

**"AN OPEN LABELED DOUBLE ARM NON RANDOMIZED PHASE II  
CLINICAL TRIAL TO EVALUATE THE EFFICACY OF SIDDHAR  
YOGA MARUTHUVA MURAIGAL AND  
SIDDHA MEDICINE KANDANKATHIRI SAMOOLA CHOORANAM  
IN THE MANAGEMENT OF PEENISAM (SINUSITIS)"**

*Dissertation Submitted to*

**THE TAMIL NADU Dr. M.G.R. Medical University Chennai- 3**

*For the Partial fulfillment for the Award of Degree of*

**DOCTOR OF MEDICINE (SIDDHA)**

**(BRANCH –IX, SIDDHAR YOGA MARUTHUVAM)**



**DEPARTMENT OF SIDDHAR YOGA MARUTHUVAM**

**Government Siddha Medical College & Hospital**

**Palayamkottai - 627 002**

**OCTOBER - 2022**

**GOVERNMENT SIDDHA MEDICAL COLLEGE  
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**BONAFIDE CERTIFICATE**

This is to certify that the dissertation entitled  
**"AN OPEN LABELED DOUBLE ARM NON RANDOMIZED PHASE II  
CLINICAL TRIAL TO EVALUATE THE EFFICACY OF SIDDHAR  
YOGA MARUTHUVA MURAIGAL AND SIDDHA MEDICINE  
KANDANKATHIRI SAMOOLAM CHOORANAM (INTERNAL  
MEDICINE) IN THE MANAGEMENT OF PEENISAM"** is a bonafide work  
done by **Dr.B.SUDHANTHIRA, (Reg.No:321919002) GOVERNMENT  
SIDDHA MEDICAL COLLEGE, PALAYAMKOTTAI** in partial fulfillment  
of the University rules and regulations for award of **M.D (SIDDHA), BRANCH  
- IX SIDDHAR YOGA MARUTHUVAM** under my guidance and supervision  
during the academic year **2019-2022 OCTOBER.**

Name and Signature of the Guide:

Name and Signature of the Head of Department:

Name and Signature of the Principal:

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PALAYAMKOTTAI, TIRUNELVELI-627002,  
TAMILNADU, INDIA.**

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**DECLARATION BY THE CANDIDATE**

This is to certify that the dissertation entitled "**AN OPEN LABELED DOUBLE ARM NON RANDOMIZED PHASE II CLINICAL TRIAL TO EVALUATE THE EFFICACY OF SIDDHAR YOGA MARUTHUVA MURAIGAL AND SIDDHA MEDICINE KANDANKATHIRI SAMOOLAM CHOORANAM (INTERNAL MEDICINE) IN THE MANAGEMENT OF PEENISAM**" is a bonafide and genuine research work carried out by me under the guidance of **Dr.A.S.POONGODI KANTHIMATHI, M.D(s).**, Prof. PG-IX, Department of Siddhar Yoga Maruthuvam, Govt. Siddha Medical College, Palayamkottai and the dissertation has formed the basis for the award of any Degree, Diploma, Fellowship or other similar title.

Date:

Place:

Signature of Candidate

**Dr.B. SUDHANTHIRA**

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This certificate is awarded to Dr. B. SUDHANTHIRA

for participating as Resource Person / Delegate in the 33<sup>rd</sup> Workshop on

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For AYUSH Post - Graduates & Researchers organized by the Department of Siddha,

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The board of "International Journal of Reverse Pharmacology and Health Research" (ISSN 2589-3343, [www.ijrphr.com](http://www.ijrphr.com)) is hereby awarding this certificate to Corresponding author

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in recognition of the publication of the Research/Review Paper entitled

***A Literature Review on Yoga Muthiraigal in Siddha System of Medicine***

Published in Volume 5 , Issue 1 , Jan-Mar, 2022



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This is to certify that Dr/Shri..... **B. SUPHANITHIRA**..... has participated in the National Conference on "Mainstreaming of Siddha System of Medicine in the Management of NCD in Public Health" held on 8<sup>th</sup> & 9<sup>th</sup> January 2020 at Govt. Siddha Medical College, Palayamkottai Jointly organized by National Institute of Siddha, Chennai & Directorate of Indian Medicine & Homeopathy, Chennai. Govt.of Tamil Nadu as a part of 3<sup>rd</sup> Siddha day celebration with the support of Ministry of AYUSH, Govt. of India.

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***A Literature review on Different Schools of Yogam***

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an acknowledgement of the contribution to the Conference as a **DELEGATE / PRESENTER** of  
a paper on **.A....LITERATURE...REVIEW...ON...YOGA...MUTHIRAIKAL...IN...SIDDHA....**  
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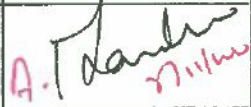
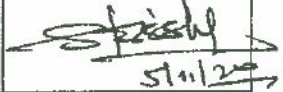

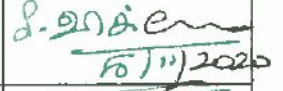
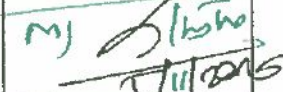
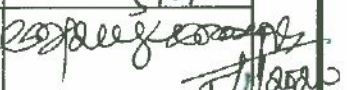

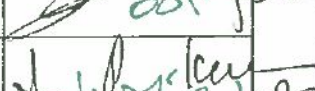


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Department : Post Graduate Department of Siddhar Yoga Maruthuvam

This is to certify that the dissertation topic "AN OPEN LABELLED DOUBLE ARM NON RANDOMIZED PHASE II CLINICAL TRIAL, TO EVALUATE THE EFFICACY OF SIDDHAR YOGA MARUTHUVA MURAIGAL AND SIDDHA MEDICINE "KANDANKATHIRI SAMOOLA CHOORANAM" IN THE MANAGEMENT OF PEENISAM" has been approved by the Review Board.

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I	Pothu Maruthuvam	Dr.A.Manoharan MD(s), Ph.D., Professor	
II	Gunapadam	Dr.A.Kingsly MD(s), Associate Professor	
IV	Kuzhandhai Maruthuvam	Dr.D.K.Soundararajan MD(s), Professor	
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IX	Siddhar Yoga Maruthuvam	Dr.A.S.Poongodi Kanthimathi MD(s), Professor	

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**CERTIFICATE OF APPROVAL**

Address of Ethical Committee	Government Siddha Medical College & Hospital, Palayamkottai, Tirunelveli-627002
Principal Investigator	Dr.B.Sudhanthira, PG 1 <sup>st</sup> Year Br IX, Depatment of Siddhar Yoga Marutham Registration No: 321919002
Guide	Dr.A.S.Poongodi Kanthimathi MD(S)., Professor & HOD, Department of Siddhar Yoga Maruthuvam, Government Siddha Medical College & Hospital, Palayamkottai, Tirunelveli-627002. Mail Id: arunapriya1995@gmail.com
Dissertation Topic	An Open Labeled Double Arm Non Randomized Phase II Clinical Trial To Evaluate "The Efficacy Of Siddhar Yoga Maruthuva Muraigal and Siddha Medicine KANDANKATHIRI SAMOOLA CHOORANAM" In The Management of "PEENISAM(SINUSITIS)"
Documents filed	I)Protocol, II)Data collection forms, III)Patient information sheet, IV)Consent form, V)SAE(Pharmacovigilance)
Clinical/Non clinical Trail Protocol (Others-Specify)	Clinical Trial Protocol
Informed Consent Document	Yes
Any Other Document	Case sheets, Investigation documents
Date of IEC Approval & Its Number	GSMC-IEC-VII/Br.XI/38-06.11.2020

We approve the trail to be conducted in its presented form.

The Institutional Ethical Committee expects to be informed about the process report to be submitted to the IEC at least annually of the study, any SAE occurring in the course of the study, any changes in the protocol and submission of final report.

  
Chairman

  
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Prof.Dr.M.Thiruthani MD(S),PGDYN

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**CERTIFICATE OF BOTANICAL AUTHENTICITY**

Certified the following plant drugs used in siddha formulation “**Kandankathiri samoola chooranam**” [Internal] in the management of **Peenisam (sinusitis)** taken up for post-graduation dissertation studies by **Dr.B.Sudhanthira M.D(S).**, (REG.NO:321919002) PG scholar, department of Siddhar Yoga maruthuvam are correctly identified and authenticated through Visual inspection / Organoleptic characters / Experience, Education & Training morphology, microscopical and taxonomical methods.


**INGREDIENT OF INTERNAL MEDICINE: KANDANKATHIRI**

**SAMOOLA CHOORANAM**

S.N	DRUG NAME	BOTANICAL NAME	FAMILY	PART USED	QUANTITY
01	<i>kandankathiri</i>	<i>Solanum surrattense</i>	Solanaceae	Whole plant	2-4 gm

Station:Palayamkottai

Date: 25.03.21

Authorized signature  
  
DR. A. KINGSLY, M.D(S)  
Reader, Head of the Department  
PG Gunapadam  
Govt. Siddha Medical College  
Palayamkottai, Tirunelveli Dist.



Clinical Trial Details (PDF Generation Date :- Sat, 28 May 2022 02:48:52 GMT)

<b>CTRI Number</b>	CTRI/2021/03/031772 [Registered on: 08/03/2021] - Trial Registered Prospectively	
<b>Last Modified On</b>	28/05/2022	
<b>Post Graduate Thesis</b>	Yes	
<b>Type of Trial</b>	Interventional	
<b>Type of Study</b>	Siddha	
<b>Study Design</b>	Other	
<b>Public Title of Study</b>	A CLINICAL STUDY ON SIDDHAR YOGA MARUTHUVA MURAIGAL AND INTERNAL MEDICINE KANDAKATHIRI SAMULA CHOORANAM IN MANAGEMENT OF PEENISAM(SINUSITIS)	
<b>Scientific Title of Study</b>	AN OPEN LABELLED DOUBLE ARM NON RANDOMIZED PHASE II CLINICAL TRAIL TO EVALUATE THE EFFICACY OF SIDDHAR YOGA MARUTHUVA MURAIGAL AND SIDDHA MEDICINE KANDAKATHIRI SAMULA CHOORANAM IN THE MANAGEMENT OF PEENISAM(SINUSITIS)	
<b>Secondary IDs if Any</b>	<b>Secondary ID</b>	<b>Identifier</b>
	NIL	NIL
<b>Details of Principal Investigator or overall Trial Coordinator (multi-center study)</b>	<b>Details of Principal Investigator</b>	
	<b>Name</b>	Dr B Sudhanthira
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	<b>Phone</b>	98651053556
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	<b>Email</b>	arunapriya1995@gmail.com
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	<b>Name</b>	Dr A S Poongodi Kanthimathi MDs





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<b>Affiliation</b>	Government Siddha Medical College and Hospital, Palayamkottai, Tirunelveli, Tamil Nadu			
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<b>Details of Ethics Committee</b>	<b>Name of Committee</b>	<b>Approval Status</b>	<b>Date of Approval</b>	<b>Is Independent Ethics Committee?</b>
	Institutional ethical committee	Approved	06/11/2020	No
<b>Regulatory Clearance Status from DCGI</b>	<b>Status</b>		<b>Date</b>	
	Not Applicable		No Date Specified	
<b>Health Condition / Problems Studied</b>	<b>Health Type</b>		<b>Condition</b>	
	Patients		Acute sinusitis, unspecified	
<b>Intervention / Comparator Agent</b>	<b>Type</b>	<b>Name</b>	<b>Details</b>	
	Intervention	Kandankathiri samula chooranam	2-4 grams/twice a day(orally)/luke warm water/48 days	
	Comparator Agent	Siddhar yoga maruthuva muraigal	pranayamam 20-80 cycles Bhujangasanam Trikonasanam	



		Savasnam do twice a day
<b>Inclusion Criteria</b>	<b>Inclusion Criteria</b>	
	<b>Age From</b>	18.00 Year(s)
	<b>Age To</b>	60.00 Year(s)
	<b>Gender</b>	Both
	<b>Details</b>	patient having the symptoms of headache facial pain nasal congestion and discharge sneezing  patients who are willing to participate in this study with knowledge of potential risk and who are willing to sign the informed consent form 
<b>Exclusion Criteria</b>	<b>Exclusion Criteria</b>	
	<b>Details</b>	Fractures and tumors of nose Tuberculosis Pregnancy women and lactating mothers Asthma
<b>Method of Generating Random Sequence</b>	Not Applicable	
<b>Method of Concealment</b>	Not Applicable	
<b>Blinding/Masking</b>	Open Label	
<b>Primary Outcome</b>	<b>Outcome</b>	<b>Timepoints</b>
	1 To evaluvate the clinical efficacy of yoga therapy on management of peenisam(sinusitis) 2 To analyse the therapeutic efficacy of Kandankathiri samoola chooranam towards the same	48 days
<b>Secondary Outcome</b>	<b>Outcome</b>	<b>Timepoints</b>
	1 To evalvaute the changes in the markers such as LIKERTS scoring method among the two study groups 2 To evaluate the overall efficacy of Siddhar Yoga and Kandankathiri Samoola Chooranam in the management of peenisam	48 days
<b>Target Sample Size</b>	Total Sample Size=40 Sample Size from India=40 Final Enrollment numbers achieved (Total)=40 Final Enrollment numbers achieved (India)=40	
<b>Phase of Trial</b>	Phase 2	
<b>Date of First Enrollment (India)</b>	09/06/2021	
<b>Date of First Enrollment (Global)</b>	No Date Specified	
<b>Estimated Duration of Trial</b>	Years=1 Months=0 Days=0	
<b>Recruitment Status of Trial (Global)</b>	Not Applicable	
<b>Recruitment Status of Trial (India)</b>	Completed	
<b>Publication Details</b>	NIL	
<b>Brief Summary</b>	The study isAN OPEN LABELED DOUBLE ARM NON RANDOMIZED PHASE II CLINICAL TRIAL, TO EVALUATE THE EFFICACY OF SIDDHAR YOGA MARUTHUVA MURAIGAL AND SIDDHA MEDICINE "KANDANKATHIRI SAMULAM[INTERNAL]" IN THE MANAGEMENT OF PEENISAM ". The trial drug will be administrated at the dose of 2-4 grams/ twice a day A/F 48 days along with	



lute warm water as adjuvent in 20 patients another 20 patients were subjected to Siddhar yogam therapy alone. The trial period of 12 months will be carrying out

in Government Siddha Medical College & Hospital, Palayamkottai, Tirunelveli, Tamil Nadu.

The Primary Outcome:

The study aims at bringing light on the Efficacy of the long standing traditional practice of Siddhar yogam therapy towards the management of Peenisam.

It is expected that Siddhar yogam therapy along with Kandankathiri will produce expected results in managing the problem of Sinusitis.

Secondary Outcome The positive impact of Yoga in the treatment aspect may be highlighted through this study . In case of any adverse event (AE) is noticed and it will be referred to

pharmacovigilance department of SCRI. Further management of patient will be given in OPD

facility.

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## 1. INTRODUCTION

Siddha system is one of the unique system of Indian medicine. Siddha system is differ from the other system of medicine by giving absolute physical, mental and social wellbeing of individual by its various tools like medicine, meditation, yogam, varmam, massage and its distinctive social and preventive medicine.

Siddhars are highly intellectual and spiritual faculties. They are the man of super natural powers. Siddha system of medicine is based on body and soul. It's says the body is made up of five elements.

1. Prithivi
2. Appu
3. Theyu
4. Vayu
5. Aagayam

These fundamental principles are not only for humans, but also for all creations of god. This can be stated in Sathaga nadi as,

The siddha medicine is based on Thiri dosha theory, the three important humours are vatham, pitham, kabam. They are also called uyir thathus or thiri thathus. Their ratio are 1:1/2:1/4 respectively.

Vatham is formed by Air and Space

Pitham is formed by Fire

Kabam is formed by Earth and Water

When the mutual harmony of these thrithathus is disturbed they are called thridoshas.

மிகினும் குறையினும் நோய் செய்யும் நூலோர்  
வளிமுதலா எண்ணியமூன்று

-திருவள்ளுவர்

In siddha system the disease is classified into vatha, pitha and kadha disease based on the thridoshic theory.

Saint Thirumoolar defines the ailment of the body and mind as disease siddha system paves way for attaining soul perfection along with physical perfection

உடம்பார் அழியில் உயிரார் அழிவர்  
திடம்பட மெய்ஞானம் சேரவும் மாட்டார்  
உடம்பை வளர்க்கும் உபாயம் அறிந்தே  
உடம்பை வளர்த்தேன் உயிர்வளர்த் தேனே

The treatment in siddha medicine is aimed at keeping the three humors in equilibrium and maintenance of seven elements so proper diet, medicine and a disciplined life are advised for a healthy living and to restore equilibrium of humors in diseased condition.

Yoga is widely considered as an “Immortal cultural outcome” of the Indus Saraswathi valley civilization dating back to 2700 BC and has proven itself to cater to both material and spiritual uplift of humanity.

Yogam works on the level of one’s body, mind, emotional and energy. This has given rise to four broad classification of yogam.

KARMA YOGAM – where we utilise the body

JNANA YOGAM – where we utilise the mind

BHAKTI YOGAM – where we utilise the emotion

KRIYA YOGAM – where we utilise the energy

Each system of yoga we practice fall within the gamut of one or more of these categories.

The widely practices yoga sadhanas are Yamam, Niyamam, Asanam, Pranayamam, Pirathiyakaram, Dharanai, Dhyanam, Samadhi. Among this asana has the capable of bringing about stability of body and mind.

Ancient siddha literatures numbered the diseases as 4448. Among them the disease pertaining to nasal region are 86, “Peenisam” is one of the 86 types of nasal diseases mentioned by Sage Nagamunivar. The term “Peenisam” means an increased flow of mucous from the nose, owing to the inflammation of the memberane or cold in the wind.

On the basis of our Siddha text “SINUSITIS” is inter correlated with “PEENISAM”

Sinusitis affects a tremendous proportion of the population, accounts for millions of visits to primary care physicians each year and in the fifth leading diagnosis for which antibiotics are prescribed accounting for 0.4% ambulatory diagnosis. According to the National Ambulatory Medical Care Survey [NAMCS] approximately 14% adults report having an episode of sinusitis each year.

The prevalence of sinusitis has soared in the last decade due to increased pollution, urban sprawl and increased resistance to antibiotics, since more than 120 million of Indian suffer from atleast one episode of sinusitis each other. Most of the symptoms of sinusitis head ache, facial pain, runny nose, and nasal congestion.

Respiratory infections are the first common infection that occurs all over the world. Sinusitis is the fifth most common diagnosis for an antibiotic prescription.

The author have selected SIDDHAR YOGAM THERAPY [EXTERNAL] and Siddha kalpa medicine KANDANKATHIRI SAMOOLAM [INTERNAL] for “PEENISAM” (SINUSITIS).

