ð Ì½õ :

" Å£ìì õ ¸ÃôÀ¡ý Å¢¾¡¸õ ¸¢Ãó¾¢ÌýÁõ
°ì¸Á¢Ì Ý¨ÄÅ¡ö §Å¡ÎÀ¢ò¾ò - ¾¡ìÌÅ¢¼õ
Å¢Ú§Á¡ ¸ñ ÐÄíÌõ Å¢ÍÀ°¢ Ãò¾Ón¼¡õ
ÜÚ°í¸õ §Å¡¢¨Ä ¸ðÎ "

- «¸Š¾¢Â÷ Ì½ Å¡¸¼õ
Ì½ À¡¼õ ÓÄ¢¨¸ ÅÌôÒ Àì¸õ 415

°í¸õ §ÅÕìÌ **¸ÃôÀ¡ý**, ¦ÅôÀõ, ¸Æ¨Ä,ÌýÁõ, ¸£ø Å£ì¸õ, Å¡¾ §¸¡Àõ, À¢ò¾¦¿¡ö ÀÄ ¿ïÍ¸û ¿£íÌõ, ¸ñ ÐÄíÌõ, ÌÕ¾¢ ¦ÀÕì¸õ ¯ñ¼¡Ìõ.

¸ÃôÀ¡ý ÝÃ½õ

°£Ã¸õ **¸Õï°£Ã¸õ**

¸ñ¼í¸ò¾¢¡¢

¸ÎÌ§Ã¡¸¢½¢

ÍìÌ

¦°í¸ò¾¡¡¢

°¢üÈÃò¨¾

¦ÀÕÁÃòÐô Àð¨¼

°í¸õ §Å÷

¸ÃôÀ¡ý ÝÃ½õ

MEDICINE – 2

KARAPPAN ENNAI

INGREDIENTS

S.No	Common Name	Botanical Name / Chemical name	Part used
1	Pungan Vithai	Pungamia pinnata	seeds
2	Mara manjal	Coscinium Fenestratum	Bark
3	Vempadapattai	Ventilago Madras Patana	Bark
4	Avuri	Indigofera Tinctoria	Root
5	Kanthagam	Sublimed Sulphur	
6	Aridaram	Yellow Arsenic tri sulphide	
7	Mayil tuttam	Cupprium Sulphate	
8	El nei	Gingelly oil	

METHOD OF PREPARATION

The ingredients are taken in equal parts. They are purified and well dried in the shade. Then it was finely powdered & then mixed with gingelly oil with equal quantity and boiled well. When the content of oil reached sand like stage (Á½ü À¾õ). The oil was removed from fire, allowed to cool , filtered and kept in a bottle.

USE

External

1. Òí¸ý Å¢¨¾

Tamil Name - Pungan Vithai

English Name	-	Indian Beech
Botanical Name	-	Pungamia pinnata
Family	-	Fabaceae
Part Used	-	Leaves, flower, roots, seed
Suvai	-	Kaippu
Thanmai	-	Veppam
Pirivu	-	Karppu

Actions:

Astringent, Alterative, Parasiticide, Antiseptic, Stimulant,

Chemical constituent:

Karajin, Pongamol, glabrin

¦À¡Ð Ì½õ :

" Òí¸¢ý Å¢¨¾ ¸¡ü¸¢Ãó¾¢ Òñ¸ÃôÀ¡ý ¸¡¦¾Øî°¢ «í¸°ýÉ¢ ¸ñ¦½¡öìÌõ ¬õ§À¾¢ - Ôí¸ðÎõ ¸¡ðÎôÒí ¸¢ýÅ¢¨¾ìÌ ¸ñ¼¦¾ Áü¦°¡È¢ ¦Áö âðÎôÀí ¸¢ýÅ¡Ô×õ §À¡õ "

- Ref : - À¾¡÷ò¾ Ì½ Å¢Çì¸õ, Àì¸õ- 529

Òí¸ý Å¢¨¾Â¡ø ¸¡øÒñ, ¸¢Ãó¾¢, ***¸ÃôÀ¡ý***, ¸¡Ð §¿¡ö, ÓôÀ¢½¢, ¸ñ§½¡ö Þ¨Å¸û ¾£Õõ. ÞÐ ÁÄò¨¾ì ¸ðÎõ. ¸¡ðÎ Òí¸ý Å¢¨¾Â¡ø §¾ÁÖõ À¨¼Ôõ §À¡Ìõ.

Seeds yields fatty oil pongamin. It is medically applied in Scabis, herpes, leucoderma and other cutaneous diseses.

Ref: The useful plants of India page No 434

2. ÁÃÁï°û

Tamil Name	-	Mara manjal
English Name	-	Tree Turmeri, False Calumba
Botanical Name	-	Coscinium Fenestratum
Family	-	Menispermaceae
Part Used	-	Bark
Suvai	-	Karppu
Thanmai	-	Veppam
Pirivu	-	Karppu

Actions:

Febrifuge, Stomachic, Tonic

Chemical constituent:

Stem yield yellow dye, resembling turmeric called false Calumba, used as a substitute for Calumba. Dye is used for dyspepsia, as a febrifuge and for dressing wounds and ulcers.

- Ref: The useful plants of India page No 143

3. §ÅõÀ¡¼ô ÀÐ¨¼

Tamil Name	-	Vempadapattai
English Name	-	Red creeper
Botanical Name	-	Ventilago Madras Patana
Family	-	Rhamnaceae
Part Used	-	Bark

Actions:

Astringent, Carminative, Stomachic, Digestive

Chemical constituent:

Bark yields a reddish dye, ventilagin used for colouring. Bark powder is mixed with gingelly oil and it is used externally for itch and other skin diseses.

Ref : National Institute of Science, Council of Sciencific & Research , page no 670

4. «×¡¢ §Å÷

Tamil Name	-	Avuri
English Name	-	Indian Indigo plant
Botanical Name	-	Indigofera Tinctoria
Family	-	Fabaceae
Part Used	-	Whole plant, leaves, roots

Actions:

Laxative, Germicide, Antiperiodic, Stimulant

Chemical constituent:

Extract of leaves used as ointment in sores, old ulcers and hemorrhoids

- Ref : Glossary of Indian Medicine page no 141

5. ¸ó¾¸õ

Tamil Name	-	Kanthagam
English Name	-	Brim Stone, Sublimed Sulphur
Suvai	-	Kaippu, Thuvarppu

Purification (Íò¾¢)

¸ó¾¸ò¨¾ ÀÍ ¦Åñ¨ÉÔ¼ý §°÷òÐ ¯Õì¸¢ ÀÍõÀ¡Ä¢ø °üÈ §ÅñÎõ. þùÅ¡Ú 30 Ó¨È ¦°öÂ Íò¾¢Â¡Ìõ.

Actions:

Astrigent, Laxative, Alterative, Diuretic, Insecticide,

¦À¡Ð Ì½õ :

" ¸ðÊî ¦°¡È¢°¢ÃíÌ ¸¡Ïõ ¸¢Ãó¾¢Å¨¸ Ìð¼í Ì¨È§¿¡ö ÌÆ¢Ã½Óõ - Åð¼Á¢ðÎ Åó¾ Ò¨ÃÒñ¸û Å¡ö¸¾È¢ §Â¡ð¼Á¢Îõ ¸ó¾¸ò¾¢ý ÀñÀ¢Ð §¸û "

- À¾¡÷ò¾ Ì½ Å¢Çì¸õ ¾¡Ð ƒ£Å ÅÌôÒ Àì¸õ - 74

¸ó¾¸ò¾¢É¡ø ¦°¡È¢, °¢ÃíÌ, ¸¢Ãó¾¢Å¨¸¸û, Ìð¼§¿¡ö, ÌÆ¢Ã½õ, Ò¨Ã¸û, Òñ¸û ¿£íÌõ.