### **Internal Medicine**

KANDANKATHIRI SAMOOLAM – Murugesu Mudhaliar(1936), Gunapadam Pagam-1, Indian Medicine and Homeopathy( pg 214)

The dosage of the trail medicine is 2-4 gm (BD – with luke warm water) 48 days

### **External Therapy**

SIDDHAR YOGA THERAPY – Sirappu Maruthuvam (pg no:40 – 41)

Pranayamam [Naadi suthi] – 20 to 80 cycles

Bhujangasanam

Trikonasana

Savasanam

## **2. AIM AND OBJECTIVES**

To evaluate the clinical efficacy of Siddhar Yoga Maruthuva Muraigal and Siddha medicine “Kandankathiri samoolam[internal medicine] in the management of Peenisam.

### **OBJECTIVES:**

#### **Primary objective:**

To evaluate the clinical efficacy of yoga therapy on management of Peenisam (Sinusitis)

To evaluate the therapeutic efficacy of Kandankathiri samoolam on the management of Peenisam (Sinusitis)

#### **Secondary objective:**

To evaluate the overall efficacy of Siddhar yoga and Kandankathiri samoolam in the management of Peenisam

To evaluate the bio-chemical parameters of trail drug

To collect various literatures and modern textbooks as literal evidences regarding the disease Peenisam (Sinusitis)

To highlight the factors like diet, land, climatic condition and person hygiene in the incidence of Peenisam (Sinusitis)



## **ABSTRACT**

The most common disease is peenisam the number of sufferers are increasing day by day. Its increased incidence in recent times is due to secondary life styles, abnormal food habits and pollution.

40 patients of both sexes as inpatients and as outpatients were selected for clinical studies. 20 patients were administered with the trail medicine, Kandankathiri samoola chooranam – 2 - 4 gm twice a day with luke warm water during the whole period and Siddhar yoga therapy was given as external therapy for another 20 patients.

The trail medicine was subjected to biochemical analysis. At the end of the trail study the majority of the cases showed good results.

### 3. REVIEW OF LITERATURE

#### 3.1 SIDDHA ASPECT

##### மூக்கு நோய் வகைப்பாடு

நூல்	வகைப்பாடு
அகத்தியர் 2000	27
அகத்தியர் இரத்தின சுருக்கம்	10
பரராச சேகரம் சிரோரோக நிதானம்	86
சித்தர் அறுவை மருத்துவம்	86
4448 வியாதிகள்	86
அவைகளில் தெரிய வருவன (வழக்கில்)	
நீர்ப்பாய்ச்சல்	
பீனிசம்	
நாசிகாபீடம்	
கரப்பான்	
கழலை	
பரு	
பிளவை என்பன	

- சித்தர் அறுவை மருத்துவம்

#### PEENISAM

##### DEFINITION:

Peenisam is characterised by redness of the eye with lacrimation, frequent discharge of mucous, pus and blood, watery nasal discharge, redness of the nasal mucous membrane.

##### SYNONYMS:

Neerkovai

Mookkuneer paichal

Mokkadaippu

-Siddha maruthuvam, Noi nadal noi muthal nadal (part- II)

மூக்கின் துளைக்குள் சிவந்து காணல், தும்மல், கண்சிவந்து நீர்வடிதல், மூக்கில் நீர் பாய்தல், தலைநோதல், அடிக்கடி மூக்கைச் சிந்தி சளி, சீழ் குருதி வெளியாதல் ஆகிய இயல்புடைய நோயாகும்.

- நோய்நாடல் நோய்முதல் நாடல்திரட்டு-2

சிரசில் கனலெழுந்து சூலையால் ரோகம் அதிகரித்து சீல் போலும் சிராய்போலும் காணப்படும் ஒருவித மூக்கு வியாதி.

T.V சாம்பசிவம் பிள்ளை அகராதி

### பொதுகுணம்

பார்ப்பா மூலத்தில் கனலே மிஞ்சி  
பக்குவமாயி கபாலதத்தில் நீரைக் கோர்த்து  
நீர்ப்பா நாசி வழியோடும் தும்மும்  
நின்றடைக்கும் தலைகனக்கும் பிடரி நோவாம்  
சேர்ப்பா திரண்டுவிழும் நாளும் நாவில்  
ருசியற்று நாசியினில் மணமு மற்று  
வீர்ப்பா வெதுப்புண்டாயி சிர நீர் கீழே  
வீற்றிறங்கி கபம் கெட்டும் நெஞ்சில் தானே

பித்த பீனிச தொகுதி – A.T.S.V.S முஞ்சிறை

### மூக்கு நீர்ப்பாய்ச்சலின் குணம்

”கண்டமென் முகங்கண் காது கரகரத்தார்வ தேபோல்  
துண்டமேற் றினவு பற்றிச் சொறிந்துதான் சலமும் வீழ்ந்து  
மண்டையுங் கனத்து நொந்து வலிடரிக வுளதே யாகில்  
பண்டுசேத் மூக்கினீர்ப் பாய்ச்சலென் நுரைக்க லாமே”

மூக்கில் வெளிப்புறத்தில் நீர் வடிந்துக் கொண்டிருப்பின் முன்னீர்ப்பாய்ச்சலெனவும் தொண்டையினுட் புறத்தே நீர் பெருகி வாயின் வழிவரின் பின்நீர்ப் பாய்ச்சலெனவும் கூறுவர்.

சித்தர் அறுவை மருத்துவம்

”தலையும் வலித்து ஊறும் நாசிச் சளியும் விழுந்து ஒடுபட்டு  
மலையு னாதலிச் சென்றால் வறண்டே யிறுக்கித் திரண்டு வீழும்  
உலையு மிகவும் நாற்றமா மூடே தண்ணீர் விழுந்திருக்கும்  
பலமுங் சென்று மூக்கடைக்கில் பீனிசமென்பார் பெரியோரே”

- அகத்தியர் குணவாகடம்

”கண்டமுகங் காதும் கரகரத்தார்வது போலத்  
துண்டமுந் தினவும் பத்திதும்மியே தண்ணீர் வீழ்ந்து  
மண்டையுங் கனத்து நொந்து வாதமும் பகைக்கு மாகில்  
முண்டக மதிக்கு பாதே! மூக்கில் நீர்ப்பாய்ச்சல் போம்”

- அகத்தியர்-2000



”ஒடுக்கமா மையநாபி யொருங்குடன் பக்க நின்றால்  
நடுக்கமாம் பீனிசங்க ணாசிநீர்ப் பாய்ச்சலுண்டாம்  
பிடித்திரு மண்டைச் சூலை பெருகிடுந் தலைக்கனப்புத்  
தடுத்திரு நன்றா நெய்யைத் தலையிலே தப்பத் தீரும்”

-நாகமுனிவர் தலைநோய் மருத்துவம்-சிரரோக விதி

## **AETIOLOGY:**

### **I. T.V. SAMBASIVAM PILLAI MARUTHUVA AGARATHI:**

According to T.V. Sambasivam Pillai Maruthuvam Agarathi, the aetiology causes are as follows

When body heat transmitted to head in an ascending manner.

Voluntary retention of stools and urine.

Entry of minute dust particles or smoke, which irritate the nasal mucous membrane.

Excessive application of heat or cold.

Excessive sexual indulgence.

### **II. SIDDHA MARUTHUVAM, NOINADAL NOI MUTHAL NADAL PART-II AND ARUVAI MARUTHUVAM:**

1. மிக குளிர்ந்த நீரைப் பருகதல்.
2. பனி அல்லது குளிர்ந்த காற்றிலீடுபடல்.
3. புகை அல்லது படிந்துள்ள காற்றைச் சுவாசித்தல், எதிர் காற்றில் செல்லல்.
4. தும்மலையுண்டு பண்ணும் பொருள்களை முகர்தல்.
5. உடல் வெப்பமடைந்திருக்கும்போது ஐயத்தைப் பெருக்கக் கூடிய குளிர்ந்த நீரில் தலை முழுகல்.
6. குளிர்ச்சியான பொருட்களை உட்கொள்ளல்.
7. தன் தேசமல்லாது வேறு நாடுகளுக்குச் சென்று அங்கு சிலசமயம் அசுத்தமான நீரை உபயோகிப்பதாலும்.
8. கண்ணீர் வடிதல், வாந்தி ஆகியவற்றைத் தடுப்பத்தினாலும்.
9. அதிகம் உரத்துப் பேசுவதாலும்.
10. அளவுக்கு மிகுந்தவாது குறைத்தாவது நித்திரை கொள்ளலாலும்.
11. அன்றியும் நோய்களுக்கு துணையாய் இந்நோய் உண்டாகும்.
12. யோக நிலையிலுள்ள போது கீழ்வாய்க்கனல் மிகுதியாகி தலை மூளை வரையிற்சென்று அங்கு வெப்பத்தையுண்டாக்கி மூக்கடைப்பு நோயை உண்டாக்கும்.

#### IV. AGASTHIYAR GUNAVAGADAM:

”எல்லையுள்ள பீனிசத்தின் நோயைக் கேளாய்  
எப்போதும் சலதோடம் வருவ தாலும்  
தொல்லை செய்யும்மேக ரோகத்தி னாலும்  
தோன்றினதோர் திரேகத்தின் தன்மை யாலும்  
அல்லல் செய்ய இந்த நோய் பிறக்குதய்யா”

- அகஸ்தியர் குணவாகடம்

In this stanza, recurrent cold attacks, venereal diseases and according to the nature of the body are said to be the reasons for the occurrence of peenisam.

#### CLINICAL FEATURES

##### I. ACCORDING TO GUNAVAGADAM

“கண்டமேல் முழந்தாள் காது கரகரத் தூர்வ தேபோல்  
துண்டமே தும்ம லுண்டாய் சொரிந்துதான் சலமும் வீழ்ந்து  
மண்டையுங் கனத்து நொந்து வலியுமோ மிகவு மாகில்  
பண்டுசேர் மூக்கு நீரின் பாய்ச்சலா மெனனலாமே”

-குணவாகடம்

1. Itching above the neck region and ears
2. Sneezing
3. Profuse watery nasal discharge.
4. Heaviness of the head
5. Headache

##### II. NEER PAICHAL ROGA NITHANAM

”நாற்றமும் வலியும் தும்மல் நாசியுள்ளரிப்பும் காந்தல்  
மாற்றமாம் தினவுங் கொண்டு மண்டைவலியுடன் நீரும்பாயும்  
சீற்றமும் அடிக்கடிக்கு சில்லென அடைத்து காட்டும்  
பார்த்தறி மூக்கில் நீரின் பாய்ச்சலு மிதுதானென்றே”

- நீர்பாய்ச்சல் ரோக நிதானம்

1. Nasal itching and burning sensation of the nose
2. Watery nasal discharge
3. Bad odour in the nose
4. Headache
5. Nasal blockage

”நாசியில் மாறிமாறி நன்றதாய் அடைத்து நீரும்  
கூசிடும் முத்துப்போலே குமறியே வடிந்து நாறும்  
ஊசி போலகுத்தும் கண்ணுள் உடன்பீளை மிகவேசாடும்  
காசினி மீதில் தும்மல் சளிவிழும் முக்கில் நீரே”

-நீர்பாய்ச்சல் ரோக நிதானம்

1. Nasal blockage
2. Pricking sensation in the eyes
3. Recurrent watery nasal discharge
4. Sneezing leads to nasal discharge

### III.ACCORDING TO AGASTHIYAR – 2000

”கண்ட மேல் முகங்கண் காது கரகரத் தூர்வ தேபோல்  
துண்டமேற் தினவு பற்றிச் சொறிந்துதான் சலமும் வீழ்ந்து  
மண்டையுங் கனத்து நொந்து வலிமிக வுளதே யாகில்  
பண்டுசேர் முக்கினீரின் பாய்ச்சலென் றுரைக்கலாமே”

- அகஸ்தியர் - 2000

1. Irritation of the throat, face and ears
2. Headache
3. Heaviness of the headache
4. Nasal itching with watery nasal discharge

### IV.ACCORDING TO ATHMA RATCHAMIRTHAM

1. Recurrent sneezing
2. Fever
3. Loss of smell
4. Nasal blockage and nasal discharge
5. Heaviness of the head
6. Headache
7. Tastelessness

### V. NAGA MUNIVAR THALAI NOI MARUTHUVAM:

”தலைமிக வலிக்கும் நாசி சளிவிழு மொருவுண்டாகும்  
நலிவுறு தும்மலுண்டாம் நாட்செலில் வரளு நாசி  
மலைவுறத் திரண்டு வீழும் வாயுமே நாற்றமுண்டாம்  
பெலமுற முக்கடைக்கும் பீனிசமென்று தேரே”

-நாகமுனிவர் தலைநோய் மருத்துவம்



1. Mucous discharge
2. Severe headache
3. Sneezing
4. Offensive odour of the mouth
5. Dryness of nostrils
6. Nasal blockage

## **CLASSIFICATION OF PEENISAM**

### **I. ACCORDING TO ATHMARATCHAMIRTHA VIDHYA SARA SANGIRAGAM**

Peenisam has been classified into 9 types. The classifications are,

1. Vatha peenisam
2. Pitha peenisam
3. Silethuma peenisam
4. Neer peenisam
5. Seezh peenisam
6. Uthira peenisam
7. Moola peenisam
8. Kanda peenisam
9. Siraai peenisam

### **II. ACCORDING TO SIDDHA MARUTHUVAM AND NOI NADAL NOI MUTHAL NADAL:**

Peenisam has been classified into 9 types. They are

1. Vali peenisam
2. Azhal peenisam
3. Iya peenisam
4. Neer peenisam
5. Kuruthi peenisam
6. Seezh peenisam
7. Mulai peenisam
8. Kazhuthu peenisam

**III.ACCORDING TO T.V.SAMBASIVAM PILLAI MARUTHUVA  
AGARATHI:**

Peenisam has been classified into 7 types. The classifications are,

1. Vatha peenisam
2. Pitha peenisam
3. Silethuma peenisam
4. Neer peenisam
5. Seezh peenisam
6. Ratha peenisam
7. Siraai peenisam

**IV.ACCORDIND TO SIDDHAR ARUVAI MARUTHUVAM**

Peenisam has been classified into 4 types only. The classifications are,

1. Neer peenisam
2. Kuruthi peenisam
3. Seezh peenisam
4. Siraai peenisam

**V. ACCORDING TO THANVANTHIRI VAITHIYAM:**

Peenisam has been classified into 10 types. The classifications are,

1. Vatha peenisam
2. Pitha peenisam
3. Kaba peenisam
4. Vatha pitha peenisam
5. Vatha kaba peenisam
6. Pitha kaba peenisam
7. Mukkutra peenisam
8. Sala peenisam
9. Ratha peenisam
10. Varatchi peenisam

## **MUKKUTRA VERUPADUKAL (PATHOLOGY OF PEENISAM)**

When the body heat raises due to dietary, habits ect., Pitham is vitiated and the level of kabam is also increased by the activities and these two interact with each other and then produce peenisam. According to some Siddha texts during the process of yoga, the vitiated body heat along with Udhana vayu reaches the head where it combines with Kaba and then forms peenisam.

## **PINIYARI MURAIMAI(DIAGNOSIS)**

Piniyari muraimai is the methodology of diagnosing the disease in siddha science. Which are based on three principles.

1. Poriyal arithal (Inspection)
2. Pulanal arithal (Palpation)
3. Vinathal (Interrogation)

## **PORIYAL ARIDHAL (GNANTHIRIYANGAL)**

Examination of patient five organs of perception by physician's sensory organs. They are Mei, Vai, Kan, Mooku, Sevi

Here Kan is affected. Redness and pain in the eye. Mooku is affected. Nasal congestion.

## **PULANAL ARIDHAL:**

Examination of a patient's five sensations by a physician. They are Ooru, Osai, Suvai, Oli, Natram.

Here loss of smell may or may not be present.

## **VINADHAL:**

The physician interrogates patient's name, age, occupational history, residence, nativity, family history, socio economic status, dietary habits, allergic factors, complaints of the illness, past history of illness, treatment history, previous episodes, frequency of attacks by the change of season etc., from the patient or from his immediate relatives.

The above principles correspond to the methodology of inspection, palpation and interrogation of modern medicine in arriving at a clinical diagnosis of the disease

Siddhars have developed a unique method of diagnosing the disease by "ENVAGI THERVUGAL"

”நாடி ஸ்பரிசம் நாநிறம் மொழிவிழி  
மலம் மூத்திரமிவை மருத்துவராயுதம்”

- தேரையர்

Here the diagnosis is made by the following,

1. Naadi
2. Sparisam
3. Naa
4. Niram
5. Mozhi
6. Vizhi
7. Malam
8. Moothiram

### 1.NAADI:

Naadi is the uyirthatu which helps to measure the changes in the body it indicates the disease.

It is also the breathing throbbing or rhythmical dilatation of the arteries, during flow of the blood.

It represents the contraction of the heart in living body.

”கரிமுகனடியை வாழ்த்திக்  
கைதனில் நாடிப்பார்க்கில்  
பெருவிரலங்குலத்தில்  
பிடித்தடி நடுவே தொட்டால்  
ஒரு விரல் ஓடி வாதம்  
உயர் நடுவிரல் பித்தம்  
திருவிரல் மூன்றிலோடில்  
சிலேத்தம நாடிதானே”

-அகத்தியர்நாடி

Agasthiyar Naadi Nool says, that Naadi is best felt in the hand.

Vatha naadi felt in the index finger, Pithanaadi felt in the middle finger, kaba naadi felt in the ring finger.

”மெய்யளவு வாதமொன்று  
மேல்பித்தமோரையாம்  
ஐயங்காலென்ற அறி”

-கண்ணுசாமியம்

In penisam, the following types of Naadi are seen commonly.



1. "பண்பான பித்தத்தில் சேத்துமநாடிப்  
பரிசித்தாலத்தி சுரமிளைப்பு ஈளை  
கண்காது நயன மலம் நீரு மஞ்சள்  
கணவயிறு பொருமல் மஞ்சள் நோய் கண்ணோவு  
உண்போது மறுத்தல் ரத்தவிப்புருதி தானும்  
உளைமாந்தை பீனிசமும் ரத்த வீக்கம்  
நண்பான காமாலை சோகை வெப்பு  
நணுகிவந்த பலபிணியும் நண்ணுந்தானே"

-சதகநாடி

When the normal pattern of pitha sethuma naadi varies, it causes peenisam.

2. "கண்டாயோ சிலேற்பனத்தில் வாத நாடி  
கலந்திடுகில் வயிறு பொருமல் கனத்தவீக்கம்  
உண்டாலோ ஓங்காரஞ் சத்தி விக்கல்  
உறுதிரட்சை வாய்வுவலி சன்னிதோடம்  
விண்டாலே இளைப்பிருமல் சோகை பாண்டு  
விடபாகம் விடசூலை பக்கவாதம்  
திண்டாடு நாசிகா பீடங்கல்  
சிரநோய்கள் பலவும் வந்து சிக்குந்தானே"

-சதகநாடி

When the normal pattern of the silethuma Vatha Naadi varies, it causes peenisam.