Sulphur is given in haemorrhoids, prolepsus, stricture and skin disease. In skin disease sulphur is used both internally and externally.

- Ref Indian Materia medica page no 120,121

6. ¾¡Ç¸õ

Tamil Name	-	Aridaram
English Name	-	Trisulphuret of Arsenic Orpiment, Yellow Arsenic tri sulphide

Action:

Emmenagogue, Antiperiodic, Alterative,

Purification (Íò¾¢)

¾¡Ç¸ì ¸ðÊ¨Â Íñ½¡õÒ ¸øÄ¢ý þ¨¼Â¢ø ¨ÅòÐ ÀÉí¸ûÇ¢É¡ø ¾¡Ç¢òÐì ¸ØÅ¢ ±Îì¸î Íò¾¢Â¡Ìõ. þùÅ¡Ú 7 Ó¨È ¦°öÂ §ÅñÎõ.

¦À¡Ð Ì½õ :

" ¾¡Ç¸ò¾¢ý §ÀÕ¨Ãì¸ò ¾¡Ö¸×û §¿¡ö Ì‰¼õ ¿£Çì ÌÇ¢÷¸¡öî°ø ¿£Î¸Àõ - ¿¡Ç¸í¦¸¡û Ð‰¼ô ÀÈí¸¢ôÒñ ÝÆØ¸ñ Áñ¨¼ §¿¡ö ¸¢ð¼ô ÀÎÅÁ¡ ¸¢ÇòÐ "

- Ì½ À¡¼õ ¾¡Ð, °£Å ÅÌôÒ Àì¸õ 243

¿¡ìÌ, ¸§À¡Äõ þ¨Å¸¨Çô ÀüÈ¢Â §¿¡ö Ìð¼õ, ÍÃõ, ¸Àõ, Óò¾¢Ã ¿¡Çò¨¾ô ÀüÈ¢Â ÀÈí¸¢ô Òñ, Áñ¨¼ §¿¡ö ¿£íÌõ.

It is used as external application in skin disease.

- Ref Indian Materia medica page no 31,32

7. Ð¡¢Í

Tamil Name - Mayil tuttam
English Name - Cupprium Sulphate

Action:

Astringent, Emetic. Anti septic, Styptic,

Purification (Íò¾¢)

¦Åñ¨ÁÂ¡Ìõ ÀÊ ¦À¡¡¢òÐ ±Îì¸î Íò¾¢Â¡Ìõ.

¦À¡Ð Ì½õ :

" ÓüÈ¢Â ÌÈ¢ôÒñ Ó¨ÄÅ¢Ã½ï ¦°ýÉ¢¾¨Éô ÀüÈ¢¿¢ýÈ Å¡¾õ À¼ü¸ÃôÀ¡ý - Íò¾ Å¢Æ¢ì ¸¡°í ¸½õ À¢øÄí ¸ñ§½¡öì Ìó¾ó ¦¾¡¨ÄÔõ Å¡°Á¢Ì Ðò¾¾¡ø Å¡úòÐ "

Ref : - À¾¡÷ò¾ Ì½ Å¢Çì¸õ Àì¸õ- 133

Ó¨ÄÅ¢Ã½õ, §¾¡¨Çô ÀüÈ¢Â Å¡¾õ, ***¸ÃôÀ¡ý,*** ¸ñ¸¡°õ, ¸½õ, À¢øÄõ, Ìó¾õ ¬¸¢Â¨Å ¿£íÌõ.

Externally copper sulphate is applied to indolent ulcers, exuberant , granulations sinuses and fistula.

- Ref Indian Materia medica page no 52

8. ¿ø¦Äñ¦½ö

Tamil Name - El nei (±û ¦¿ö)
English Name - Gingelly oil

Actions:

Alterative, Tonic, Laxative,

Chemical Constituent

Vitamin E, Sesamin, Sesamolin, Phyposterol

ÁÕòÐÅ ÀÂý

¦°¡È¢, °¢ÃíÌ, Òñ Ó¾Ä¢ÂÅü¨È Ì½Á¡ìÌ¸¢ýÈÐ. °¢ò¾ ÁÕòÐÅò¾¢ø ¿ø¦Äñ¦½ö À¡Ð¸¡ìÌõ ¦À¡ÕÇ¡¸ (Preservative) ÀÂýÀÎ¸¢ÈÐ.

¸ÃôÀ¡ý ±ñ¦½ö

Òí¸ý Å¢¨¾

ÁÃÁï°û

§ÅõÀ¡¼ô ÀÐ¨¼

«×¡¢ §Å÷

¸ó¾¸õ

¾¡Ç¸õ

Ð¡¢Í

¸ÃôÀ¡ý ±ñ¦½ö

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2.4 Anti inflammatory, Anti histaminic & Anti microbial studies

2.5 Antioxidant activity

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4.0 Reference

1.0 MATERIALS AND METHODS

1.1 Test Drugs

The herbal medicine " Karappan Choornam [KPC] ", was used for the following study.

- Qualitative analysis
- Acute Oral Toxicity study
- Repeated Oral Toxicity study
- Bio-chemical Studies
- Anti-Inflammatory activity
- Vivo Anti Oxidant study
- Phytochemical screening
- Anti-histamine activity
- Micro-biological study

1.2 Preparation of drug for dosing

KPC used for the study was suspended each time with 1% (w/v) solution of sodium carboxymethyl cellulose before administration.

1.3 Drugs and chemicals

Carrageenan, Histamine and fine chemicals used in these experiments were obtained from Sigma Chemicals Company, U.S.A. Other analytical grade chemicals were obtained from S.D. Fine Chemicals Ltd., Mumbai. Histamine Hydrochloride was gifted by M/s.Orchid Chemicals & Pharmaceuticals, Chennai.

1.4 Experimental animals

Colony inbred animals strains of wistar rats of either sex weighing 200 - 250 g and swiss albino mice of either sex (18-25 g).Guinea pigs weighing 0.5 – 1.0 kg, either sex were used for the pharmacological and toxicological studies. The animals were kept under standard conditions 12:12 (day/night cycles) at 22^0C room temperature, in polypropylene cages. The animals were fed on standard pelleted diet (Hindustan Lever Pvt Ltd., Bangalore) and tap water *ad libitum*. The animals were housed for one week in polypropylene cages prior to the experiments to acclimatize to laboratory conditions. The experimental protocol was approved by the Institutional Animal Ethical Committee (IAEC).

1.5 Acute oral toxicity study

Acute oral toxicity was conducted as per the OECD guidelines (Organization of Economic Cooperation and Development) 423 (Acute Toxic Class Method). The acute toxic class method is a stepwise procedure with 3 animals of a single sex per step. Depending on the mortality and /or moribund status of the animals, on the average 2-4 steps may be necessary to allow judgment on the acute toxicity of the test substance. This procedure results in the use of a minimal number of animals while allowing for acceptable data based scientific conclusion.

The method uses defined doses (5, 50, 300, 2000 mg/kg body weight) and the results allow a substance to be ranked and classified according to the Globally Harmonized System (GHS) for the classification of chemicals which cause acute toxicity

Wistar albino mice of either sex weighing 25 g were fasted overnight, but allowed water *ad libitum*. Since the formulation is relatively non toxic in clinical practice the highest dose of 2000 mg/kg/p.o (as per OECD guidelines "Unclassified") was used in the acute toxicity study.

The animals were observed closely for behavioural toxicity, if any by using FOB (Functional observation battery).

1.6 Repeated oral toxicity study

Repeated oral toxicity studies can be used to get additional information regarding the toxicity profile of a chemical. Repeated oral toxicity studies are defined as those studies where the chemical is administered to the animal for a period covering approximately 10% of the expected life of the animal. Usually, the dose levels are lower than for acute studies and allow chemicals to accumulate in the body before lethality occurs, if the chemical possess this ability.

Experimental procedure

The following experimental procedure was followed to evaluate the repeated oral toxicity study of

1. Karappan Choornam (KPC)

Group I : Control animals received 1% Sodium carboxymethyl cellulose (CMC), 2 ml/kg/p.o. for 21 days

Group II : Drugs suspended in CMC was given at the dose Level of 500 mg/kg/p.o. for 21 days

Body weight, food intake and water intake was recorded at two intervals with simultaneous observation for toxic manifestation and mortality, if any. At the end of 21 days treatment all the animals were sacrificed by over dosage of ether anaesthesia. Blood was collected and used for haematological studies.

1.7 Biochemical studies

Aspartate aminotransferase (AST)

Aspartate aminotransferase was estimated using commercial AST kit (Span Diagnostics) by the method of Reitman and Frankel (1957).

Alanine aminotransferase (ALT)

Alanine aminotransferase was estimated using commercial AST kit (Span Diagnostics) by the method of Reitman and Frankel (1957).

Alkaline phosphatase (ALP)

Alkaline phosphatase was assayed using commercial ALP kit (Span Diagnostics) by the method of King (1934).

Urea

Urea was assayed using the commercial kit (Span Diagnostics) by the method of Coulambe *et al*., (1965).

1.8 Haematological studies

Erythrocyte count

Erythrocyte count was estimated by Hemocytometer method of Ghai (1995).

Total Leukocyte Count (WBC)

Total Leukocyte Count was estimated by Hemocytometer method of John (1972).

Haemoglobin

Haemoglobin was estimated by method of Ghai (1995).

1.9 Anti-inflammatory studies

Anti inflammatory activity

Anti inflammatory activity was evaluated in both acute and chronic models of inflammation.

Acute model

a. Carrageenan induced hind paw edema

The carrageenan assay procedure was carried out according to the method of Wintar *et al.* (1962). Edema was induced by injecting 0.1 ml of 1% solution of carrageenan in saline into the plantar aponeurosis of the left hind paw of the rats. The extracts, reference drug and the control vehicle (distilled water) were administered 60 min prior to the injection of the carrageenan. The volumes

of edema of the injected and contra lateral paws were measured at +1, 3 and 5 hrs after induction of inflammation using a plethysmometer (Bhatt *et al*., 1977) and percentage of anti-inflammatory activity was calculated.

Chronic model

b. Cotton pellet granuloma

Sterile cotton pellets (weighing 10 ± 2 mg) were implanted subcutaneously along the flanks of axillae and groins of wistar albino rats (Swingle and Shideman *et al*., 1972). The extracts, reference drug and the control vehicle (distilled water) were administered as per protocol to rats everyday for a period of 7 days. On day + 8 the rats were sacrificed by cervical decapitation and cotton pellets were removed surgically, freed from extraneous tissue and weighed immediately for wet weight. One half of the pellets were dried in an incubator at 60ºC until a constant weight was obtained.

1.10. Anti histamine activity of KPC in isolated guinea pig ileum preparation

Guinea pig weighing 300 – 500 g starved overnight with water add libitum. The animal was killed by a blow on the head and the neck was exsanguinated. The abdomen was cut open and a suitable length of the ileum (App 2 cm long) was placed on a petridish containing Tyrode solution. The composition of the Tyrode solution in mM was NaCl 137 mM, $NaHCO_3$ 12mM, NaH_2PO_4 0.3 mM, KCl 2.7 mM, $MgCl_2$ 1.0 mM, $CaCl_2$ 1.0 mM and glucose 5.6 mM. Experiment were performed in a 30 ml organ bath containing Tyrode solution maintained at 37^0 C under a tension of 0.5 gm and gassed with air mixture

(O_2+CO_2). Isometric contractions were recorded in a smoked kymograph paper with frontal writing lever. After an equilibration period of 30 min during which the Tyrode solution was changed intervals of 10 minutes, contractile response were recorded for histamine (8 μg/ml). The contract time 30 sec recorded at 5 min time cycle is kept for proper recording of the responses. The KPC – tissue contract time was 5 min before the addition of histamine does the effect of the extract on histamine induced contractions was recorded. The percentage inhibition of the KPC on contraction induced by histamine was calculated.

1.11. Anti- Microbiological study.

The extract of the medicine was tested with the following micro – organisms.

1. Streptococcus mutans,
2. Staphylococcus aureus
3. Escherichia coli
4. Klebsiella Pneumoniae
5. Aspergillus Niger
6. Aspergillus fumigates
7. Candida Albicans
8. Trichoderma

The tube dilution method was used. As a homogenous dispersion of the medicine is more effective to test the anti-microbial activity of the medicine. Dilution method is used in the preliminary screening of the anti-microbial activity.

To 10 ml of nutrient broth culture 0.5 ml of the extract was added and the tubes were incubated at 37^0 C overnight. The next day the tubes were examined for turbidity and sub culture were made on nutrient Agar plates. Control tubes without medicine were also incubated. The plates were incubated overnight at 37^0 C and the next day the reading was taken. The readings were in Table 7

1.12 In Vivo Antioxidant study

Samples of serum collected from rats treated with test drugs were assayed for GSH (Moron *et al* , 1979) and LPO (Yagi, 1976) and the results were compared with control group.

1.13 QUALITATIVE ANALYSIS OF ACIDIC / BASIC RADICALS & PHYTO CHEMICAL CONSTITUENTS IN TEST MEDICINE

PREPARATION OF EXTRACT

5 gram of Karappan Choornam is weighed accurately and placed in a 250 ml clear beaker and 50 ml of distilled water was added. Then it is boiled well for about 10 min. Then it is cooled & filtered in a 100 ml volumetric flask and made up to 100 ml with distilled water.