3. "சிறப்பான பித்தத்தில் வாதநாடி  
சேரிலுறு தாதுநட்டமுதர பீடை  
உறைப்பாக செரியாமைக்குன்மஞ்சூலை  
யுற்றசுரங்கிராணி வயிற்றிரைச்சல் மந்தம்  
அறைப்பான ஓங்கார புறநீர்க்கோவை  
ஆயாச மிரக்கமொடு மயக்க மூர்ச்சை  
முறைக்காய்வு விவீக்கம் மூலவாய்வு  
முரடான நோய் பலவு முடுகும் பண்பே"

-சதகநாடி

When the normal pattern of the pitha vatha naadi varies, it causes peenisam

4. "ஒடுக்கமாஞ் சிலேற்பன நாடி  
யொழுங்கொடு பதறி நின்றால்  
நடுக்கமாய்ப் பீனிசங்கள்  
நாசி நீர்ப்பாய்ச்சலாகும்"

-குணவாகடம்

When the normal pattern of the kaba naadi varies, it causes peenisam.

5. "விரணமுடன் புண்புரைக்கு வாதபித்தம்  
விதியறியாப் பீனிசந்தான் பித்த சேத்துமம்"  
-பரிபூரணநாடி.

## **2. SPARISAM (SKIN)**

The examination of skin by the feeling of touch, reveals, about warmthness high temperature chillness, sweating, skin fissure, falling of hairs, dryness, thickness, erosions, scales, tumours, oedema, swelling.

In peenisam, swelling can be noticed at affected sinus areas. Tenderness may be present in some cases.

## **3.NAA (TONGUE)**

Examination of the tongue for its colour, coating dryness, deviation, sensory changes, ulcer, conditions of the tooth and gums are noted.

In Peenisam, sometimes tasteless may be present.

## **4.NIRAM (COLOUR OF SKIN)**

Colour indicating Vatha, Pitha, Kabha and three dhasas. Yellow or pallor or redness of the skin, bluish discolouration of the face, conjunctive can be noted. In peenisam, there was no specific abnormality.

## **5.MOZHI (SPEECH)**

Clarity of speech or any disturbance, loud voice, slurring, crying, talks induced by hallucination.

In peenisam, disturbances in speech due to nasal congestion can be noticed.

## **6.VIZHI (EYE)**

An abnormal colour changes indicating three dosha derangements, pallor, excessive lacrimation and accumulation of secretion at the angles of the eyes. Sub conjunctival bleeding, closure of the eyelids, visual disturbance any specific disease of the eye can be noted.

In Peenisam, irritation burning sensation and lacrimation of eyes can be noted.

## **7.MALAM (MOTION)**

Nature, colour, quantity, odour, froth and abnormal consistency are noted

In peenisam, no abnormality is seen in the defecation.

## **8.MOOTHIRAM (URINE)**

The examination of urine is classified into two types. They are Neerkuri and Neikuri.

In this santza, prior to the day of urine examination for neikuri, the patient is adviced to take a balance diet and the quantity of food must be proportionate to his apprtite the patient should have a good sleep.

The first voided urine is collected in a glass container and is subjected to analysis of Neerkuri and Neikuri

### **NEERKURI**

In Neerkuri the Niram(colour), Nurai (froth), Edai (Specific gravity), Enjal (quantity) and Manam (Odour) is noted. Apart from these the frequency of urination, abnormal constituents such as sugar, protein etc.,

- Niram - Indicate the colour of urine
- Manam - Indicate the smell of urine
- Edai - Indicate specific gravity of urine
- Enjal - Indicate the deposits of urine
- Nurai - Indicates the forthy nature of urine

A drop of gingelly oil is dropped into a wide vessel containing the urine to be tested and kept in sunlight in clam place. The variations of three thathus in diseases can be diagnosed by the behaviours of gingelly oil on the surface of urine.

The spreading pattern of oil drop is the indicative of Vali, Azhal and Iyyam diseases e.g

1. Aravu (Snake Pattern of spread) indicates Vali disease
2. Mothiram (Ring Pattern of spread) indicates Azhal disease
3. Muthu (Pearl Pattern of spread) indicates Iyya disease

When the drop of oil shows two shapes enclosed within one another it indicate thondha neer.

### **MUKKUTRA NEER:**

When the drop of oil is drumbled into the urine. It's is called mukkutra neer.

In peenisam, the neikuri shows like a pearl. The facts regarding Envagai thervugal suggest that they are the mostly used diagnostic implements in siddha system of medicine.

## **UDAL VANMAI: (BODY IMMUNITY)**

The strength, stamina, vitality of the body is classified into three types.

1. Eyarkai Vanmai
2. Seyarkai Vanmai
3. Kaala Vanmai

In diseased condition, the natural body strength gets affected, there by Seyarkai Vanmai is induced by diet, medicines and yoga practice.

## **REGIONAL CHANGES OF HUMOURS:**

### **THINAI (LAND AND PLACE)**

It is classified into 5 types. They are Kurunji, Marutham, Mullai, Neithal, Palai. In all the five types of lands, Peenisam is probable of occurrence.

### **PARUVAKAALAM:**

Siddhars have classified a year into six seasons. Each constituting two months.

They are,

1. Kaar kalam - Avani and Puratasi
2. Koorthir kalam - Iyppasi and Karthigai
3. Munpani kalam - Margazhi and Thai
4. Pinpani kalam - Maasi and Panguni
5. Elavenir kalam - Chithirai and Vaikasi
6. Muthuvenir kalam - Aani and Aadi

In peenisam, the prevalence of the disease is in Pinpani kalam and Elavenir kalam due to the vitiation of kaba.

During Karkalam and Koorthir kalam also the disease prevails due to vitiation of pitha.

### **EZHU UDARKATTUKAL:**

The seven thatus are responsible for the entire structure of the body. There Saaram, Senneer, Oon, Kozhuppu, Enbu, Moolai and Sukkilam / Suronitham.

**Saaram** It is the energy part of end product of digestion. It strengthens the body and mind. It is deranged in peenisam due to loss of appetite causing tiredness in the body and mind causes emaciation



**Senneer** It is responsible for Knowledge strength, boldness and healthy complexion. It is deranged in some patients with anaemia.

**Oon** It gives the structure to the body and is responsible for the movement of the body and is not affected in peenisam.

**Kozhuppu** When the organs are doing their work this gives lubrication and facilitates their work, is not affected in peenisam.

**Moolai** It is present in the core of the bone which strengthens and maintains the normal condition of the bone, it's not affected in peenisam.

**Sukkilam/ Suronitham** It is responsible for reproduction

When the seven udal katukal increase or decrease from the normal level, the normal functioning of the body is affected.

### **MUKKUTRANGAL:**

Vatha, pitha, kaba are the three life principles. They have multiple significance in a body.

### **VATHAM:**

**In peenisam, following vatham types are affected.**

1. Piranan - Difficulty in breathing.
2. Viyanan - Headache, heaviness of the head, pain and tenderness over the affected sinus areas.
3. Udhanan - Cough with expectoration.
4. Samanan - Due to other vayus are affected.
5. Kirukaran - Profuse watery nasal discharge sneezing.
6. Koorman - Itching, lacrimation of the eyes.
7. Devathathan - Sleep disturbances.

### **PITHAM:**

**In peenisa, following pitham types is affected.**

Here Sathaga pitham may be affected in some cases.

Sathaga pitham - Difficulty in performing usual works

## **KABAM:**

**In peenisam, following kabam types are affected.**

1. Avalambagam - Cough with expectoration
2. Tharpagam - Itching and watering of the eyes are mainly affected.

## **LINE OF TREATMENT: (NOINEEKAM – PARIKARAM)**

In Siddha system of medicine, the main aim of the treatment is removal of udal pinigal (due to alternation of uyir thathukkal and udal thathukkal) and udalpinigal (due to alternation of mind). Treatment is not only removal of disease, but also for the prevention and improving the body condition also, this is said to as follow

Kappu (prevention)

Nee kam (treatment)

Nirai vu (restoration)

The line of treatment of Peenisam consists of the following.

1. Internal Medicine – Expectorant, to relieve the spasms and to expel the sputum.
2. Diet – to maintain tridhoshas and energy
3. Prevention methods – to strength the muscles of respiration (Pranayamam)
4. Yoga therapy – to maintain dhasa vayukkal and to improve mental and physical health.

### **Administration of internal medicine**

For the treatment of the disease Peenisam, Kandankathiri samoola chooranam 2 - 4gm bd with lukewarm water.

In peenisam the medicines should be given to normalise the vitiated Pitham and Kabam. The internal medicines and yoga therapy which reduces the vitiated pitham and kabam.

On this basis Kandankathiri samoola chooranam was internal medicine and yoga therapy was the external medicine which were taken as the trial drug.

## **DIET AND RESTRICTION**

1. Avoid chill and cold weather.
2. Avoid working in dust, cement, cotton mills and in husks.
3. Avoid smoking
4. To sleep in phoenix mat to prevent kaba diseases.
5. Advice to practice of Pranayamam
6. Vegetables like pudal, peerku, poosani, surai, vellari and other vitiating food materials should be avoided
7. Meat, gingelly oil, sour, and bitter food stuffs should be avoided.

## **MEDICAL ADVICE:**

1. The hair should be dried well after taking oil bath in the morning.
2. If steam inhalation with turmeric powder and leaves of notchi is also beneficial.
3. Advised to drink and bath in warm water.
4. Advised to take head bath using medicated oil weekly twice
5. Advised not to be in polluted place and exposure to cold atmospheric conditions.
6. Advised to avoid inhalation of dust, fumes and aromatic substances, which induce sneezing.

### 3.2 SIDDHAR YOGA ASPECT

#### SIDDHAR YOGA THERAPY PROTOCOL FOR PEENISAM:

1. Pranayamam [ Naadi Suththi] 20 – 80 cycles
2. Trikonasana
3. Bhujangasana
4. Savasana

#### YOGA THERORY

The word '**Yoga**' is derived from Sanskrit root yuj which means 'join' or 'unite'. This may be taken as the union of body, mind and soul, and is used in the literature both as an end as well as means. As an end, yoga signifies 'integration of personality' at the highest level. As means, yoga includes various practices and techniques which are employed to achieve the development of such integration. These practices and techniques are means in the yogic literature and are also referred collectively as 'Yoga'

Yoga for a common person contains the practices of yama, niyama, asana, pranayama, pratyahara, kriya, mudra, bandha and meditation which are helpful to keep one physically fit, mentally alert and emotionally balanced. This ultimately prepares ground for the spiritual development of an individual. Postures or asanas form an important basis of this curriculum. These have, therefore, been given more weight age. Though, other yogic activities have also been included in the curriculum.

The major schools of yoga are Jnana yoga, Bhakti yoga, Karma yoga and Raja yoga. These schools of yoga advocate particular type of methodology which includes a variety of systematized practices of yoga depending on their particular approach. However, all these are leading to the common goal of self realization and integration of body and mind.

Importance of Yoga Good Health is the right of every human being. But this right depends on individual, social and environmental factors. Along with social or environmental factors to a large extent, we can develop a better immune system and a better perception of oneself so that other conditions do not affect us adversely and we can achieve good health.



## **HISTORY OF YOGA:**

Several Thousand years ago, on the banks of the lake Kantisarovar in the Himalayas, Adiyogi poured his profound knowledge into the legendary Saptarishis or "seven sages". The sages carried this powerful yogic science to different parts of the world, including Asia, the Middle East, Northern Africa and South America. Interestingly, modern scholars have noted and marveled at the close parallels found between ancient cultures across the globe. However, it was in India that the yogic system found its fullest expression. Agastya, the Saptarishi who travelled across the Indian subcontinent, crafted this culture around a core yogic way of life.

The Number of seals and fossil remains of Indus Saraswati valley civilization with Yogic motives and figures performing Yoga Sadhana suggest the presence of Yoga in ancient India. The phallic symbols, seals of idols of mother Goddess are suggestive of Tantra Yoga. Presence of Yoga is available in folk traditions, Indus valley civilization, Vedic and Upanishadic heritage, Buddhist and Jain traditions, Darshanas, epics of Mahabharata and Ramayana, theistic traditions of Shaivas, Vaishnavas, and Tantric traditions. In addition, there was a primordial or pure Yoga which has been manifested in mystical traditions of South Asia. This was the time when Yoga was being practiced under the direct guidance of Guru and its spiritual value was given special importance. It was a part of Upasana and yoga sadhana was inbuilt in their rituals. Sun was given highest importance during the Vedic period. The practice of 'Surya namaskara' may have been invented later due to this influence. Pranayama was a part of daily ritual and to offer the oblation.

Though Yoga was being practiced in the pre-Vedic period, the great Sage Maharishi Patanjali systematized and codified the then existing practices of Yoga, its meaning and its related knowledge through his Yoga Sutras. After Patanjali, many Sages and Yoga Masters contributed greatly for the preservation and development of the field through their well documented practices and literature.

The period between 1700 - 1900 A.D. is considered as Modern period in which the great Yogacharyas- Ramana Maharshi, Ramakrishna Paramhansa, Paramhansa Yogananda, Vivekananda etc. have contributed for the development of Raja Yoga. This was the period when Vedanta, Bhakti yoga, Nathayoga or Hatha-yoga flourished. The

Shadanga-yoga of Gorakshashatakam, Chaturanga-yoga of Hathayogapradipika, Saptanga-yoga of Gheranda Samhita, were the main tenets of Hatha-yoga.

Now in the contemporary times, everybody has conviction about yoga practices towards the preservation, maintenance and promotion of health. Yoga has spread all over the world by the teachings of great personalities like Swami Shivananda, Shri T. Krishnamacharya, Swami Kuvalayananda, Shri Yogendara, Swami Rama, Sri Aurobindo, Maharshi Mahesh Yogi, Acharya Rajanish, Patabhijois, BKS. Iyengar, Swami Satyananda Sarasvati and the like. For many, the practice of yoga is restricted to Hatha Yoga and Asanas (postures).

Historical evidences of the existence of Yoga were seen in the pre-Vedic period (2700 B.C.), and thereafter till Patanjali's period. The main sources, from which we get the information about Yoga practices and the related literature during this period, are available in Vedas (4), Upanishads (108), Smritis, teachings of Buddhism, Jainism, Panini, Epics (2), Puranas (18) etc.

Tentatively, the period between 500 BC - 800 A.D. is considered as the Classical period which is also considered as the most fertile and prominent period in the history and development of Yoga. During this period, commentaries of Vyasa on Yoga Sutras and Bhagawadgita etc. came into existence. This period can be mainly dedicated to two great religious teachers of India –Mahavir and Buddha.

The concept of five great vows – Pancha mahavrata by Mahavir and Ashta Magga or eightfold path by Buddha can be well considered as early nature of Yoga sadhana. We find its more explicit explanation in Bhagawadgita which has elaborately presented the concept of Gyan yoga, Bhakti yoga and Karma Yoga. These three types of yoga are still the highest example of human wisdom and and even today people find peace by following the methods as shown in Gita. Patanjali's yoga sutra besides containing various aspects of yoga is mainly identified with eight-fold path of Yoga.

The very important commentary on Yoga sutra by Vyasa was also written. During this very period the aspect of mind was given importance and it was clearly brought out through Yoga sadhana, Mind and body both can be brought under control to experience

equanimity. The period between 800 A.D - 1700 A.D. has been recognized as the Post Classical period wherein the teachings of great Acharyatrayas-Adi Shankracharya, Ramanujacharya, Madhavacharya were prominent during this period.

The teachings of Suradasa, Tulasidasa, Purandardasa, Mirabai were the great contributors during this period. The Natha Yogis of Hathayoga Tradition like Matsyendaranatha, Gorkshanatha, Cauranginatha, Swatmaram Suri, Gheranda, Shrinivasa Bhatt are some of the great personalities who popularized the Hatha Yoga practices during this period.

Common Yogic Practices Yogic texts propound several practices such as yama, niyama, asana, pranayama, pratyahara, shatkarma (cleansing practices), mudra, bandha, dharana, dhyana (meditation). Here, we will discuss those practices which are commonly used. Yama and Niyama these are initial sets of principles that are concerned with our conduct in personal and social life. These are related to ethics and values.

#### **ASHTANGA YOGAM:**

Ashtanga yoga is a system of yoga recorded by the sage Vamana Rishi in the Yoga Korunta, an ancient manuscript said to contain lists of many different groupings of asanas, as well as highly original teachings on vinyasa, drishti, bandhas, mudras, and philosophy. The text of the Yoga Korunta was imparted to Sri T. Krishna Acharya in the early 1900's by his Guru Rama Mohan Brahmachari, and was later passed down to Pattabhi Jois during the duration of his studies with Krishnamacharya, beginning in 1927. Since 1948, Pattabhi Jois has been teaching Ashtanga yoga from his yoga shala, the Ashtanga Yoga Research Institute, according to the sacred tradition of Guru Parampara.

Ashtanga yoga literally means eight-limbed yoga, as outlined by the sage Patanjali in the Yoga Sutras. According to Patanjali, the path of internal purification for revealing the Universal Self consists of the following eight spiritual practices:

- i. Yama [moral codes]
- ii. Niyama [self-purification and study]
- iii. Asana [posture]
- iv. Pranayama [breath control]
- v. Pratyahara [sense control]

- vi. Dharana [concentration]
- vii. Dhyana [meditation]
- viii. Samadhi [absorption into the Universal]

The first four limbs yama, niyama, asana, pranayama are considered external cleansing practices. According to Pattabhi Jois, defects in the external practices are correctable. However, defects in the internal cleansing practices pratyahara, dharana, dhyana are not correctable and can be dangerous to the mind unless the correct Ashtanga yoga method is followed. For this reason, Pattabhi Jois emphasizes that the Ashtanga Yoga method is Patanjali Yoga“.

The definition of yoga is the controlling of the mind [citta vrtti nirodhah]. The first two steps toward controlling the mind are the perfection of yama and niyama. However, it is not possible to practice the limbs and sub-limbs of yama and niyama when the body and sense organs are weak and haunted by obstacles. A person must first take up daily asana practice to make the body strong and healthy. With the body and sense organs thus stabilized, the mind can be steady and controlled. With mind control, one is able to pursue and grasp these first two limbs.

To perform asana correctly in Ashtanga yoga, one must incorporate the use of vinyasa and tristhana. “Vinyasa means breathing and movement system. For each movement, there is one breath. For example, in Surya Namaskar there are nine vinyasas. The first vinyasa is inhaling while raising your arms over your head, and putting your hands together; the second is exhaling while bending forward, placing your hands next to your feet, etc. In this way all asanas are assigned a certain number of vinyasas

The purpose of vinyasa is for internal cleansing. Synchronizing breathing and movement in the asanas heats the blood, cleaning and thinning it so that it may circulate more freely. Improved blood circulation relieves joint pain and removes toxins and disease from the internal organs. The sweat generated from the heat of vinyasa then carries the impurities out of the body. Through the use of vinyasa, the body becomes healthy, light and strong.