S.No	Experiment	Observation	Inference
	Test for Acid radical		
1	**Test for Sulphate** 2 ml of the extract is added to 5 % barium chloride solution	White precipitate is formed .	Presence of Sulphate
2	**Test for Chloride** The extract is treated with silver nitrate solution.	White precipitate is formed.	Presence of Chloride
3	**Test for Phosphate** The extract is treated with ammonium molybdate and concentrated HNO_3 .	Yellow precipitate is formed.	Presence of Phosphate
4	**Test for Carbonate** The substance is treated with concentrated HCL.	No effervescence is formed.	Absence of Carbonate.
	Test for Basic radical		
5	**Test for Calcium** 2 ml of extract is taken in clean test tube. To this add 2 ml of 4% ammonium oxalate solution..	No white colour precipitate is formed.	Absence of Calcium.
6	**Test for Iron (Ferric)** The extract is treated with glacial acetic acid and potassium ferro	No blue colour is formed.	Absence of Ferric Iron.

	cyanide.		
7	**Test for Iron (Ferrous)** The extract is treated with concentrated HNO_3 and ammonium thiocynate.	Bright brick red colour is formed.	Presence of Ferrous iron.
	Test for phyto chemicals		
8	**Test for Starch** The extract is added with weak Iodine solution.	Blue colour is formed.	Presence of Starch
9	**Test for Reducing sugar** **Benedict Method** 5 ml of Benetic solution is heated gently and then add 8 drops of diluted extract then heated in a boiling water bath. **Molisch Test** Dilute extract + 2 drops of molisch + 3 ml of conc. H_2SO_4	Green colour is formed. Reddish violet zones appeared	Indicates the presence of Sugar. Presence of Carbohydrate.
10	**Test for Alkaloids** .**Mayor's Method** 1 ml of dilute extract + 1 ml reagent **Dragendroff's Method** 1ml of dilute extract + 1 ml reagent	Cream colour precipitate. Appears orange colour precipitate	Presence of alkaloids in trace amount. Presence of alkaloids
11	**Test for Tannin** Dilute extract + Add 2ml of 10 % lead acetate	White precipitate formed.	Presence of Tannin
12	**Test for Phenol** Dilute extract + Add 2 drops of $FeCl_3$	Deep green colour is formed.	Presence of Phenols
13	**Test for Flavanoids** Dilute extract + mg bits + 2 drops of conc. HCL and gently heated	Formation of pink colour.	Presence of Flavanoids

14	**Test for Proteins** **Biuret Method** 1ml of dilute extract + 1ml of 5% $CuSO_4$ + 1 % NaOH .	Foramtion of deep blue colour	Presence of Protein
15	**Test for Amino Acids** .Dilute extract + 2 ml of Ninhydrin's Solution	Foramtion of violet colour	Presence of Amino acids
16	**Test for Steroids** **Liberman Burchard test** Dilute extract + 2 ml of Acedic anhydride + conc. H_2SO_4	Foramtion of Red colour	Presence of Steroids
17	**Test for Saponins** .Dilute extract + 1 ml of distiiled water shake well	Froth formation	Presence of Saponin
18	**Test for Unsaturated** 1 ml of $KnMO_4$ solution is added to the extract	Decolurised	Presence of Unsaturated compound
19	**Test for Tanic Acid** The extract is treated with Ferric Chloride	Blue black precipitation is formed	Presence of Tanic Acid

2.0 RESULTS

2.1 Preliminary basic, acidic radicals and phytochemical studies

The qualitative chemical analysis and acidic, basic radicals assay of the drugs showed the presence of phytoconstituents and minerals as depicted in (Table 1).

2.2 Acute oral toxicity study

KPC at the dose of 2000mg/kg/po did not exhibit any mortality in rats. As per OECD 423 guidelines the dose is said to be "Unclassified" under the toxicity scale. Hence further study with higher doses was not executed.

2.3 Repeated oral toxicity for 21 days

Test drug KPC at the dose of 500 mg/kg/po when administered orally for 21 days in rats did not show toxicity in renal functions. However the drug did not exhibit any significant reduction in RBC count and marker enzyme levels of liver (Table 2 and 3).

2.4 Anti inflammatory, Antihistaminic and Anti microbial activities

Karappan Choornam (KPC) at the dose of 500 mg/kg/po showed anti-inflammatory activity in both acute and chronic models of inflammation in rats. In carrageenan induced hind paw edema KPC showed significant ($P<0.001$) reduction in edema volume at the end of 4 hrs and 15 hrs whereas no significant reduction in the edema volume was observed at 30, 60, 120 mts. However, Diclofenac sodium exhibited significant reduction in edema volume at time intervals of 30, 60, 120 and 180 mts (Table 6).

In cotton pellet granuloma assay KPC showed highly significant (P<0.001) reduction in the dry weight of granuloma when compared to control. The percentage inhibition of cotton pellet granuloma was 51.8% with KPC (Table 4).

KPC showed antihistaminic activity when tested in guinea pig ileum. There was a dose dependent inhibition by KPC of contractions of guinea pig ileum induced by histamine. The gradual antagonistic reduction on (in %) of the amplitude of contraction after dosing with 10, 20, 40 µg of KPC was 34, 53, and 74.1 respectively against the amplitude of contraction with increasing dose of histamine (10-40 µg /ml of bath) (Table 5).

In-vitro antimicrobial activity of KPC was screened against bacteria, fungal and yeast strains. The results are depicted in Table 7. KPC exhibited moderate to high antibacterial, antifungal activity when compared to standard drugs ciprofloxacin and ketoconozole respectively.

KPC is relatively non toxic as evidenced by both acute and 21 days repeated oral toxicity studies. KPC upto a dose level of 2000 mg/kg/po (OECD - Unclassified) did not exhibit any change in behavioural pharmacology, food and water intake. No mortality was observed at the dose of 2000 mg/kg/po. KPC did not exhibit signs of toxicity as assessed by haematological, biochemical studies after 21 days repeated oral dosing. The results are depicted in table 2,3.

2.6 Antioxidant activity

At the end of 21 days repeated oral toxicity study when the plasma of drug treated animals was examined for GSH activity, the level of GSH activity was increased significantly (p>0.001) in test groups. On the other hand the LPO activity was considerably reduced in drug treated group when compared to control (Table 8).

Table 1

PRELIMINARY BASIC, ACIDIC RADICALS AND PHYTOCHEMICAL SCREENING

S.No.	Constituents	KPC
1.	Calcium	-
2.	Iron (Ferric)	-
3.	Iron (Ferrous)	+
4.	Sulphate	+
5.	Chloride	+
6.	Carbonate	-
7.	Starch	+
8.	Phosphate	+
9.	Tannic acid	+
10.	Unsaturated	-
11.	Reducing Sugar	+
12.	Alkaloids	+
13.	Steroids	+
14.	Protein	+
15.	Tannins	+
16.	Phenols	+
17.	Flavanoids	+
18.	Saponins	+
19.	Amino acid	+
20	Glycosides	+

Table 2

EFFECT OF KPC ON HAEMATOLOGICAL PARAMETERS AFTER 21 DAYS REPEATED DOSING (500 MG/KG/P.O) IN RATS

Groups	Hb (gm/100ml)	RBC (millions/cu.mm)	WBC (cells/cu.mm)	Differential leucocyte count (%)		
				Lymphocytes	Monocytes	Granulocytes
Control	13.08 ± 0.348	5.20 ± 0.347	5683.33 ± 334.94	77.00±3.89	5.50±1.04	15.66±3.07
KPC	13.32 ± 0.24 ns	5.27 ± 0.53 ns	5543.± 349.23 ns	78.33±4.32 ns	6.00±2.28 ns	17.5±4.27 ns

n=6; Values are expressed as mean ± S.D followed by Students Paired 'T' Test

ns - Non significant as compared with control.

Table 3

EFFECT OF KPC ON BIOCHEMICAL MARKERS OF LIVER AND KIDNEY AFTER 21 DAYS REPEATED DOSING (500 MG/KG/P.O) IN RATS

Groups	**ALP (K.A.Units)**	**AST (IU/L)**	**ALT (IU/L)**	**Urea (mg/100ml)**	**BUN (mg/ 100ml)**
Control	3.66 ± 0.37	76.16 ± 1.16	27. 51±1.19	11.25 ± 0.537	4.92 ± 0.74
KPC	3.65 ± 0.39^{ns}	78.58 ± 1.64 ^{ns}	29.17±1.29 ^{ns}	13.08 ± 0.85 ^{ns}	5.17 ± 0.21 ^{ns}

n=6; Values are expressed as mean ± S.D followed by Students Paired 'T' Test

ns - Non significant as compared with control

Table 4

Anti inflammatory activity of KPC in Cotton Pellet Granuloma

Groups	Cotton pellet Granuloma method
	Dry Weight (mg)
Control	241.87 ± 2.738
KPC 500 mg/kg/p.o	125.60 ± 5.98***
Standard (Dic.Sodium 5 mg/kg/po)	70.00 ± 7.42***

n=6; Values are expressed as mean ± S.D followed by Students Paired 'T' Test

***P<0.001 as compared with that of control.

Table 5

ANTI INFLAMMATORY ACTIVITY OF KPC IN CARRAGEENAN INDUCED HIND PAW OEDEMA IN RATS

Groups	**Paw volume (ml) by mercury Displacement at regular interval of time**					
	0 min	**30 min**	**60 min**	**120 min**	**240 min**	**15 hrs**
Control	1.55 ± 0.164	1.808 ± 0.1497	2.0 ± 0.303	1.95 ± 0.3619	2.25 ± 0.4612	2.25 ± 0.4612
KPC (500mg/kg. p.o.,)	1.683 ± 0.1472 ***	1.808 ± 0.1497 ***	2.0 ± 0.303 ***	1.85 ± 0.021 ***	1.716 ± 0.7521***	1.616 ± 0.1169 ***
Standard (Dic.Sodium 5 mg/kg/po)	0.835 ± 0.065 **	1.315 ± 0.069**	1.128 ± 0.049**	1.011 ± 0.056**	0.896 ± 0.048**	0. 85 ± 0.054

n=6; Values are expressed as mean ± S.D followed by One Way ANOVA –Dunnett's multiple comparison test.

ns - Non significant as compared with control;

(P< 0.003), *(P<0.001) as compared with control.

Table 6

EFFECT OF THE KPC ON HISTAMINE INDUCED CONTRACTIONS OF GUINEA PIG ILEUM

S.No	Treatment				
	Histamine µg/ml	**Mean contraction (mm)**	**KPC mg/ml**	**Mean contraction (mm)**	**% inhibition of Histamine**
1.	10.0	35.52 ± 3.214	10.0	12.0 ± 3.412 ***	34.0
2.	20.0	65.0 ± 0.872	20.0	35.0 ± 2.314 ***	53.8
3.	40.0	85.130 ± 3.214	40.0	63.2 ± 3.216 ***	74.1

Values are mean ± SEM of triplicates.

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Values are mean ± SEM of triplicates.

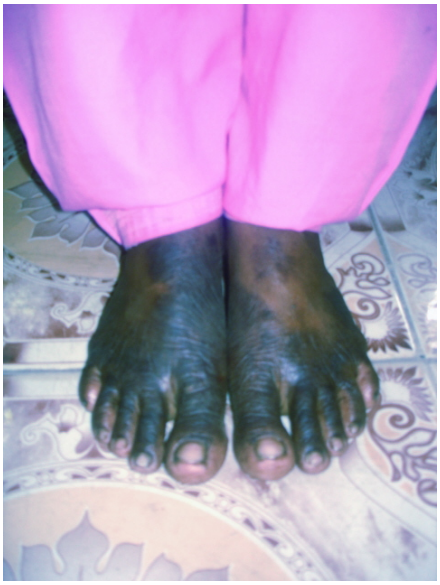
*** ($p<0.001$) when compared with control.

LABORATORY INVESTIGATION OF 20 I.P CASES - HAEMOTOLOGICAL REPORT

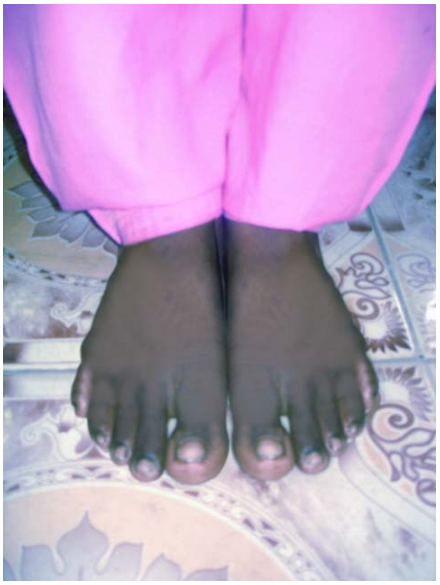
S.No	IP No	Name of the patient	Age	Sex	Blood Sugar (random) mg		Blood Cholesterol mg		Blood Urea mg		VDRL	Skin Scrapping for fungus
					BT	AT	BT	AT	BT	AT		
1	410/3957	Ratnam	63	M	118	110	185	172	14	14	Non - reactive	+ ve
2	772/8328	Sampath Ammal	50	F	98	90	188	160	23	20	Non - reactive	- ve
3	837/362	Sivanandam	63	M	79	100	216	200	26	35	Non - reactive	+ ve
4	953/4713	Arumugam	40	M	282	220	172	150	24	22	Non - reactive	- ve
5	1039/9150	Prakash	27	M	84	75	105	100	22	20	Non - reactive	- ve
6	1152/4133	Sambayi	50	F	118	100	178	150	20	18	Non - reactive	- ve
7	1140/3827	Valli	55	F	118	100	170	150	24	20	Non - reactive	- ve
8	1674/643	Chellammal	52	F	83	89	214	186	21	21	Non - reactive	- ve
9	1057/1174	Janaki	35	F	109	100	180	150	21	20	Non - reactive	- ve
10	1850/9477	Thirumangai	27	F	93	105	144	102	18	15	Non - reactive	+ ve
11	1892/1387	Mani	65	M	160	120	210	180	19	18	Non - reactive	- ve
12	1877/978	Rajathi	28	F	68	65	160	155	18	15	Non - reactive	+ ve
13	1977/6193	Balakrishnan	47	M	155	110	210	200	28	28	Non - reactive	- ve
14	1994/6714	Ramamoorthy	40	M	162	152	194	163	25	20	Non - reactive	+ ve
15	2055/920	Ram Ammal	70	F	146	140	198	190	28	25	Non - reactive	- ve
16	2038/9396	Chandra Ammal	60	F	89	80	120	120	21	20	Non - reactive	- ve
17	2109/3404	Balakrishnan	47	M	140	100	175	150	20	20	Non - reactive	- ve
18	1657/9851	Sivanandam	60	M	80	100	180	170	20	15	Non - reactive	- ve
19	920/4311	Veera Samy	41	M	80	85	185	170	21	20	Non - reactive	- ve
20	2755/9974	Ramalingam	55	M	115	100	168	160	25	20	Non - reactive	- ve

Mrs YOGESWARI – AGE 24 / FEMALE

BEFORE TREATMENT



AFTER TREATMENT



STATISTICAL ANALYSIS OF CLINICAL STUDY

BIO STATISTICS

PARAMETERS FOR ANALYSIS

1. Subjective Parameters (Signs & symptoms)
    - ❖ Erythema ć Itching
    - ❖ Crawling Sensation
    - ❖ Oozing
    - ❖ Lichenification

2. Objective Parameters (Laboratory Investigation)
    - ❖ Eosinophil

The parameters observed and analysed before and after treatment in 20 Number of patients.