Tristhana refers to the union of three places of attention or action: posture, breathing system and looking place. These three are very important for yoga practice, and cover three levels of purification the body, nervous system and mind. They are always performed in conjunction with each other

Asana the term asana means sitting in a particular posture, which is comfortable and which could be maintained steadily for long time. Asana gives stability and comfort, both at physical and mental level. There may be variations in the techniques of some of the asanas depending upon the following yoga institutions.

Asana may broadly be classified into three categories:

- (a) Meditative asana
- (b) Cultural or Corrective asana
- (c) Relaxative asana

**Meditative asana** are those asanas which are aimed at quiet sitting and are used for higher practices in yoga. padmasana, swastikasana, sukhasana and siddhasana can be put in this category.

**Cultural asanas** can further be classified into two groups, depending on the effects produced:

- (i) Asana that work through and on the spine and visceral organs.
- (ii) Asanas that work through the skeletal muscles, ligaments and joints.

**Relaxative asanas** are those which remove tension and bring about physical as well as mental relaxation. The important asanas in this category are shavasana and makarasana.

### **BREATHING:**

The breathing technique performed with vinyasa is called ujjayi [victorious breath], which consists of puraka [inhalation] and rechaka [exhalation]. Both the inhale and exhale should be steady and even; the length of the inhale should be the same length as the exhale. Over time, the length and intensity of the inhalation and exhalation should increase, such that the increased stretching of the breath initiates the increased stretching of the body. Long, even breathing also increases the internal fire and strengthens and

purifies the nervous system. Bandhas are essential components of the ujjayi breathing technique.

Bandha means lock or seal. The purpose of bandha is to unlock pranic energy and direct it into the 72,000 nadi [energy channels] of the subtle body. Mula bandha is the anal lock, and uddiyana bandha is the lower abdominal lock. Both bandhas seal in energy, give lightness, strength and health to the body, and help to build a strong internal fire. Mula bandha operates at the root of the body to seal in prana internally for uddiyana bandha to direct the prana upwards through the nadis. Jalandhara bandha is the throat lock, which occurs spontaneously in a subtle form in many asanas due to the dristi (gaze point), or head position. This lock prevents pranic energy escaping and stops any build-up of pressure in the head when holding the breath. Without bandha control, breathing will not be correct, and the asanas will give no benefit.

### **LOOKING PLACE:**

Dristhi is the gazing point on which one focuses while performing the asana. There are nine dristhis: the nose, between the eyebrows, navel, thumb, hands, feet, up, right side and left side. Dristhi purifies and stabilizes the functioning of the mind. In the practice of asana, when the mind focuses purely on inhalation, exhalation, and the drishti, the resulting deep state of concentration paves the way for the practices of dharana and dhyana, the six and seventh limbs of Ashtanga yoga.

Instruction in pranayama can begin after one has learned the asanas well and can practice them with ease. Pranayama means taking in the subtle power of the vital wind through rechaka [exhalation], puraka [inhalation], and kumbhaka [breath retention]. Only these kriyas, practiced in conjunction with the three bandhas [muscle contractions, or locks] and in accordance with the rules, can be called pranayama. The three bandhas are mula bandha, uddiyana bandha, and jalandhara bandha, and they should be performed while practicing asana and the like. When mula bandha is perfect, mind control is automatic. In this way did Patanjali start Yoga. By using mulabandha and by controlling the mind, he gradually gained knowledge of Yoga.

Practicing asana for many years with correct vinyasa and tristhana gives the student the clarity of mind, steadiness of body, and purification of the nervous system to begin the prescribed pranayama practice. Through the practice of pranayama, the mind becomes arrested in a single direction and follows the movement of the breath. Pranayama forms the foundation for the internal cleansing practices of Ashtanga yoga.

The four internal cleansing practices pratyahara, dharana, dhyana, and samadhi bring the mind under control. When purification is complete and mind control occurs, the Six Poisons surrounding the spiritual heart [kama (desire), krodha (anger), moha (delusion), lobha (greed), matsarya (sloth), and mada (envy)] will, one by one, go completely, revealing the Universal Self. In this way, the correct, diligent practice of Ashtanga Yoga under the direction of a Guru with a subdued mind unshackled from the external and internal sense organs eventually leads one to the full realization of Patanjali's eight-limbed yoga.

#### **GUIDELINES FOR THE PRACTICE OF ASANAS:**

Generally, the asanas are practiced in the sequence of standing, sitting, prone lying and supine lying position. Though there is other version which follows different sequence. Asanas must not be practiced in haste or by applying any sort of undue force and under urgency. Jerks should be avoided. Asanas should be performed with body and breath awareness. There should be coordination between breath and movement of body parts. As a general rule, inhale while raising any part of the body and exhale when bending down. The practitioner has to follow instructions sincerely with optimal attention. Final position should be attained slowly step by step and should be maintained with closed eyes for developing an inward awareness within the body. Final position of asanas must be maintained for as long as one is comfortable. One should maintain the final posture according to one's own limitations and should not go beyond one's capacity.

During maintenance of final position of asana, there should ideally be no tremors or any type of discomfort. An utmost care must be taken in increasing the time for maintaining the asanas. Regular practice is essential. Body starts listening to your command only after a regular and diligent training for a sufficient period of time. If regularity is disturbed due to some reasons, then one should resume the practice within minimum time.

In the initial phase, asanas involve de-conditioning and reconditioning processes. Therefore, initially, one may feel little fatigued after the practice but after few days' practice, body and mind get adjusted and one starts experiencing a feeling of well-being and happiness again.

**Mechanism:**

All asanas require the spine to be kept erect and keep richer blood supply to the pelvis region. this stimulates kundalini, which controls mind and body.

In modern study, it seems to stimulation of psycho neuron hormonal axis which controls the over sympathetic activity, this in turn eliminates free radicals, catecholamine's and secrets endorphins and enkephalin which is a natural steroidal hormone which helps to maintain body and mind active and relieve the stress. Some asanas are advised in peenisam (sinusitis) they are

Pranayamam

Trikonasana

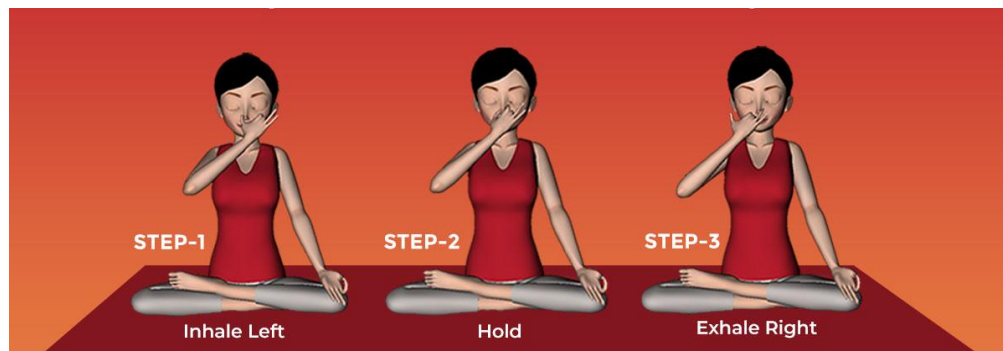
Bhujangasana

Savasana

**PRANAYAMAM (Breathing Exercise)**



Pranayamam or breathing exercise mainly consists of Pooragam (inhalation of air by deep inspiration), Kumbagam (holding the breath as far as possible) and Resagam (exhalation of air by expiration) By this exercise, the duraion of Kumbagam is increased. This results in proper gaseous exchange which provides incerased oxygen supply to the cells. By the regular practice of Pranayamam, one can get a feeling of reduced both mental and physical stress and enjoy pleasure. It provides good concertation and meditation. This practice also gives good appetite, strength, enthusiasm, rigor and vitality. During breathing exercise, the lungs fill with fresh air in its anatomical dead space also and expand well and get proper supply of oxygen by proper expansion of chest. So, Pranayamam practice is one of the preventions for peenisam.



## HOW TO DO DAILY PRANAYAMAM

1. Sit in a comfortable, cross-legged position
2. Place your left hand on your left knee
3. Exhale completely
4. Use your right hand to close your right nostril
5. Inhale deeply with the left
6. Close the left nostril with your spare fingers
7. Open the right nostril, exhale completely
8. Inhale through the right nostril, then close
9. Open the left, exhale completely
10. This is one cycle; repeat 10 times



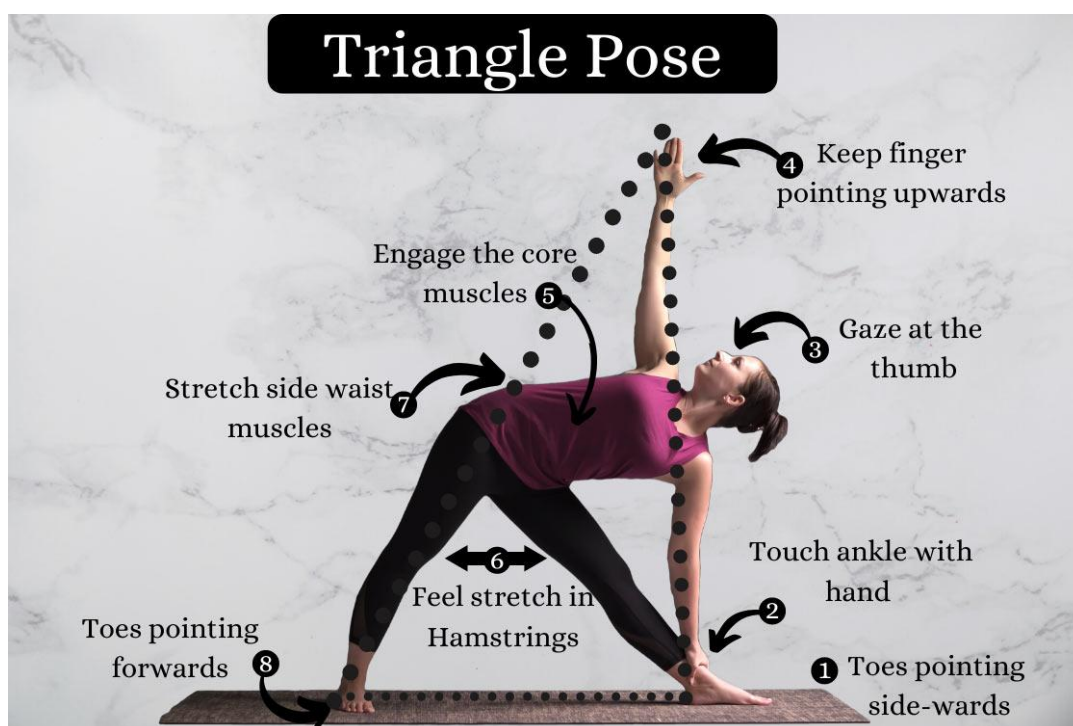
### Some valuable points to consider for your daily pranayamam practices

1. Place should be ventilated.
2. Morning and evening are an ideal time for the pranayamam practice.
3. Everyday about 15 minutes of pranayamam .
4. Make it a point to practice every day at same place and time.
5. Pranayamam practice should be done in empty stomach (at least 4 hours after any meals).

### BENEFITS OF PRANAYAMAM

1. Favourable pressure change in lung for better oxygenation.
2. Sedative effect on the nervous system.
3. Restore the elasticity of the lung
4. Beneficial in reliving hypertension and stress.
5. It help to reduce anger and frustration.
6. Improve breathing –vital capacity and tidal volume improved.

### TRIKONASANAM



## **Description**

Trikonasanam is performed in two parts, facing left, and facing right. The practitioner begins standing with the feet one leg-length apart, knees unbent, turns the right foot less than 45 degrees to the inside, keeping the heel in line sides parallel to the ground, palm facing down, the trunk is extended as far as is comfortable to the right, while the arms remain parallel to the right. Once the trunk is fully extended to the right, the right arm is dropped so that the right hand reaches the shin (or a block or on the floor) to the front (left side) of the floor, with the palm down is fixed. The left arm is extended vertically, and the spine and trunk are gently twisted counter clockwise (i.e., upward to the left, since they have roughly parallel to the floor), using the extended arms as level, while the spine remains parallel to the ground. The arms are stretched away from one another, and left thumb, slightly intensifying the spine twice. Returning to standing, the bend is then repeated to the left.

## **BENEFITS**

1. Triangle poses help to expand your chest and shoulders.
2. It strengthens the muscles of the chest and increase respiration.
3. Stimulate the organs like lung and abdomen organs.
4. Strengthens the core muscles.
5. Lengthens the back.

## **Contraindications:**

Trikonasana (Triangle Pose) is a lateral bending posture and with this come a few contraindications

1. **Injury:** Students with an injury of the back like; disc bulge should avoid the practice of Trikonasana (Triangle Pose). Those with issues related to the knee, hips, ankles, shoulders, neck, or the abdominal area should take proper guidance from a yoga teacher to avoid further complications.
2. **Women:** While women during their first trimester can practice this under the guidance of a yoga teacher, but during the second trimester and third trimester should use block for better support if very comfortable with breathing, and otherwise have no other health issues.

3. **Blood Pressure and Heart:** Breathing can get difficult while doing a lateral bend especially for those students suffering from blood pressure or having **heart related issues**. Hence best done in a modified way and then go slowly into the complete Triangle Pose. The option of this modification can be this at utthita trikonasana (Extended Triangle Pose Block), or (Triangle Pose Chair)

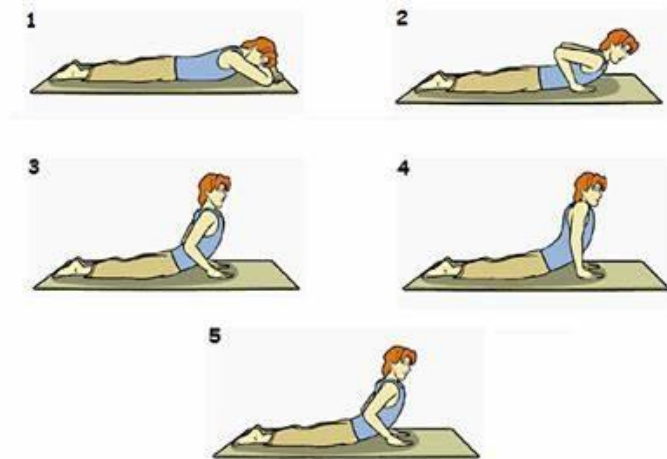
## BHUJANGASANA



Bhujangasana or Cobra Pose is a reclining back-bending asana in hatha yoga and modern yoga as exercise. It is commonly performed in a cycle of asanas in Surya Namaskar (Salute to the Sun) as an alternative to Urdhva Mukha Svanasana (Upwards Dog Pose)

### PROCEDURE:

Begin in a prone position on the stomach. Bring the legs together with the tops of the feet on the floor. Place the hands on opposite sides of the chest and press into the floor, lifting the chest up and forward coming into a backbend. Take the gaze upwards. In Bhujangasana, unlike Upward Facing Dog, the knees are kept in contact with the floor. Eventually, the hips should also connect with the floor, though this is an advanced refinement and may be inaccessible to beginners.



The arms can stay bent during the initial stages of Bhujangasana. Eventually, the arms can straighten as become more comfortable in the posture. For most people, straightening the arms and keeping the hips in contact with the floor will be quite intense. At first, we can experiment with doing one or the other.

Draw the shoulders back and down. The full expression of Bhujangasana is to bend the knees and reach the feet towards the back of the head. The knees will usually need to come apart to accommodate this. This makes the pose quite advanced and should only be attempted once a practitioner is quite comfortable with the preparatory versions.

### **MODIFICATIONS AND VARIATIONS OF BHUJANGASANA:**

One of the best variations for Bhujangasana is highly beneficial for all skill levels from beginner to advanced. Rather than pressing strongly into the floor with the palms of the hands, instead, place the fingertips on the floor and press gently into the floor to gain a bit of traction and then lift the chest off the floor with the power of the back muscles.

This is a great way to build core strength and to train the body to come into flexibility poses with active muscle engagement.

Another useful modification is what's known in Yin Yoga as Seal Pose. The only difference in this variation is that, walk their hands forward enough so that it is comfortable to keep the hips on the floor and the arms straight. This allows to settle into a passive version of the pose that, if held without pushing, is appropriate for long holds.

## **BENEFITS:**

To draw the body comfortably into a deep backbend with control, the support muscles of the spine need to be strongly and intelligently engaged. Developing these deep core support muscles can help to maintain the health of the spine.

The core muscles that are used to actively draw the body into cobra pose are the same muscles that are used to maintain an alert, upright posture while standing or sitting. Correcting postural imbalances is key to taking the pressure off of the joints, as well as maintaining balance and coordination as we age.

In Yoga, there are countless poses that help to strengthen the core muscles and organs of the abdomen. However, it is just as important to lengthen these muscles and break down fascial adhesions that restrict mobility and inhibit growth. Bhujangasana is one of the best poses for doing this.

One of the reasons why having an alert, upright posture is so important is that it promotes a positive mental attitude and automatically helps to raise our energy levels. Also, by stretching the front of the body, Bhujangasana helps to create blood flow throughout the chest and abdomen. This combined with the stimulation of the spine, can be quite exhilarating.

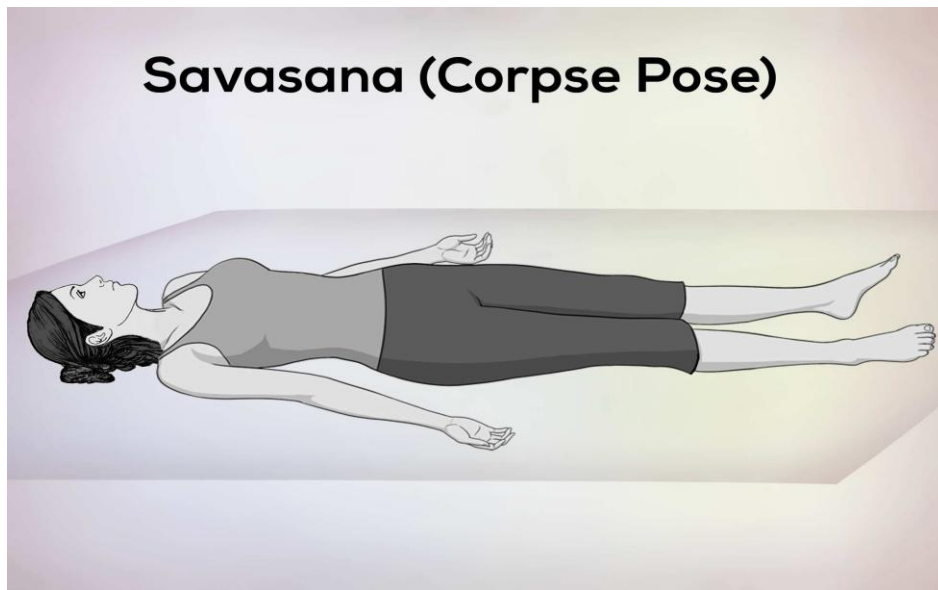
As one of the key heart-opening postures, Bhujangasana is felt to develop an attitude of emotional vulnerability where the body is given permission to feel deeply and connect with others.

## **CONTRAINDICATIONS:**

Women who are menstruating or pregnant should avoid this pose. If have any neck injury or pain, keep the head upright. If lower back hurts, tighten the buttocks or keep the legs hip-width distance or do Urdhva Mukha Svanasana instead.



## SAVASANA



Sava - Corpse; Asana – Pose.

This pose gets its name from the recumbent posture of a dead body. It is a position of rest and relaxation, and is usually practiced towards the end of a yoga session – a session that typically begins with activity and ends in rest a space or pause when deep healing can take place.

### **PROCEDURE:**

1. Lie flat on your back, preferably without any props or cushions. Use small pillow below your neck if absolutely required. Close your eyes.
2. Keep your legs comfortable apart and let your feet and knees relax completely, toes facing to the sides.
3. Place your arms alongside, yet a little spread apart from your body. Leave your palms open, facing upward.
4. Taking your attention to different body parts one by one, slowly relax your entire body.
5. Begin with bringing your awareness to the right foot, move on to the right knee (as you complete one leg, move your attention on to the other leg), and so on, and slowly move upwards to your head, relaxing each part of the body.
6. Keep breathing slowly, gently, and deeply and allow your breath to relax

you more and more. The incoming breath energizes the body while the outgoing breath brings relaxation. Drop all sense of hurry or urgency or any need to attend to anything else. Just be with the body and the breath. Surrender the whole body to the floor and let go. Make sure you don't fall asleep.

7. After some time, about 10-20 minutes when you feel fully relaxed, keeping your eyes closed; slowly roll onto your right side. Lie in that position for a minute or so. Then, taking the support of your right hand, gently sit up into a seated pose such as Sukhasana (Easy Pose).
8. Keep your eyes closed and take a few deep breaths in and out as you gradually become aware of your environment and the body. When you feel complete, slowly and gently open your eyes.



### **BENEFITS:**

1. This posture leaves you in a state of rejuvenation. It is the perfect way to end a yoga session, particularly if it has been a fast-paced one.
2. This posture brings a deep, meditative state of rest, which may help in the repair of tissues and cells, and in releasing stress. It also gives time for the yoga workout to sink in at a deeper level.
3. This is an excellent way to ground the body and reduce the Vatha dosha (imbalance of the air element) in the body.
4. It helps reduce blood pressure, anxiety, and insomnia.

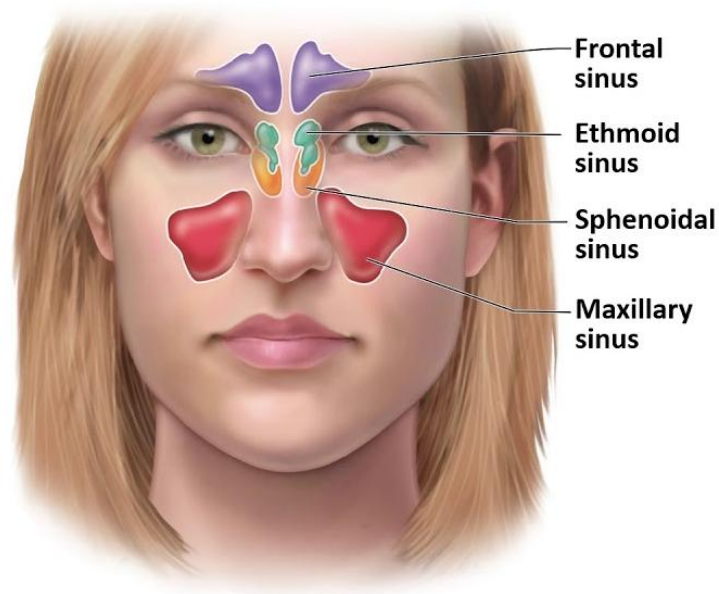
**CONTRAINDICATIONS:**

1. One who suffering from severe acidity may hurt himself or herself to lying on back because food pipe may displease your body system.
2. Avoid lying on your back.

### 3.3 MODERN ASPECT

#### ANATOMY OF PARANASAL SINUSES:

Paranasal sinuses are air filled spaces present within some bones around the nasal cavities. The sinuses are frontal, maxillary, sphenoidal and ethmoidal. All of them open into the nasal cavity through its lateral wall. The of the sinuses is to make the skull lighter and add resonance to the voice. In the infections of the sinuses or sinusitis, the is altered.



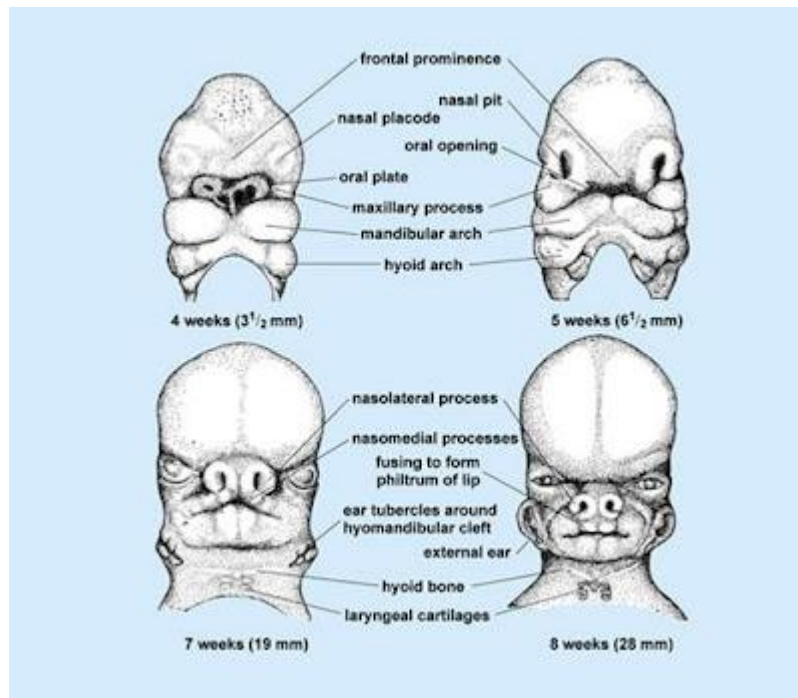
The sinuses are rudimentary or even absent at birth. They enlarge rapidly during the ages of 6 to 7 years, puberty. From birth to adult life, the growth of the sinuses due to enlargement of the bones, in the old age it is due to resorption of the surrounding cancellous bone.

#### EMBRYOLOGY OF NOSE AND PARANASAL SINUSES

Developmentally nose and paranasal sinuses are interlinked. Development of head and neck along with face, nose and paranasal sinuses takes place simultaneously in a short window span. At the end of 4th week of development branchial arches, branchial pouches and primitive gut makes their appearance. This is when the embryo gets its first identifiable head and face with an orifice in its middle known as the stomadaeum.

The stomadaeum (primitive mouth) is surrounded by mandibular and maxillary prominences bilaterally. These prominences are derivatives of first arch. This arch will

give rise to all vascular and neural supply of this area. The stomadaeum is limited superiorly by the presence of frontonasal eminence and inferiorly by the mandibular arch.



The frontonasal process inferiorly differentiates into two projections known as “Nasal Placodes”. These nasal placodes will be ultimately invaded by growing ectoderm and mesenchyme. These structures later fuse to become the nasal cavity and primitive choana, separated from the stomadaeum by the oronasal membrane. The primitive choana forms the point of development of posterior pharyngeal wall and the various paranasal sinuses.

The Oronasal membrane is fully formed by the end of 5th week of development. It gives rise to the floor of the nose (palate develops from this membrane). The continuing growth of embryo brings both the nasal placodes and the maxillary processes together in midline to form the maxilla and the beginning of the external nose. The frontonasal prominence gives rise to inferior mesodermic projection which goes on to form the nasal septum dividing the nose into two cavities. Simultaneously the skull and facial bones also develop. The skeletal system develops from mesoderm. Each cranial bone is formed by a series of bone spicules that grow from the centre towards the periphery. At birth all the cranial bones are separated by layers of connective tissue which later fuses and ossifies in the postnatal period.

At about 25 – 28 weeks of gestation, three medially directed projections arise from the lateral wall of the nose. This serves as the beginning of the development of



Paranasal sinuses. Between these projections small lateral diverticula invaginate into the primitive choana to eventually form the meati of the nose.

**The medial projections arising from the lateral wall of the nose forms the following structures:**

1. The anterior projection forms the agger nasi
2. The inferior (maxilloturbinate) projection forms the inferior turbinate and maxillary sinus
3. The superior projection (ethmoidoturbinate) forms the superior turbinate, middle turbinate, ethmoidal air cells and their corresponding drainage channels. The middle meatus develops between the inferior and middle meatus.
4. The middle meatus invaginates laterally to form the embryonic infundibulum and uncinate process. During the 13th week of development the embryonic infundibulum grows superiorly to form the frontal recess area.

**Frontal sinus**

1. The frontal sinus lies in the frontal bone deep to the superciliary arch.
2. Its opens into the middle meatus of nose at the anterior end of the hiatus semilunaris either through the infundibulum or through the frontonasal duct.
3. The right and left sinuses are usually unequal in size and rarely one or both may be absent. Their average height, width and anteroposterior depth are each about 2.5cm. The sinuses are better developed in males than in females.
4. They are rudimentary or absent at birth. They are well developed between 7 and 8 years of age, but reach full size only after puberty.

**Maxillary sinus**

1. The maxillary sinus lies in the body of the maxilla and is the largest of all the paranasal sinuses.
2. Its open into the middle meatus of the nose in the lower part of the hiatus semilunaris. The opening is nearer the roof
3. The size of sinus is variable. Average measurements are height-3.5cm, width-2.5cm and anteroposterior depth-3.5cm
4. The maxillary sinus is the first paranasal sinus to develop.

### **Sphenoidal sinus**

1. The right and left sphenoidal sinuses lie within the body of sphenoid bone. They are separated by a septum
2. The two sinuses are usually unequal in size. Each sinus opens into the sphenoidal recess corresponding half of the nasal cavity.

### **Ethmoidal sinuses**

1. Ethmoidal sinuses are numerous small intercommunicating spaces which lie within the labyrinth of the ethmoid bone.
2. The sinuses are divided into anterior, middle and posterior groups.
3. The posterior ethmoidal sinus consisting of 1 to 7 air cells open into the superior meatus of the nose.
4. The middle ethmoidal sinus consisting of 1 to 7 air cells open into the middle meatus of the nose.
5. The anterior ethmoidal sinus is made up of 1 to 11 air cells, open into the anterior part of hiatus semilunaris of the nose.

### **Development of sinuses:**

1. The ethmoid and maxillary sinuses are the only ones present at birth and fully developed at 12 years.
2. The frontal sinuses start their growth after 3 years and fully developed at 18-20 years.
3. The sphenoid sinuses start their growth after 8 years and fully developed at 12-15 years.
4. The sinuses reach full development during adolescence.

### **Capacity of sinuses:**

<b>Sinuses</b>	<b>Maxillary</b>	<b>Frontal</b>	<b>Ethmoidal</b>	<b>Sphenoidal</b>
Numbers	2	2	8-18	2
Capacity	15ml	5-7ml	Variable	3-6.5ml

## **STRUCTURE OF NOSE & PARANASAL SINUSES**

The Nose is divided into 2 parts: ·

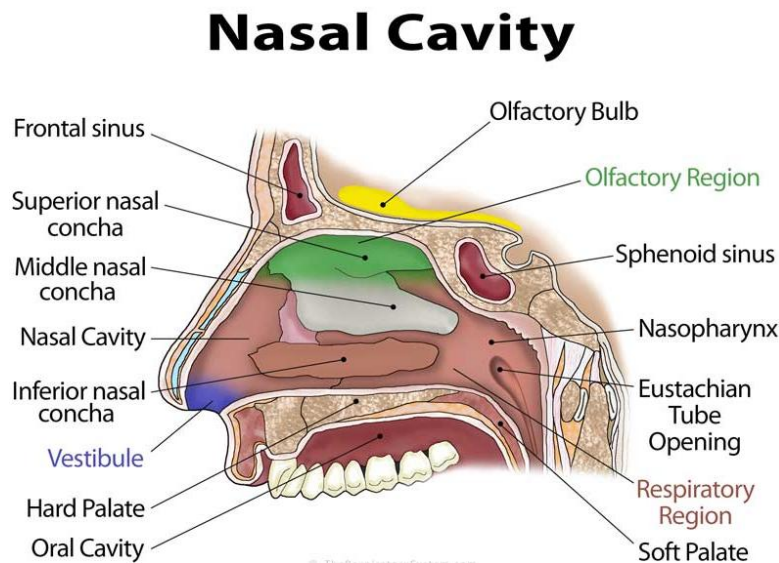
1. The External nose.
2. The Internal nose (nasal cavities)

### 1-The External nose:

1. The external nose has a skeletal framework that is partly bony and partly cartilaginous.
2. The bones are the nasal bones, which form the bridge of the nose, and the frontal processes of the maxillae.
3. The cartilages are the superior and inferior nasal cartilages, the septal cartilage, and some small cartilages.
4. The outer surface is covered by skin which is thin and mobile above and thick and adherent to the subcutaneous structures near the tip.

### 2-The Internal nose (the nasal cavity):

The nasal cavity extends from the external nares or nostrils to the posterior nasal apertures and is subdivided into right and left halves by the nasal septum.



Each cavity has a roof, floor, medial and lateral walls. .

The floor is formed by the palatine process of the maxilla and the horizontal process of palatine bone.

The roof is narrow and is formed (from behind forward) by the body of the sphenoid, cribriform plate of the ethmoid and the frontal bone.

**The medial wall** (the nasal septum) is an osteocartilaginous partition Covered by adherent mucoperichondrium and mucoperiosteum .The upper part is formed by the

perpendicular plate of the ethmoid bone, the posterior part by the vomer and the anterior portion is formed by septal cartilage.

**The lateral wall** is the most complex, it contains 3 shelf –like projection into the nasal cavity called the turbinates (the superior, middle and the Inferior turbinates). The groove below each turbinate is referred to as a meatus. There are 3 meati called the superior ,middle and the inferior meatus) into these meati the paranasal sinuses open and join the nasal cavity. The area above the superior turbinate is called the sphenothmoidal recess.

**The inferior meatus** contain the opening of nasolacrimal duct.

**The middle meatus** contains the ostia (openings) of the frontal ,maxillary and the anterior ethmoid sinuses.

**The superior meatus** receives the opening of the posterior ethmoid sinus.

**The sphenothmoidal** recess receives the opening of the sphenoid sinus.

## **HISTOLOGY OF NASAL CAVITY**

1. Each wall of nasal cavity is divisible into three distinct regions,
2. The vestibule of the nasal cavity is lined by skin continuous with that on the exterior of the nose.
3. Hair and Sebaceous glands are present.
4. Receptors for smell are located in the olfactory mucosa which is confined to a relatively small area on the superior nasal concha, and on the adjoining part of nasal septum.
5. The rest of the wall of each half of the nasal cavity is covered by respiratory mucosa lined by pseudo stratified ciliated columnar epithelium.
6. Blood supply of the Nose:
7. It is supplied by branches of internal and external carotid arteries.
8. Branches of the internal carotid artery that supply the nose are the anterior and Posterior ethmoidal arteries. While the external carotid artery supplies the nose through its maxillary branch and small contribution of the facial artery.

The internal carotid artery and external carotid artery branches anastomose freely in the nose, the common site of anastomosis is in the anteroinferior part of the nasal septum (Little`S Area) , the arteries that share in this anastomosis are the sphenopalatine

artery ,greater palatine artery, superior labial artery and branch from the anterior ethmoidal artery

### **The venous drainage**

The Nose characterized by rich submucosal plexus of venous sinusoids, these drained by veins that accompany the arteries.

### **Lymphatic drainage**

The Nose drained to the submandibular lymph nodes and the upper deep cervical lymph nodes.

### **Nerve supply**

#### **1- Olfactory nerves:**

They arise from a specialized olfactory epithelium in the olfactory mucosa .They ascend through the cribriform plate to reach the olfactory bulb.

#### **2- Nerves of ordinary sensation:**

They are from the ophthalmic and maxillary divisions of the trigeminal nerve.

#### **3- Vasomotor nerve supply (the autonomic nerve supply):**

A-Parasympathetic when it is simulated it causes vasodilatation. And stimulate glandular secretion B- Sympathetic nerves It causes vasoconstriction when stimulated and inhibit glandular secretion.

## **PHYSIOLOGY OF THE NOSE**

The nose has several functions

### **1- Respiratory function**

- a- It provides an airway for respiration.
- b- Filtration of the inspired air.
- c- Humidification of the inspired air.
- d- Adjusts the temperature of he inspired air.

### **2- Olfactory function**

**3- Phonatory function.** It provides the voice with a resonant quality.

**4- Mucociliary Clearance (MCC)** is an important innate defense mechanism by which both upper and lower airways cleanse their surface of inhaled pollutants, allergens, pathogens, and mucus secreted by goblet cells and submucosal glands. This protective mechanism is especially important in the upper airways and sinuses, as the removal of debris-laden mucus in the sinuses completely depends on MCC, whereas in the lower airways MCC can be compensated for by other mechanisms such as coughing. The mucociliary apparatus consists of three functional components: the cilia on respiratory epithelium, the mucus layer, and the underlying airway surface liquid layer.

## **SINUSITIS**

Sinusitis refers to an inflammatory condition involving the four paired structures surrounding the nasal cavities. Although most cases of Sinusitis involve more than one sinus, the maxillary sinus is most commonly involved; next, in order of frequency, are the ethmoid, frontal, and sphenoid sinuses. Each sinus is lined with a respiratory epithelium that produces mucus, which is transported out by ciliary action through the sinus ostium and into nasal cavity. Sinusitis affects a tremendous amount of proportion of the population, accounts for millions of visits to primary care physicians each year and is the fifth leading diagnosis for which antibiotics are prescribed.

## **FORMS OF SINUSITIS**

Sinusitis is classified based on duration as acute, subacute, or chronic, or recurrent. Acute: Less than 4 weeks

Subacute: 4 - 12 weeks

Chronic: 12 weeks or longer

Recurrent: 3 or more acute episodes in 1 year

## **ACUTE SINUSITIS**

Acute sinusitis – defined as sinusitis of <4 weeks duration – constitutes the vast majority of sinusitis cases. Most cases are diagnosed in the ambulatory care setting and occur primarily as a consequence of a preceding viral URI.