METHOD OF ANALYSIS

1. Two test for changes in subjective parameters. Detail is elaborately explained in table.
2. Student one sample t – test for changes in objective parameter. Detail is furnished in table.

RESULTS

Z-test values for subjective parameters & Objective parameters

- ❖ Erythema ć Itching Z = 26.832, $P < 0.001$
- ❖ Crawling Sensation Z = 8.944, $P < 0.000$
- ❖ Oozing Z = 26.832, $P < 0.003$
- ❖ Lichenification Z = 17.888, $P < 0.005$
- ❖ Eosinophil Z = 0.187, $P < 0.000$

STATISTICAL ANALYSIS OF SUBJECTIVE PARAMETERS OBSERVED BEFORE & AFTER TRETMENT OF PATIENT

S.No	Parameters	Percentage			Statistical test criteria	Probability values	Significance
		Before treatment	After treatment	Difference			
1	Erythema ć itching	100.0 ± 26.832	100.0 ± 26.832	0.001 ± 0.21	26.832	P < 0.001	*** (Highly significant)
2	Crawling Sensation	55.0 ± 8.944	45.0 ± 26.832	10.35 ± 0.982	8.944	P < 0.000	*** (Highly significant)
3	Oozing	45.0 ± 26.832	30.0 ± 8.944	10.0 ± 0.328	26.832	P < 0.003	** (significant)
4	Lichenification	60.0 ± 17.888	40.0 ± 26.832	20.0 ± 0.321	17.888	P < 0.005	* (significant)
5	Eosinophil	5.816 ± 0.186	4.363 ± 0.654	1.85 ± 0.112	0.187	P < 0.000	*** (Highly significant)

n= 20, values are expressed as mean ± S.D followed by student 1 sample t – test

*** P < 0.001, ** P < 0.003, *P < 0.005 compared with that of before and after treatment

DISCUSSION

Nowadays allergic diseases are widely prevalent in people from all the walks of life. This is because of the changing life style of the population, their dietic patterns, the polluted atmosphere, culminated with seasonal changes are determinating the immunoresponse of the individual to fight against the disease.

The main characteristics features of "**Pitha Karappan"** are Erythema ć itching, Crawling sensation, Loss of appetite, Indigestion, Extreme tiredness, Oozing, Lichenification & Scaling. This disease can be more or less correlated with "Eczema" in modern medicine.

CAUSATIVE FACTORS

According to the Siddhar's view, it was stated that excessive intake of fish, mutton, low grade food material like meat, varagu, thinai, rhizomes and root of some plants are the main cause for this disease. All the anti-social activities resulting in psychic disturbance are also leading to this disease.

Regarding the aetiology of " Eczema " in modern medicine, hyper sensitivity to variety of contact allergens (Plants, cosmetics, clothing and medicaments), irritants (Physical & Chemical), history of allergies, emotional factors and familial predisposition are the causes.

SEX REFERENCE

The research study reveals that 55 % of males and 45 % of females were affected by Pitha Karappan.

AGE DISTRIBUTION

Patients who suffered from Pitha karappan are ranging between the age group of 21-40 years (30%), 41-60years (50%) and 61-80 years (20%).

The research study shows that the patients between the age group of 41-60 years (50%) ware more affected by Pitha karappan.

REFERENCE TO OCCUPATIONAL STATUS

Occupation and life style play an important role as the exiting and aggravating factors in Pitha karappan. This theory was proved to be true in most of the cases.

REFERENCE TO SOCIO - ECONOMIC STATUS

Many of the patients were from lower income group. The unhygienic conditions prevailed, exposure to polluted environment, malnutrition & lower immune response of lower income group, have made them easily susceptible to this disease.

REFERENCE TO DIET

The non-vegetarian food plays a major role in the occurrence of Pitha Karappan. Apart from this item like ragi, brinjal, tomato and certain varieties of fish also contribute towards the aetiology of Pitha Karappan. In this study most of the patients were non-vegetarians and many of them were in the habit of taking some of the above referred food items.

REFERENCE TO PARUVAKAALAM

Out of 20 patients, 30 % of patients were affected in Koothir Kaalam and 25 % in Mun Pani Kaalam.. The starting date of illness was in the months of April and May for 40 % of cases (Elavenil Kaalam).

In three doshas, Kabam is aggravated and spreads throughout the body during the month of Elavenil Kaalam.(Vetrunillai Valarchi). Pitham is aggravated and spreads throughout the body in Koothir Kaaalam.

So the aggravation of Kabam and Pitham during Elavenil Kaalam and Koothir Kaaalam produces Pitha Karappan.

In dermatology books also described as follows.

- Infective Eczema is common in the summer.
- Eczema credible in winter and monsoon.
- Prickly heat becoming eczematized.
- Severe cold promote the development of Eczema.

REFERENCE TO THINAI

The research study reveals that out of 20 cases 70 % of the cases are belonging to Neithal Thinai.

REFERENCE TO KAALAM DISTRIBUTION

According to Kaalam Distribution, most of the cases (80 %) were affected in Pitha Kaalam.

REFERENCE TO MUKKUTTRAM

All the three Kuttram were involved in Pitha karappan.

Kabam was predominantly affected due to the derangement of kilethagam & improper digestion takes place which results in variation of other Kuttrams. Hence it is understood that kabam place a vital role in the pathogenesis of Pitha Karappan.

In Vatha Kuttram, Viyanan (100%) and Samanan (50%) were affected. The deranged Vatha Kuttram along with the other cause Erythma ć itching, Crawling sensation, Lichenification & Scaling.

In Pitha Kuttram, Prasaga Pitham (100%) and Anar Pitham (50%) were affected. Therefore the deranged Pitha Kuttram along with other Kuttram is the prime most cause for changes in skin colour, thickening and lichenification.

REFERENCE TO UDAL KATTUGAL

The clinical study reveals that Saram, Senneer and Oon were involved in 100 % of the cases.

Roughness of skin is due deranged of Saram. Senneer cause the dryness of the skin, hyper pigmentation and oozing. Lichenification is due to derangement of Oon.

REFERENCE TO ENVAGAI THERVUGAL

In Envagai Thervugal, the study reveals that Niram and Sparism were involved in all cases and there was dryness, roughness, thickening and hyper pigmentation.

In Neer Kuri all the patients had straw yellow coloured urine and in Nei Kuri 55 % of patients had “Azhipol Paraval” (Pitha Neer) and 35 % of cases had “ Muthothu Nitral ” (Kaba Neer).

The Naadi involved in Pitha Karappan are Kaba Pitham (55%) and Kaba Vatham (35%).

REFERENCE TO DURATION OF ILLNESS

According to the clinical study, the duration of illness for 30 % of cases was 1-3 months, and 25 % of the cases had more than a year.

REFERENCE TO CLINICAL FEATURE

According to clinical study, all the patients had Erythema ć itching (100%),60 % had Lichenification, 55 % of cases had Crawling sensation, 45 % had Extreme tiredness & Oozing.25% of cases had Loss of appetite & Indigestion.