## **AETIOLOGY**

The ostial obstruction that results in rhinosinusitis can arise from both infectious and non-infectious causes.



## **NON INFECTIOUS CAUSES**

Non infectious causes include allergic rhinitis, barotraumas, and exposure to chemical irritants. Obstruction also can occur with nasal and sinus tumors (e.g., squamous cell carcinoma) or granulomatous diseases (e.g., granulomatosis with polyangiitis) and conditions leading to altered mucus content (e.g., cystic fibrosis) can cause sinusitis through impaired mucus clearance.

## **INFECTIOUS CAUSES**

### **VIRAL SINUSITIS**

Viral sinusitis is far more common than bacterial sinusitis, in the study that have done so, the viruses most commonly isolated – both alone and with bacteria – have been rhinovirus, parainfluenza virus, and the influenza virus.

### **BACTERIAL SINUSITIS**

Bacterial causes of sinusitis have been better described. Among community – acquired cases, *S. pneumoniae* and nontypable *Haemophilus influenzae* are the most common pathogens, accounting for 50-60% of cases.

*Moraxella catarrhalis* causes disease in significant percentage (20%) of children but a lesser percentage in adults.

Other Streptococcal species and *Staphylococcus aureus* cause only a small percentage of cases, although there is increasing concern about community- acquired methicillin – resistant *S. aureus* (MRSA) as an emerging cause.

Nosocomial cases commonly associated with bacteria found in the hospital environment, including *S. aureus*, *Pseudomonas aeruginosa*, *Serratia marcescens*, *Klebsiella pneumoniae*, and *Enterobacter* species.

## **FUNGI SINUSITIS**

Fungi are also established causes of sinusitis, although most acute cases are in immunocompromised patients and represent invasive, and life-threatening infections.

The best - known example is rhinocerebral mucormycosis caused by the fungi of the order Mucorales, which includes *Rhizopus*, *Rhizomucor*, *Mucor*, *Mycocladius* and *cunninghamella*.

These infections classically occur in diabetic patients with ketoacidosis but also can develop in transplant recipients, patients with hematologic malignancies, and patients receiving chronic granulocorticoid or deferoxamine therapy.

Other hyaline molds, such as *Aspergillus* and *Fusarium* species, are also occasional causes of this disease.

## **CLINICAL MANIFESTATIONS**

A large proportion of patients with colds have sinus inflammation, although as previously stated, true bacterial sinusitis complicates only 0.2 – 2% of these viral infections.

Common presenting symptoms of sinusitis include nasal drainage and congestion, facial pain or pressure, and headache. Thick, purulent or discolored nasal discharge is often thought to indicate bacterial sinusitis but also occurs early in viral infections such as the common cold and is not specific to bacterial infection.

Other non – specific manifestations include cough, sneezing and fever. Tooth pain, most often involving the upper molars, as well as halitosis can be associated with bacterial sinusitis.

In acute sinusitis, sinus pain or pressure often localizes to the involved sinus (particularly the maxillary sinus) and can be worse when the patient bends over or is supine. Although rare, manifestations of advanced sphenoid or ethmoid sinus infection can be profound. Including severe frontal or retro orbital pain radiating to the occiput, thrombosis of the cavernous sinus, and signs of orbital cellulitis.

Acute focal sinusitis is uncommon but should be considered over the maxillary sinus and fever in patients with severe symptoms, regardless of illness duration.

Patients with acute fungal rhinosinusitis often present symptoms related to pressure effects, particularly when the infection has spread to the orbits and cavernous sinus. Signs such as orbital swelling and cellulitis, proptosis, ptosis, and decreased extraocular movements are common, as is retroorbital or periorbital pain.

Nasopharyngeal ulcerations, epistaxis, and headaches are also common, and involvement of cranial nerves V and VII has been described in more advanced cases.

### **CHRONIC SINUSITIS**

Chronic sinusitis is characterized by symptoms of sinus inflammation lasting > 12 weeks. This illness is most associated with either bacteria or fungi, and clinical cure in most cases is very difficult.

### **CHRONIC BACTERIAL SINUSITIS**

In chronic bacterial sinusitis, infection is thought to be due to the impairment of mucociliary clearance from repeated infections rather than to persistent bacterial infection. Although certain conditions (e.g., cystic fibrosis) can predispose patients to chronic bacterial sinusitis, most patients with chronic rhinosinusitis do not have obvious underlying condition that results in obstruction of sinus drainage, the impairment of ciliary action, or in immune dysfunction.

Patient experience constant nasal congestion and sinus pressure, with intermittent periods of greater severity, which may persist for many years.

### **CHRONIC FUNGAL SINUSITIS**

Chronic fungal sinusitis is a disease of immunocompetent hosts and is usually non-invasive, although slowly progressive invasive disease which is sometimes seen. Non-invasive disease, which typically is associated with hyaline molds such as *Aspergillus* species and dematiaceous molds such as *Curvularia* or *Bipolaris* species, can present as a number of different scenarios.

### **RISK FACTORS**

Sinusitis is one of the most common diseases in the United States, affecting about 1 in 7 adults each year. About 31 million Americans are diagnosed with sinusitis each year.

### **YOUNG CHILDREN AND SINUSITIS**

Before the immune system matures, all infants are susceptible to respiratory infections, with a possible frequency of one cold every 1 - 2 months. Young children are prone to colds and may have 8 - 12 bouts every year. Smaller nasal and sinus passages

also make children more vulnerable to upper respiratory tract infections than older children and adults. Ear infections such as Otitis media are also associated with sinusitis. Nevertheless, true sinusitis is very rare in children under 9 years of age. Some doctors believe it is greatly over diagnosed in this population.

### **THE ELDERLY AND SINUSITIS**

The elderly are at specific risk for sinusitis. Their nasal passages tend to dry out with age. In addition, the cartilage supporting the nasal passages weakens, causing airflow changes. They also have diminished cough and gag reflexes and faltering immune systems and are at greater risk for serious respiratory infections than are young and middle-aged adults.

### **PEOPLE WITH ASTHMA OR ALLERGIES**

People with asthma or allergies are at higher risk for non-infectious inflammation in the sinuses. The risk for sinusitis is higher in patients with severe asthma. People with a combination of polyps in the nose, asthma, and sensitivity to aspirin (called Samter's, or ASA, triad) are at very high risk for chronic or recurrent acute sinusitis.

### **HOSPITALIZATION**

Some hospitalized patients are at higher risk for sinusitis, particularly those with:

- Head injuries

- Conditions requiring insertion of tubes through the nose

- Breathing aided by mechanical ventilators. (Such patients may have a significantly higher risk for maxillary sinusitis.)

- Patients who had a weakened immune system (immunocompromised)

## **OTHER MEDICAL CONDITIONS AFFECTING THE SINUSES**

Several medical conditions put people at risk for chronic sinusitis. They include:

Diabetes

Gastroesophageal reflux disease

Nasal polyps or septal deviation

AIDS and other disorders of the immune system predispose the patient to sinusitis (fungal infections are especially risky)

Oral or intravenous steroid treatment

Hypothyroidism -- causes congestion that clears up when the condition is treated

Cystic fibrosis -- a genetic disorder in which the mucus is very thick and builds up

Kartagener's syndrome

## **MISCELLANEOUS RISK FACTORS**

**Dental Problems.** Anaerobic bacteria are associated with infections from dental problems or procedures, which precipitate about 10% of cases of maxillary sinusitis.

**Changes in Atmospheric Pressure.** People who experience changes in atmospheric pressure, such as while flying, climbing to high altitudes, or swimming, risk sinus blockage and therefore an increased chance of developing sinusitis. (Swimming increases the risk for sinusitis for other reasons, as well.)

**Cigarette Smoke and Other Air Pollutants.** Air pollution from industrial chemicals, cigarette smoke, or other pollutants can damage the cilia responsible for moving mucus through the sinuses. Whether air pollution is an important cause of sinusitis and, if so, which pollutants are critical factors, is still not clear. Cigarette smoke, for example, poses a small but increased risk for sinusitis in adults. Second-hand smoke does not appear to have any significant effect on adult sinuses, although it may pose a risk for sinusitis in children.

## **PATHOPHYSIOLOGY OF SINUSITIS**

The mucosa of sinus shows chronic inflammatory changes. The cilia gets damaged by the infection with resultant inadequate drainage of sinus cavity, particularly the maxillary sinus where the ostium is situated high up in the medial wall. The retained secretions thereby leads to reinfection.

Periphlebitis and perilymphangitis may occur leading to oedema and polyp formation, the so called hypertrophic or polypoidal sinusitis. Sometimes there occurs metaplasia of ciliated columnar epithelium to the stratified squamous type with interspersed papillary hyperplastic epithelial and inflammatory cells producing a picture of papillary hypertrophic sinusitis.

Occasionally the chronic inflammatory process may induce atrophic changes in the sinus mucosa with increase in submucosal fibrous tissue (Atrophic Sinusitis).

## **COMPLICATIONS**

Bacterial sinusitis is nearly always harmless (although uncomfortable and sometimes even very painful). If an episode becomes severe, antibiotics generally eliminate further problems. In rare cases, however, sinusitis can be very serious.

**Osteomyelitis.** Adolescent males with acute frontal sinusitis are at particular risk for severe problems. One important complication is infection of the bones (osteomyelitis) of the forehead and other facial bones. In such cases, the patient usually experiences headache, fever, and a soft swelling over the bone known as Pott's puffy tumor.

**Infection of the Eye Socket.** Infection of the eye socket, or orbital infection, which causes swelling and subsequent drooping of the eyelid, is a rare but serious complication of ethmoid sinusitis. In these cases, the patient loses movement in the eye, and pressure on the optic nerve can lead to vision loss, which is sometimes permanent. Fever and severe illness are usually present.

**Blood Clot** Blood clots are another danger, although rare, from ethmoid or frontal sinusitis. If a blood clot forms in the sinus area around the front and top of the face, symptoms are similar to orbital infection. In addition, the pupil may be fixed and dilated. Although symptoms usually begin on one side of the head, the process usually spreads to both sides.

**Brain Infection** The most dangerous complication of sinusitis, particularly frontal and sphenoid sinusitis, is the spread of infection by anaerobic bacteria to the brain, either

through the bones or blood vessels. Abscesses, meningitis, and other life threatening conditions may result. In such cases, the patient may experience mild personality changes, headache, altered consciousness, visual problems, and, finally, seizures, coma, and death.

### **INCREASED ASTHMA SEVERITY**

The relationship between sinusitis and asthma is unclear. A number of theories have been proposed for a causal or shared association between sinusitis and asthma. Successful treatment of both allergic rhinitis and chronic sinusitis in children who also have asthma may reduce symptoms of asthma. It is particularly important to treat any coexisting bacterial sinusitis in people with asthma. Patients might not respond to asthma treatments unless the infection is cleared up first.

### **EFFECTS ON QUALITY OF LIFE**

Pain, fatigue, and other symptoms of chronic sinusitis can have significant effects on the quality of life. This condition can cause emotional distress, impair normal activity, and reduce attendance at work or school. According to the American Academy of Allergy, Asthma, and Immunology, the average patient with sinusitis misses about 4 workdays a year, and sinusitis is one of the top 10 medical conditions that most adversely affect American employers.

### **DIAGNOSIS**

Patients should see a doctor if they have sinusitis symptoms that do not clear up within a few days, are severe, or are accompanied by high fever or acute illness. However, only one-half to two-thirds of patients with such symptoms actually have sinusitis. Some doctors believe that too many patients are diagnosed with true sinusitis and given unnecessary antibiotics when their symptoms would actually resolve easily in days with over-the-counter medications or no drugs at all. The first goal in diagnosing sinusitis is to rule out other possible causes of symptoms, and then determine:

The site where the infection has occurred Whether the condition is acute or chronic

The organism causing the infection (if possible)



## **DIAGNOSTIC APPROACH TO ACUTE SINUSITIS**

**Medical History.** The patient should describe all symptoms such as nasal discharge and specific pain in the face and head, including eye and tooth pain. After assessing symptoms, the doctor should take a thorough medical history of the patient:

Any history of allergies or headaches

1. Recent upper respiratory infection (colds, flus, infection) and how long they have lasted.
2. History of sinusitis episodes that is unresponsive to antibiotic treatment. (In such cases, the doctor will usually diagnose chronic or recurrent acute sinusitis and may refer the patient to a specialist for more advanced testing.)
3. Exposure to cigarette smoke or other environmental pollutants · Recent travel · Recent dental procedures.
4. Medications being taken (particularly decongestants).
5. Any known structural abnormalities in the nose and face.
6. Injury to the head or face.
7. History of medical conditions, such as chronic fatigue syndrome or fibromyalgia, which can produce tender areas in the face or sinus regions and nonspecific symptoms of ill health.
8. Any family history of allergies, immune disorders, cystic fibrosis, or immotile cilia syndrome.
9. In small children with sinusitis, whether they attend a day care center or nursery school.

## **PHYSICAL EXAMINATION**

The doctor will press the forehead and cheekbones to check for tenderness and other signs of sinusitis, including yellow to yellow-green nasal discharge. The doctor will also check the inside of the nasal passages using a device with a bright light to check the mucus and look for any structural abnormalities.

## **NASAL ENDOSCOPY (RHINOSCOPY)**

Nasal endoscopy, or rhinoscopy, involves the insertion of a flexible tube with a fiber optic light on the end into the nasal passage. Rhinoscopy allows detection of even very small abnormalities in the nasal passages and can better evaluate structural problems of the nasal septum, as well as the presence of soft tissue masses such as polyps. It may also identify small amounts of pus draining from the opening of a sinus. Bacterial cultures can also be taken from samples removed using endoscopy. (Endoscopy is also used for treating sinusitis).

## **IMAGING TECHNIQUES**

**Computer Tomography.** Computed tomography (CT) scanning is the best method for viewing the paranasal sinuses. There is little relationship, however, between symptoms in most patients and findings of abnormalities on a CT scan. CT scans are recommended for acute sinusitis only if there is a severe infection, complications, or a high risk for complications. CT scans are useful for diagnosing chronic or recurrent acute sinusitis and for surgeons as a guide during surgery. They show inflammation and swelling and the extent of the infection, including in deeply hidden air chambers missed by x-rays and nasal endoscopy. Often, they can detect the presence of fungal infections.

**X-Rays.** Until the availability of endoscopy and CT scans, x-rays were commonly used. They are not as accurate, however, in identifying abnormalities in the sinuses. For example, more than one x-ray is needed for diagnosing frontal and sphenoid sinusitis. X-rays do not detect ethmoid sinusitis at all. This area can be the primary site of an infection that has spread to the maxillary or frontal sinuses

**Magnetic Resonance Imaging.** Magnetic resonance imaging (MRI) is not as effective as CT in defining the paranasal anatomy and therefore is not typically used to

image the sinuses for suspected sinusitis. MRI is also more expensive than CT. However, it can help rule out fungal sinusitis and may help differentiate between inflammatory disease, malignant tumors, and complications within the skull. It may also be useful for showing soft tissue involvement.

### **SINUS PUNCTURE AND BACTERIAL CULTURE**

Sinus puncture with bacterial culture is the gold standard for diagnosing a bacterial sinus infection. It is invasive, however, and is performed only when antibiotics have not worked. Sinus puncture involves using a needle to withdraw a small amount of fluid from the sinuses. It requires a local anesthetic and is performed by a specialist. The fluid is then cultured to determine what type of bacteria is causing sinusitis.

### **PREVENTION**

The best way to prevent sinusitis is to avoid colds and influenza. If you are unable to avoid them, the next best way to prevent sinusitis is to effectively treat colds and influenza.

### **GOOD HYGIENE AND PREVENTING TRANSMISSION**

Colds and flu are spread primarily when an infected person coughs or sneezes near someone else. A very common method for transmitting a cold is by shaking hands. Everyone should always wash their hands before eating and after going outside. Ordinary soap is sufficient. Waterless hand cleaners that contain an alcohol based gel are also effective for every day use and may even kill cold viruses. (They are less effective, however, if extreme hygiene is required. In such cases, alcohol-based rinses are needed.) Antibacterial soaps add little protection, particularly against viruses. Wiping surfaces with a solution that contains one part bleach to 10 parts water is very effective in killing viruses.

## VACCINES

**Influenza Vaccine.** Because influenza viruses change from year to year, influenza vaccines are redesigned annually to match the anticipated viral strains. Doctors recommend that people receive annual influenza vaccinations in October or November.

Although flu vaccines are safe and appropriate for anyone over 6 months of age, the vaccines are now recommended for:

1. All healthy children ages six months to 18 years.
2. All adults ages 65 years or older,
3. Other adults who are at high risk for developing serious medical complications from influenza, and health care workers and others who care for individuals who are at high risk for influenza complications.

**Pneumococcal Vaccines.** The pneumococcal vaccine protects against *S. pneumoniae* (also called pneumococcal) bacteria, the most common bacterial cause of respiratory infections. There are two effective vaccines available, one called a 23-valent polysaccharide vaccine (Pneumovax, Pnu-Immune) for adults and a 7-valent conjugate vaccine (Prevnar or PCV7) for infants and young children. Doctors are now recommending that more people, including healthy elderly people, be given the pneumococcal vaccine, particularly in light of the increase in antibiotic-resistant bacteria.

## TREATMENT

### GENERAL TREATMENT APPROACHES

The primary objectives for treatment of sinusitis are reduction of swelling, eradication of infection, draining of the sinuses, and ensuring that the sinuses remain open. Fewer than half of patients reporting symptoms of sinusitis need aggressive treatment. Home remedies can be very useful.

#### **Treatment of Acute Sinusitis.**

Support treatment with only saline nasal irrigation, decongestants, antihistamines, and expectorants are appropriate for a minimum of 7 - 10 days for patients with mild-to-moderate symptoms, and may be used for longer.

Antibiotics are not helpful for patients with mild-to-moderate symptoms, so they should not be prescribed for at least the first 7 days.

### **Treatment of Chronic Sinusitis.**

A broad-spectrum antibiotic (one that can eliminate a wide range of bacteria) may be helpful. Some patients benefit from prolonged therapy.

A corticosteroid nasal spray. Some doctors also recommend oral corticosteroids (such as prednisone) for patients who do not respond to nasal corticosteroids or for those patients who have nasal polyps. Prednisone is also used for patients who have allergic fungal sinusitis.

Saline nasal irrigation is often needed on an ongoing basis.

If the condition dramatically improves after 1 - 2 months, antibiotics are stopped. The patient should continue with both the steroid and saline nasal solutions. If there is no improvement after this time, surgery may be considered. For some people with chronic sinusitis, however, the condition is not curable, and the goal of treatment is to improve the quality of life.

A thorough diagnostic work-up should be performed to rule out any underlying conditions, including but not limited to allergies, asthma, any immune problems, gastroesophageal reflux disorder, and structural problems in the nasal passages. If a primary trigger for chronic sinusitis can be identified, it should be treated or controlled if possible.

### **HYDRATION**

Home remedies that open and hydrate sinuses may, indeed, be the only treatment necessary for mild sinusitis that is not accompanied by signs of acute infection.

Drinking plenty of fluids and getting lots of rest when needed is still the best bit of advice to ease the discomforts of the common cold. Water is the best fluid and helps lubricate the mucus membranes.

Chicken soup does, indeed, help congestion and aches. The hot steam from the soup may be its chief advantage, although laboratory studies have actually reported that ingredients in the soup may have anti-inflammatory effects. In fact, any hot beverage may

have similar soothing effects from steam. Ginger tea, fruit juice, and hot tea with honey and lemon may all be helpful.

Spicy foods that contain hot peppers or horseradish may help clear sinuses.

Inhaling steam 2 - 4 times a day is extremely helpful, costs nothing, and requires no expensive equipment. The patient should sit comfortably and lean over a bowl of boiling hot water (no one should ever inhale steam from water as it boils) while covering the head and the bowl with a towel so the steam remains under the cloth. The steam should be inhaled continuously for 10 minutes. A mentholated or other aromatic preparation may be added to the water. Long, steamy showers, vaporizers, and facial saunas are alternatives.

**PREPARATION AND PROPERTIES OF THE TRIAL DRUG INTERNAL  
MEDICINE KANDANKATHIRI SAMOOLA CHOORANAM  
(Ref GUNAPADAM MOOLIGAI)**

<b>S. NO.</b>	<b>DRUG NAME</b>	<b>BOTANICAL NAME</b>	<b>FAMILY</b>	<b>PART USED</b>	<b>QUANTITY</b>
01	Kandankathiri	Solanum surrattense	Solanaceae	Whole plant	2-4 gram twice a day





**SOURCE OF DRUG INGREDIENTS:**

The required raw drugs for preparation of kandankathiri (Internal Medicine) will be purchased from a well reputed country shop. The purchased drugs will be authenticated by The Faculty / Expert members of Gunapadam Department at GSMCH - Palyamkottai.

**METHODS OF PURIFICATION AND PREPARATIONS:**

All the ingredients will be completely purified as per the Siddha literature in the presence of Guide / Faculty members. Then the trial drugs will be prepared from the ingredients.

**DRUG STORAGE:**

The trial drug “kandankathiri Samoolam Chooranam” will be stored in clean and dry air tight glass containers.

**DISPENSING:**

The trial drug will be dispensed by using neatly wrapped paper bundles. For outpatient one packet is given for seven day once. (Twice a day after food) For inpatient everyday the medicine packets will be dispensed in person

## 4. MATERIALS & METHODS

The clinical study on PEENISAM was carried out in Post graduate Department of Siddhar yoga maruthuvam in Government Siddha Medical College & Hospital, Palayamkottai. In this study 40 patients (who are selected by Inclusion and Exclusion criteria) were treated as OPD and IPD patients.

### TRIAL DESIGN AND CONDUCT OF STUDY:

<b>TRIAL TYPE</b>	:	An open labelled double arm non randomized phase II clinical trial
<b>TRIAL PLACE</b>	:	OPD & IPD, Department of Siddhar Yoga Maruthuvam, Govt. Siddha Medical College and Hospital, Palayamkottai.
<b>TRIAL PERIOD</b>	:	48 months
<b>SAMPLE SIZE</b>	:	40 patients [OPD & IPD]

### SUBJECT SELECTION:

Patients reporting with symptoms of inclusion criteria in OPD, Post Graduate Department of Siddhar Yoga Maruthuvam GSMCH, Palayamkottai will be subjected to screening test and documented using screening proforma.

### INCLUSION CRITERIA:

1. Age : Between 15-60 Yrs
2. Sex : Both male and female
3. Patient having the symptoms of headache, facial pain, nasal congestion and discharge, sneezing, malaise.
4. Patients who are willing to give radiological investigation and provide blood for lab investigation.
5. Patients who are willing to participate in this study with the knowledge of potential risks and who are willing to sign the informed consent form.

**EXCLUSION CRITERIA:**

1. Age : Below 15 Years and Above 60 Years
2. Patients who face difficulties or hesitate to practice Yoga are excluded.
3. Fractures & tumors of nose
4. Epitaxis
5. Tuberculosis
6. Patients with any other serious illness
7. Pregnancy women and lactating mothers
8. Wheezing
9. Asthma

**WITHDRAWAL CRITERIA:**

1. Intolerance to the drug and development of adverse reactions during drug trial.
2. Poor patient compliance & defaulters.
3. Patient turned unwilling to continue in the course of clinical trial.
4. Occurrence of any serious illness.

**GROUPING OF PARTICIPANTS:**

Patients fulfilling all the criteria of clinical information sheet, were subjected to the following two groups containing 20 cases in each group First 20 patients were subjected to Group I treatment protocol and second 20 patients were subjected to Group II treatment protocol.

Group I: Siddhar yogam therapy alone

Group II : Treated by kandankathiri samoolam Chooranam

**TESTS AND ASSESSMENTS:**

- A. Clinical assessment
- B. Routine investigations
- C. Radiological investigations

**A. CLINICAL ASSESSMENT:**

History Taking

The changes observed in the signs and symptoms were assessed by LIKERTS scoring method

NIL –

MILD – +

MODERATE – + +

SEVERE - + + +

**B. ROUTINE INVESTIGATION:**

**BLOOD:**

Hb

Total WBC Count

Differential WBC Count

Neutrophils

Lymphocytes

Eosinophils

Monocytes

Basophils

Total RBC count

ESR

1. ½ Hr:

2. 1 Hr:

Blood sugar

1. Random:

2. Fasting:

3. Post prandial:

**URINE:**

Albumin

Sugar

Deposits

## **INVESTIGATIONS BASED ON SIDDHA SYSTEM**

1. Envagai Thervu
2. Udal Thathukkal
3. Vinathal
4. Poriyaal Arithal
5. Pulanal Arithal
6. Neerkuri, Neikuri

## **METHODOLOGY STANDARD OPERATING PROCEDURE (SOP) – CLINICAL TRIAL**

### **SELECTION OF THE PATIENT:**

The clinical trial was conducted among 40 patients who are reporting the post graduate out patient Department, Department of Siddhar yoga maruthvam. The selection of patients was based on the inclusion and exclusion criteria. Among 40 patients, they are separated into two groups.

GROUP I – siddhar yogam therapy alone [In this group, 20 patients were administered (OPD & IPD)].

GROUP II – Kandankathiri samoola chooranam (Internal) [In this group, 20 patients were administered (OPD & IPD)].

### **GROUPING OF THE PATIENT:**

OPD Patient enrolled in Group I & II was instructed to visit the OPD daily for siddhar yogam therapy and the trial medicine was dispensed periodically. Enrollment of patient in Group I and Group II were based on patient's willingness.

IPD Patient enrolled in Group I & II was monitored daily. The trial medicine and siddhar yogam therapy was given daily. Enrollment of patient in Group I and Group II were based on patient's willingness.

**STUDY ENROLLMENT:**

In this clinical trial, patient reporting at GSMCH,OPD with the clinical symptoms of Headache, facial pain, nasal congestion and runny nose will be clinically examined and enrolled in the study based on the inclusion and exclusion criteria.

The patient who are to be enrolled in this study will be informed about the objective of the study, interventions in the form of internal medicine and Yoga therapy, possible outcomes in their own language and terms understandable to them.

After ascertaining the patient willingness, consent will be obtained in the informed consent form.

Complete clinical history complaints and duration, examination findings-all will be recorded in the prescribed proforma and clinical assessment forms separately. Screening form and laboratory investigation form will be filled separately.

All the patients will be given unique registrations card in which patients registrations number, address, phone number will be entered. Doctors phone number etc. will be provided in the card to report in case of emergency. Patients will be advised to undergo trail and appropriate dietary advice will be given according to the patients.

**SIDDHAR YOGAM THERAPY PROCEDURE:**

1. Siddhar yogam therapy was administered among 40 patients (Both Group I & II).
2. Group of yoga should be administered in siddhar yogam therapy during the clinical trial.

**INTERNAL MEDICINE:**

**KANDANKATHIRI SAMOOLA CHOORANAM – GUNAPADAM MOOLIGAI VAGUPPU**

The dosage of the trail medicine is 2-4 gm for 48 days.

**EXTERNAL THERAPY:**

**SIDDHAR YOGAM THERAPHY –Sirappu maruthuvam.**

1. Pranayamam [Naadisuthi] – 20 to 30 cycles
2. Bhujangasanam

3. Trikonasana
4. Savasanam

#### **PRECLINICAL ANALYSIS:**

For Internal drug the preclinical study was done before the initiation of clinical trial. It includes pharmacological analysis and Biochemical Analysis. The Pharmacological analysis was carried out in Accredited Laboratory. The Bio-chemical analysis will be done in our laboratory [Govt.Siddha Medical College, Palayamkottai]

#### **PRECLINICAL DATA:**

All the preclinical studies of the drug such as, pharmacological, biochemical, animal and toxicity studies were done in authenticated laboratory and it was cross checked before beginning the trial.

#### **CONDUCT OF THE STUDY:**

Before starting the treatment purgation is given with the OP medicine Vellai ennai-15ml with hot water in the early morning (empty stomach). The trial is started by beginning the Siddhar Yoga Maruthuva Murai training and the trial drug “Kandankathiri samoolam Chooranam” is given continuously for 48 days. OP patients should visit the hospital once in eight days. At each clinical visit clinical assessment is done and prognosis is noted. For IP patients the drug is given for 48days. Laboratory investigations are done 1st day, 24th and 48th day of the trial. IP patients, who are not in a situation to stay in the hospital for a long time are advised to attend the OPD for further follow-up. After the end of the treatment, the patient who fails to collect the trial drug on the prescribed day but wants to continue the trial from the next day or two, he/she will be allowed, but defaulters of one week and more will not be allowed to continue and be withdrawn from the study with a fresh case being included.

#### **ADVERSE EFFECT/SERIOUS EFFECT MANAGEMENT:**

If the trial patient develops any adverse reaction, he/she was immediately withdrawn from the trial and proper management were given in OPD, PG-Department of Siddhar yoga maruthuvam of Govt Siddha medical college and hospital, Palayamkottai.



**ETHICAL ISSUES:**

1. Any infection, while collecting blood sample from the patients are prevented. Only disposable syringes, disposable gloves, with proper sterilization of laboratory equipments were used.
2. No other external or internal medicines were used, other than the trial drug for osteoarthritis.
3. The data collected from the patient are kept confidential. The patients are informed about the diagnosis, treatment and follow-up.
4. Only after getting the consent of the patient (through consent form) they are enrolled in the study.
5. Informed consent was obtained from the patient explaining him/her in the language understandable to the patient.
6. Treatment were provided free of cost.

## **OBSERVATION AND RESULTS**

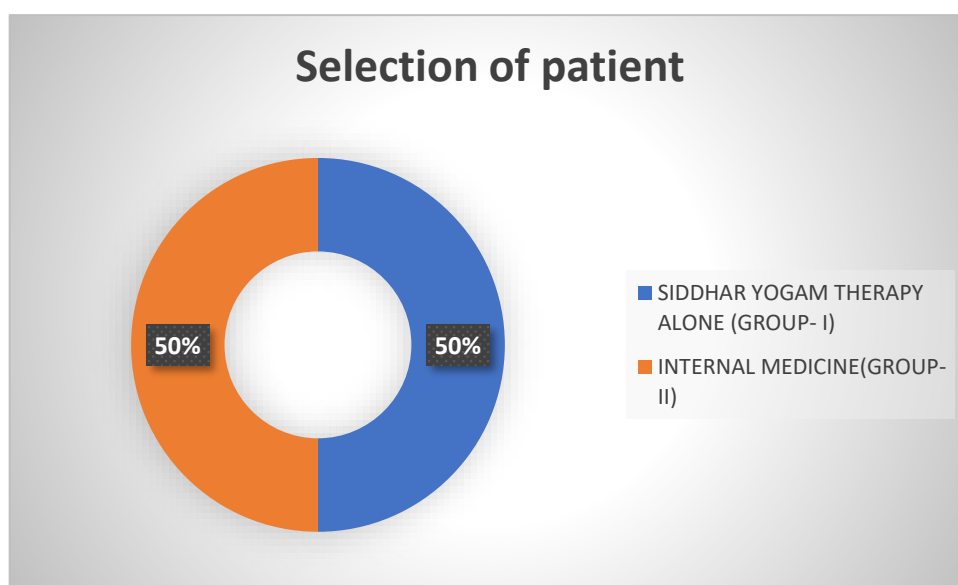
Patients were affected by Peenisam was selected in the number of 20 treated by Kandanathiri samoola chooranam and 20 only by Siddhar yogam therapy in the Department of Siddhar yoga maruthuvam (IX), Government Siddha Medical College and Hospital, Palayamkottai.

Results were observed with respect to the following criteria.

1. Selection of cases
2. Sex distribution
3. Age distribution
4. Occupation
5. Kaalam
6. Thinai
7. Paruva kaalam
8. Etiological Factors
9. Socio-economic status
10. Diet Habit
11. Religion Distribution
12. Duration of illness
13. Clinical Manifestations
14. Thegi
15. Gunam
16. Disturbance in kanmenthriyam
17. Disturbance in vatham
18. Disturbance in pitham
19. Disturbance in kabham
20. Udal Thathukkal
21. Envagai Thervugal
22. Pulse reading (Naadi)
23. Neikuri
24. Provocative test
25. Progress chart
26. Effect of therapy based on Universal LIKERTS SCORING METHOD
  - a) Group I (Siddhar yogam therapy)
  - b) Group II (Internal medicine)
27. Analogy of effectiveness of Group- I & Group- II

### SELECTION OF PATIENTS:

S.NO	SELECTION OF CASES	NO OF PATIENTS	PERCENTAGE (%)
1	SIDDHAR YOGAM THERAPY ALONE (GROUP- I)	20	50
2	INTERNAL MEDICINE(GROUP-II)	20	50
	<b>TOTAL</b>	<b>40</b>	<b>100</b>

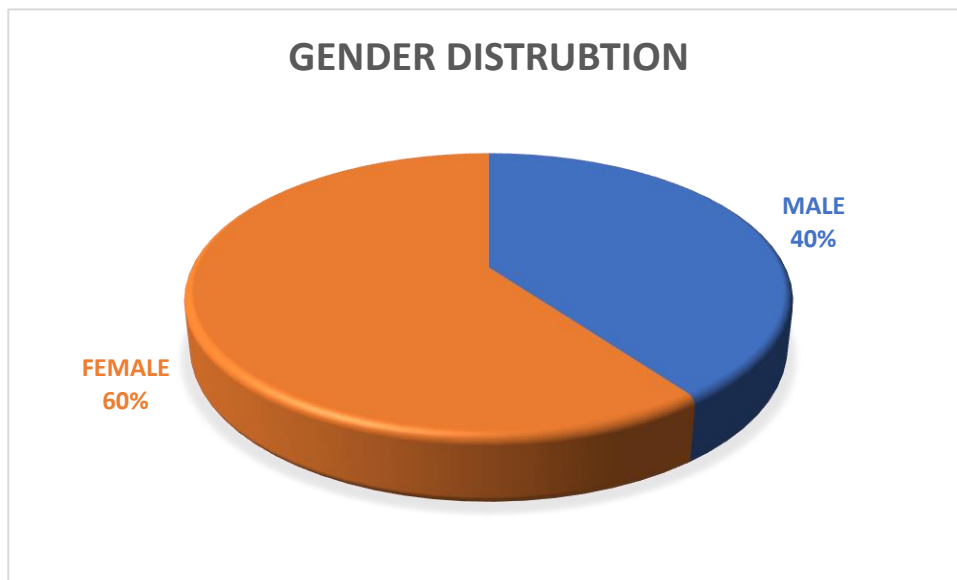


### INFERENCE:

50% of patients were selected for Group I and 50% for Group- II

**GENDER DISTRIBUTION:**

S.NO	SEX	NO OF CASES		TOTAL NO OF PATIENTS	PERCENTAGE (%)
		GROUP-I	GROUP-II		
1	MALE	11	5	16	40
2	FEMALE	9	15	24	60
	<b>TOTAL</b>	<b>20</b>	<b>20</b>	<b>40</b>	<b>100</b>



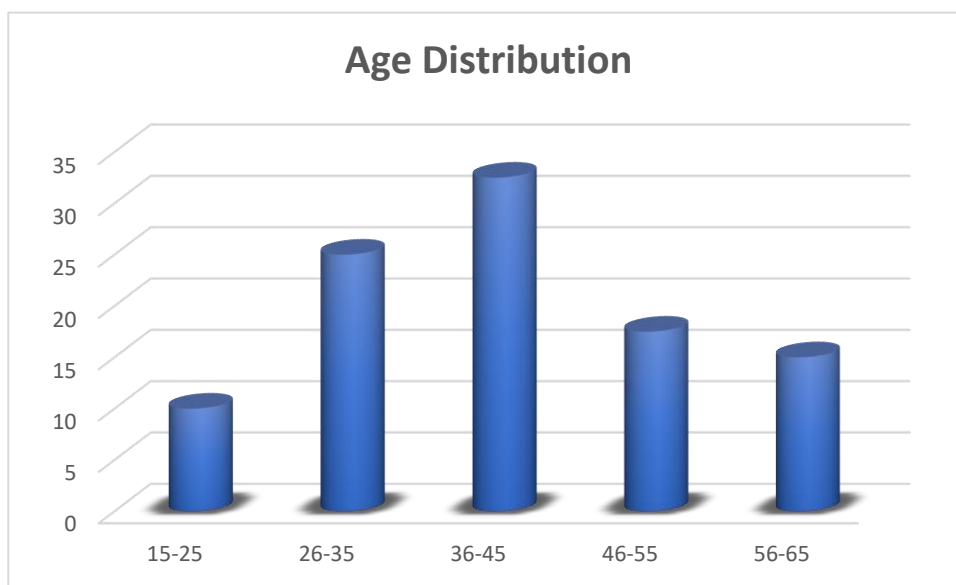
**INFERENCE:**

According to Group I & Group II ,Out of 40 patients 40% were male and 60% were female.