MODE OF ACTION IN SIDDHA SYSTEM

The medicine used in Siddha system acts by five properties. They are Suvai (Taste), Gunam (Properties), Veeriyam (Potency), Pirivu (Class) and Mahimai (Action). All the five properties based on the five elements (Panchabootham) present in that medicine.

The disease according to the Siddha system also caused by derangement in Mukkuttram and Udal Thathukkal.

Both having made up of five elements. So it normalizes the Mukkuttram and Udal Thathukkal. This is to cure a disease where we have to treat it on the basis of five elements via the five properties of medicine viz Suvai, Gunam, Veeriyam, Pirivu and Mahimai . A medicine can act as Oppurai, Ethirurai and Kalappurai. Hence Pitha Karappan occurs as a result of derange Kaba Thathu.

In Pitha Karappan, Kaba Kuttram and Pitha Kuttram are affected. Karappan Choornam has Kaippu Suvai which is made up of Kattru + Vin. Kaippu Suvai controls the derangement of Kaba Thathu and Pitha Thathu. Karappan Choornam was given as an ethirurai.

CLINICAL STUDY

All the cases were treated with Karappan Choornam (Internal) and Karappan Ennai (External) for an average of 20- 50 days. The relief from signs & symptoms were observed for seven days in acute cases and 14 days for chronic cases. Blood & Urine were tested after the completion of treatment.

The increase Erythrocyte sedimentation rate and Eosinophil count noted to be normal. Three patients had diabetics and were on regular Allopathy treatment. They were advised to continue the treatment.

No complications of any systems were observed during the entire course of treatment in all cases.

QUALITATIVE ANALYSIS OF TRIAL MEDICINE

The trial medicine showed following constituents.

KARAPPAN CHOORNAM

Acid Radicals	:	Sulphate, Chloride, Phosphate
Basic Radicals	:	Iron (Ferrous)
Phyto Chemicals	:	Starch, Reducing sugar, Alkaloids, Tannic acid, Amino acid, Glycoside, Tannin, Protein, Phenols, Flavanoids, saponins, Amino acid,

Phosphate constituent actions are closely related to Calcium. It is used as buffer in Blood. Phosphate ion activates certain enzymes in carbohydrate, fat and protein metabolism.

The presence of chloride in this medicine regulates acid – base balance of the body fluids and formation HCL in gastric juice. Chloride helps in preservation of the permeability of cells.

The iron in the form of Ferrous iron is more soluble and therefore more readily observed.

Anti microbial effect of Karappan Choornam has been studied. Lab sensitivity was tested for the following organisms namely

1. Streptococcus Mutans
2. Staphylococcus Aureus
3. Escherichia Coli
4. Klebsiella Pneumoniae
5. Aspergillus Nigar
6. Aspergillus Fumigates
7. Candida Albicns
8. Trichoderma.

The study revealed that the test medicine has anti-microbial effect to all the above referred microorganism.

In statistical evaluation of clinical study the subjective and objective parameters showed the difference is statistically significant.

The pharmacological study shows that the Karappan Choornam is definitely a better medicine for antihistamine and anti-inflammatory activities in animal model.

In an average of 30 days treatment 75 % of patients got good relief from signs & symptoms. The laboratory investigations were also encouraging.

SUMMARY

" **Pitha karappan "** is a well known disease with considerable involvement of skin and wide constitutional features. The clinical study on **" Pitha Karappan "** with the administration of the trial medicine of **" Karappan Choornam & Karappan Ennai "** was carried out in the Post Graduate Department of Maruthuvam, G.S.M.C, Chennai.

Various medical literatures having relevant reference for the disease " **Pitha karappan "** were collected from both Siddha System as well as from the Modern system of medicine to understand the nature of the disease.

A total of 40 patients were observed in this study. Out of these 40 patients, 20 were treated in the O.P Department and the remaining in I.P. Department. The duration of treatment was fixed as 48 days. Clinical & Pathological assessments were carried out on the basis of both Siddha and Modern medical system.

The results obtained from studies are summarized below.

ABOUT THE DISEASE

- More percentage of males (55 %) was affected than females.
- 50 % were affected in the age group of 41-60 years.
- High incidences of cases were observed in Lower Income Group (90%).
- 30 % of patients were affected in Koothir Kaalam.
- On examination of Uyir Thathukkal, the following were deranged in more number of cases.
  - In Vatham – Viyanan (100 %) & Samanan (50 %)
  - In Pitham – Prasaga Ptham (100 %) & Anar Pitham (50%)
  - In Kabam – Kilethagam (50%)
- In Udal Kattugal Saram (100%), Senner (100%), Oon (100%) were affected.

- Naadi showed Kaba Pitham (55%), Kaba Vatham (35 %), Vatha Kabam (10 %).
- The laboratory haematological investigations have revealed that the disease is the non- infective nature.

ABOUT THE EFFICACY OF TRIAL MEDICINE

- The Qualitative analysis reveals that the medicine **" Karappan Choornam "** has the presence of Sulphate, Chloride, Phosphate , Iron (Ferrous),Starch, Reducing sugar, Alkaloids, Tannic acid, Amino acid, Glycoside, Tannin, Protein, Phenols, Flavanoids, saponins, Amino acid.
- The pharmacological analysis of the **" Karappan Choornam "** reveals the presence of Anti histamine & Anti inflammatory activity and it also has anti microbial activity against gram positive , gram negative organism and fungus also.
- **" Karappan Ennai "** is used as external application. It has very good effect in preventing itching, crawling sensation, lichenification & oozing.
- The response to the trial medicine, were assessed daily for the Inpatients and weekly once for the Out patient and recorded in the Performa.
- The patients responded to the medicine showing gradual decrease in Signs & Symptoms.
- During and after the course of treatment no relapsing effects were reported.
- Out of 20 cases, 75 % cases had good results, 15 % got moderate results and 10 % got mild results.
- These analysis ensure the efficacies of the trial medicine.

CONCLUSION

- The medicine **“ Karappan Choornam ”** and **“ Karappan Ennai ”** tried in this study, exerted good results.
- The pre-clinical studies proved that the medicine have Anti histamine, Anti inflammatory & Anti microbial activity.
- The trial medicine was effective in reliving the signs and symptoms of Eczema patients.
- The cost of medicine is very low and free from side effect. So they are useful for long term purpose.
- Research finding shows that 75 % of the patients were completely cured and the 15 % was also got moderate improvement.
- Statistical analysis also proved that patients were significantly improved by the treatment.
- Because of the encouraging results of both pre clinical and clinical study, it can be concluded that the “Pitha Karappan” can be controlled with the trial medicine.

BIBLIOGRAPHY

SIDDHA TEXT

1. «¸Š¾¢Â÷ ¸ýÁ ¸¡ñ¼õ - 300 À¾¢ôÀ¡°¢¡¢Â÷
   ±Š.À¢.þÃ¡Áî°ó¾¢Ãý
   ¾¡Á¨Ã áÄ¸õ - 1995 Àì¸ ±ñ – 37

2. «¸Š¾¢Â÷ þÃ½ ¨Åò¾¢Âõ Å¢ŠÅ¿¡¾ý
   «ÕûÁ¢Ì ÀÆ¿¢ ¾ñ¼¡Ô¾ À¡½¢ ÍÅ¡Á¢ ¾¢Õì§¸¡Å¢ø
   °¢ò¾ ÁÕòÐÅ áø ¦ÅÇ¢Â£ðÎì ÌØ-1974 Àì¸ ±ñ – 3

3. «¸Š¾¢Â÷ ÌÕ ¿¡Ê áø - «¸ò¾¢Â÷ ÓÉ¢Å÷
   þÃò¾¢É ¿¡Â¸÷ «ñð °ýŠ - ¾¢ÕÁ¸û «î°¸õ, ¦°ý¨É
   Àì¸ ±ñ -11, 38

4. «¸Š¾¢Â÷ - 2000 ãýÈ¡õ À¡¸õ,
   ÁÕ.±Š.¦Åí¸ð¼Ã¡ƒý,±ø.³.õ, °ÃŠÅ¾¢ Á†¡ø áø ¿¢¨ÄÂ
   ¦ÅÇ¢Â£Î -1989, - Àì¸õ ±ñ 46

5. «¸Š¾¢Â÷ À¡¢ÒÃ½õ 400, «¸Š¾¢Â÷,
   þÃò¾¢É ¿¡Â¸÷ «ñð °ýŠ, ¦°ý¨É-1994- Àì¸õ ±ñ 41

6. ¬Å¢ÂÇ¢ìÌõ «Ó¾ Ó¨Èî ÍÕì¸õ,
   ÀÆ¿¢ ¾ñ¼¡Ô¾ À¡½¢ ÍÅ¡Á¢ ¾¢Õì§¸¡Â¢ø ¦ÅÇ¢Â£Î -
1975
   Àì¸õ ±ñ 131.

7. ¸ñÏ°¡Á¢ ÀÃõÀ¨Ã ¨Åò¾¢Âõ, °¢. ¸ñÏ°¡Á¢ À¢û¨Ç, Àì¸õ
   ±ñ 1

8. ÌÕ¿¡Ê °¡Š¾¢Ãõ Àì¸õ ±ñ 11

9. Ì½À¡¼õ - ãÄ¢¨¸ ÅÌôÒ, ¸.°. ÓÕ§¸° Ó¾Ä¢Â¡÷
þó¾¢Â ÁÕòÐÅõ - µÁ¢§Â¡À¾¢ Ð¨È, ¦°ý¨É.
Àì¸õ ±ñ 37, 199, 214, 415,463,

10. Ì½À¡¼õ ¾¡Ð-ƒ£Å ÅÌôÒ, ÁÕ.¾¢Â¡¸Ã¡°ý
þó¾¢Â ÁÕòÐÅõ - µÁ¢§Â¡À¾¢ Ð¨È, ¦°ý¨É - Àì¸õ ±ñ
243

11. °¢ò¾ ÁÕòÐÅõ °¢ÈôÒ ¼¡ì¼÷. ¬÷. ¾¢Â¡¸Ã¡ƒý - ±ø.³.õ
«ÕûÁ¢Ì ÀÆ¿¢ ¾ñ¼¡Ô¾ À¡½¢ ÍÅ¡Á¢ ¾¢Õì§¸¡Å¢ø
°¢ò¾ ÁÕòÐÅ áø ¦ÅÇ¢Â£ðÎì ÌØ-1986 Àì¸ ±ñ 281,286

12. °¢ò¾ ÁÕòÐÅ¡í¸î ÍÕì¸õ ÁÕ.¸.Í.¯ò¾ÁÃ¡Âý, ±î.À¢.³.õ,
þó¾¢Â ÁÕòÐÅõ - µÁ¢§Â¡À¾¢ Ð¨È, ¦°ý¨É - À¾¢ôÒ 2003
Àì¸õ ±ñ 192.

13. §¾¨ÃÂ÷ ¦ÅñÀ¡ - ãÄÓõ - ¯¨ÃÔõ ¼¡ì¼÷. ¬÷. ¾¢Â¡¸Ã¡ƒý -
±ø.³.õ
±ø.±Š. ¬É ó¾õ °¢ò¾ ÁÕòÐÅ ¬Ã¡öî°¢ ¿¢¨ÄÂõ, ¦°ý¨É
À¾¢ôÒ 1975 - Àì¸ ±ñ – 210

14. §¿¡ö ¿¡¼ø §¿¡ö Ó¾ø ¿¡¼ø ¾¢ÃðÎ, ÁÕ.Á.°ñÓ¸ §ÅÖ,
±î.À¢.³.õ,
¾Á¢ú ¿¡Î °¢ò¾ ÁÕòÐÅ Å¡¡¢Â ¦ÅÇ¢Â£Î - 1988, À¡¸õ
1
Àì¸õ ±ñ 86, 88,169, 178,253,265,279,280

15. À¾¡÷ò¾ Ì½Å¢Çì¸õ - ãÄ¢¨¸ ÅÌôÒ,°¢. ¸ñÏ°¡Á¢ À¢û¨Ç
¦ƒÂõ ÀôÇ¢§¸„ý -2003 - Àì¸õ ±ñ 533

16. À¾¡÷ò¾ Ì½Å¢Çì¸õ - ¾¡Ð-ƒ£Å ÅÌôÒ, °¢. ¸ñÏ°¡Á¢ À¢û¨Ç

17. ÀÃÃ¡°§°¸Ãõ, À¡¸õ 1 , ³.¦À¡ý¨ÉÂ¡,

¾¢Õ»¡É°õÀó¾÷ «îÍ ±ó¾¢Ã °¡¨Ä, Àì¸õ ±ñ 67

18. À¡Ä Å¡¸¼ ¾¢ÃðÎ - ¦À¡ý ÌÕ°¢§Ã¡ýÁ½¢
¾Á¢Æ¸ «ÃÍ À¾¢ôÒò Ð¨È þÂìÌÉ÷ -1992 Àì¸ ±ñ 241, 247

19. ä¸¢ ¨Åò¾¢Â °¢ó¾¡Á½¢, ä¸¢ Á¡ÓÉ¢Å÷
þó¾¢Â ÁÕòÐÅõ - µÁ¢§Â¡À¾¢ Ð¨È, ¦°ý¨É - À¾¢ôÒ 2005,
Àì¸õ ±ñ 298,299

20. Compendium of Indian Medicinal Plants, B.N.Mehrota
Central Drug Research Institute, Lucknow and
Publication and Information Directorate , New Delhi – 1993

21. Dictionary Tamil-English , T.V. Sambasivam Pillai, Govt. of Tamilnadu -1994

22. Glossary of Indian Medicinal Plants, Dr R.N.Chopra, S.L .Nair, I.C.Chopra

23. History of Siddha Medicine, N.K.Kanda Swamy Pillai
Department of Indian Medicine & Homoeopathy, Chennai - 1998

24. Indian Materia medica Vol II, A.K.Natkarni,
Bombay Popular Prakashan -1995.

25. The wealth of India,

MODERN TEXT

26. Essentials of Medical Physiology, K.Sembulingam & Prema Sembulingam

27. Essential Paediatrics – O.P.Ghai

28. Practice of Dermotology, Dr.P.N.Behl, pages no 126-149.

29. Priciple and Practice of Medicine, Davidson page no 1072-1075

30. Roxburgh's common skin disease page no 101 -123

31. Skin and Venereal diseases, Yu.K.Skripkin and M.V.Milich

32. The Text book of Human Anatomy, T.S.Ranganathan, page no 360,362

33. Text book of Dermatology, Rook (Wilkinson) Erling, Page no 662