## AGE DISTRIBUTION:

TABLE:5.3

S.no	Age	No of Patients		Total no of patients	Percentage (%)
		Group -1	Group-2		
1	15-25	4	0	4	10
2	26-35	8	2	10	25
3	36-45	6	7	13	32.5
4	46-55	2	5	7	17.5
	56-65	0	6	6	15
	<b>Total</b>	<b>20</b>	<b>20</b>	<b>40</b>	<b>100</b>

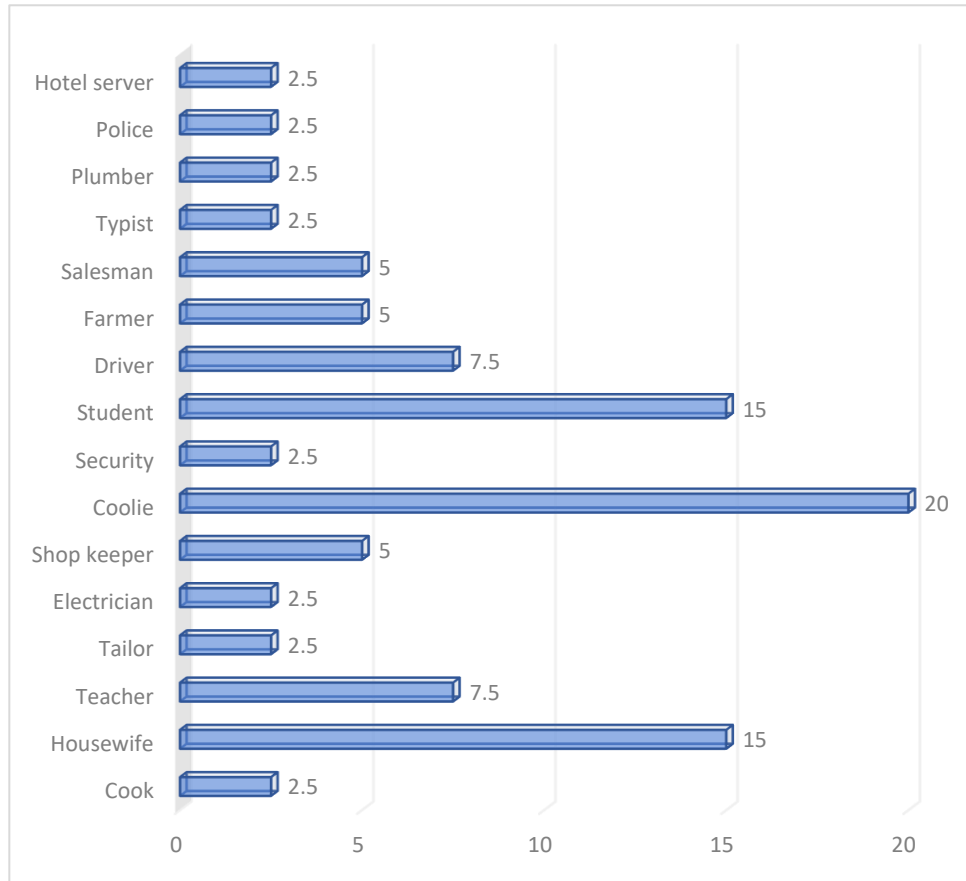


## INFERENCE:

Out of 40 patients, 10% of patients under the 15-25 years, 25% of patients were in 26-35 years, 32.5% were 36 – 45 age group, 17.5% were in 46 – 55 age group, 15% were 56-65 age group. Higher incidence of affected age group is 36-45.

**OCCUPATION:**

S.No	Occupation	No Of Patients		TOTAL NO OF PATIEN TS	PERCENTAGE (%)
		GROUP-I	GROUP-II		
1	Cook	0	1	1	2.5
2	Housewife	3	3	6	15
3	Teacher	1	2	3	7.5
4	Tailor	0	1	1	2.5
5	Electrician	1	0	1	2.5
6	Shop keeper	1	1	2	5
7	Coolie	2	6	8	20
8	Security	1	0	1	2.5
9	Student	6	0	6	15
10	Driver	1	2	3	7.5
11	Farmer	1	1	2	5
12	Salesman	1	1	2	5
13	Typist	0	1	1	2.5
14	Plumber	1	0	1	2.5
15	Police	1	0	1	2.5
16	Hotel server	0	1	1	2.5
	<b>TOTAL</b>	<b>20</b>	<b>20</b>	<b>40</b>	<b>100</b>

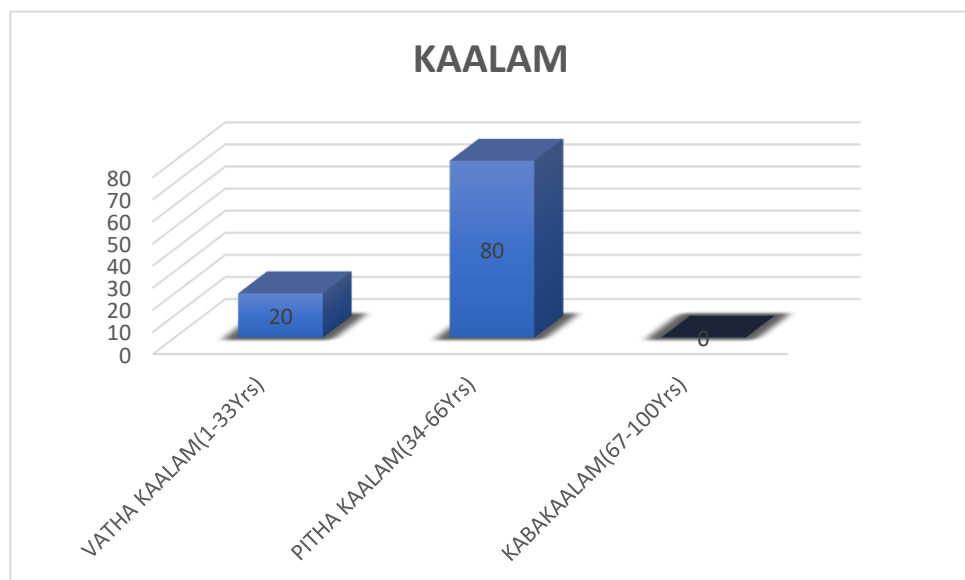


**INFERENCE:**

According to Group I & Group II, Out of 40 cases, in this study the rate of incidence is higher in house wife's 15%, cook 2.5%, Tailors in 2.5%, shopkeeper 5%, Teachers 7.5%, coolie 20%, driver 7.5%, electrician 2.5%, security 2.5%, student 15%, farmer 5%, sales man 5%, typist 2.5%, plumber 2.5%, hotel server 2.5%, police 2.5%.

## KAALAM:

S.N O	KAALAM	NO. OF PATIENTS		TOTAL NO OF PATIENT S	PERCENTAGE( %)
		Group- I	Group- II		
1	VathaKaalam (1-33yrs)	7	1	8	20
2	PithaKaalam (34- 66yrs)	13	19	32	80
3	KabaKaalam (67-100yrs)	0	0	0	0
	<b>Total</b>	<b>20</b>	<b>20</b>	<b>40</b>	<b>100</b>



## INFERENCE

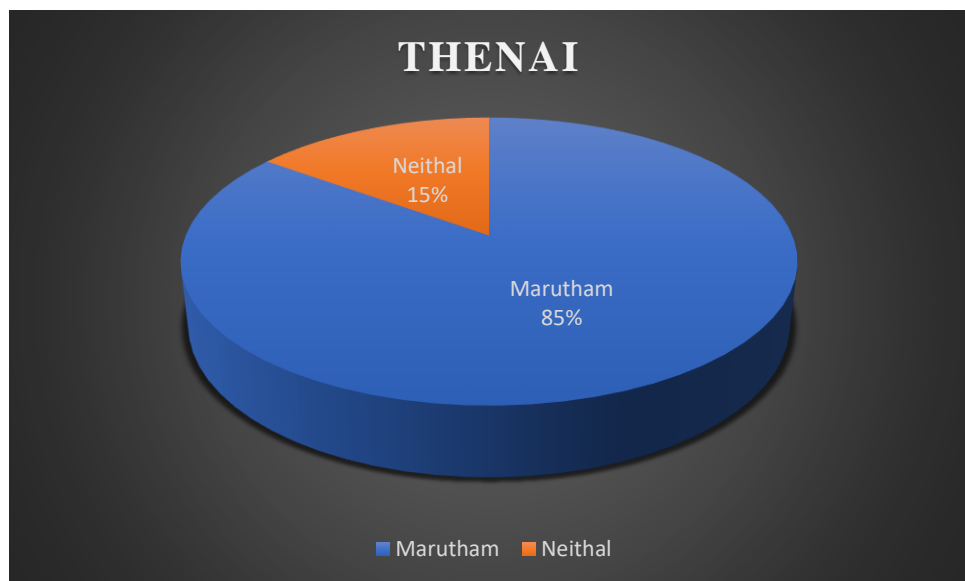
Among the 40 patients selected in this study, its shows the higher incidence was initiated to be 80% of cases were in the pitha kalam and 20% of cases were in the vatha kalam.



## THINAI:

TABLE:5.6

S.NO	THINAI (LAND)	NO. OF PATIENTS		TOTAL NO OF PATIENTS	PERCENTAGE(%)
		Group-I	Group-II		
1	Kurinji	0	0	0	0
2	Mullai	0	0	0	0
3	Marutham	19	15	34	85
4	Neithal	1	5	6	15
5	Paalai	0	0	0	0
	Total	20	20	40	100

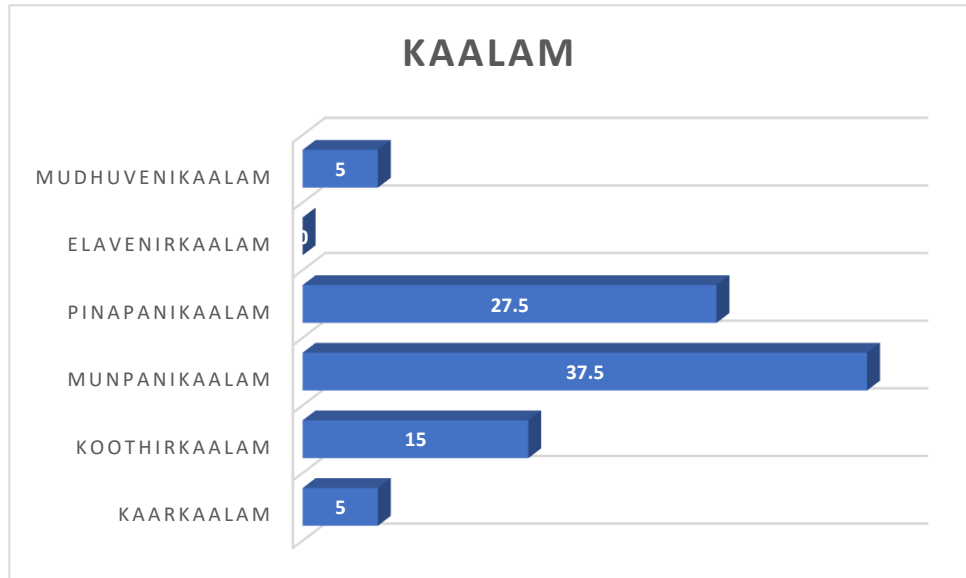


## INFERENCE:

According to Group I & Group II, Among the 40 patients 85% were from Marutham nilam and 15% cases were from Neithal nilam.

## PARUVAKAALAM

S.N O	Paruvakaalam	Month	No. of Patients		Total no of Patients	Percentage (%)
			Group-I	Group-II		
1	Kaarkaalam	Avani- Puratsai (15Aug -14 Oct)	1	1	2	5
2	Koothirkaalam	Ippasi-Karthigai (15 Oct - 14Dec)	1	5	6	15
3	Munpanikaalam	Marghazi- Thai (15 Dec - 14 Feb)	8	7	15	37.5
4	Pinapanikaalam	Maasi- Panguni (15Feb - 13 Apr)	7	4	11	27.5
5	Elavenirkaalam	Chitthirai- Vaigasi (14 Apr - 15 Jun)	0	0	0	0
6	Mudhuvenikaala M	Aani-Aadi (16 Jun- 14 Aug)	3	3	6	15
	<b>Total</b>		<b>20</b>	<b>20</b>	<b>40</b>	<b>100</b>

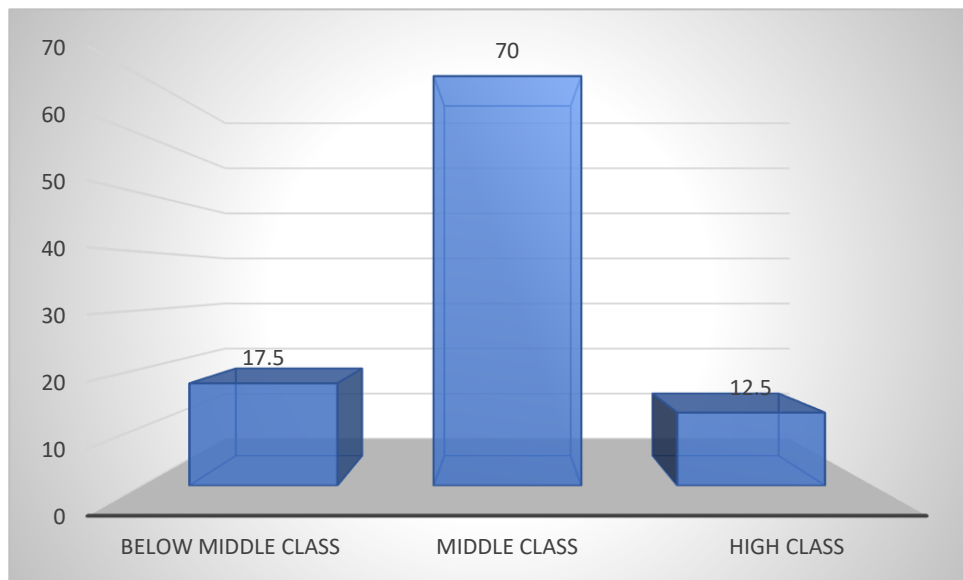


**INFERENCE:**

According to Group I & Group II Among 40 cases, 5% of patients were reported in Kaarkaalam, 15% of patients were reported in Koothirkaalam, 37.5% patients were reported in Munpanikaalam, 27.5% of patients were reported in Pinpanikaalam, 15% of patients were reported in Mudhuvnikaalam and 0% of patients were admitted in Elavenirkaalam.

## SOCIO-ECONOMIC STATUS:

S.No	Socio-Economical Status	No Of Patients		Total No of Patients	Percentage (%)
		Group-I	Group-II		
1	Below middle Class	3	4	7	17.5
2	Middle Class	13	15	28	70
3	High Class	4	1	5	12.5
	<b>TOTAL</b>	<b>20</b>	<b>20</b>	<b>40</b>	<b>100</b>

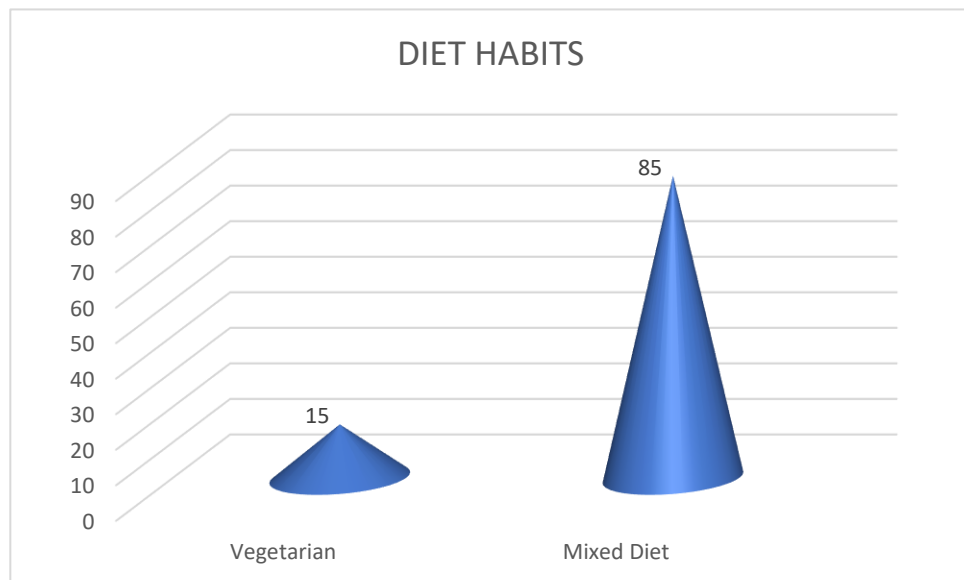


## INFERENCE

According to 40 patients, 17.5% of patients from Below middle class, 70% of patients from Middle class and 12.5% from High class.

**DIET HABIT:**

S.No	Diet Habits	No Of Patients		Total No of Patients	Percentage (%)
		Group-I	Group-II		
1	Vegetarian	2	4	6	15
2	Mixed Diet	18	16	34	85
	<b>Total</b>	<b>20</b>	<b>20</b>	<b>40</b>	<b>100</b>

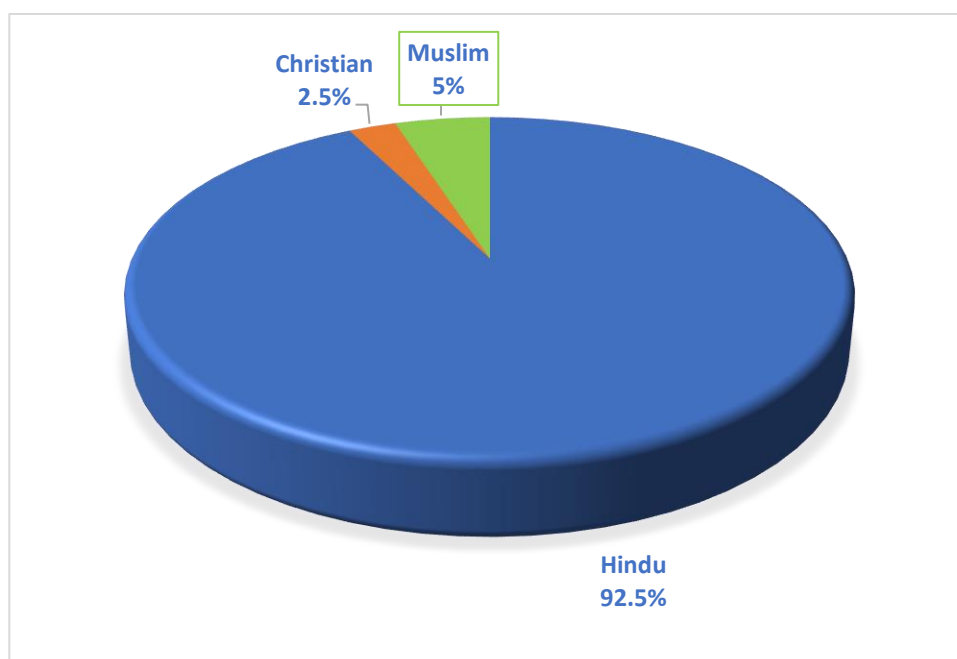


**INFERENCE:**

According to diet habits 15% of patients were took the vegetarian diet and 85% of the patients were took mixed diet.

## RELIGION DISTRIBUTION:

S.No	Religion	No Of Patients		Total No of Patients	Percentage (%)
		Group-I	Group-II		
1	Hindu	18	19	37	92.5
2	Christian	1	0	1	2.5
3	Muslim	1	1	2	5
	<b>Total</b>	<b>20</b>	<b>20</b>	<b>40</b>	<b>100</b>

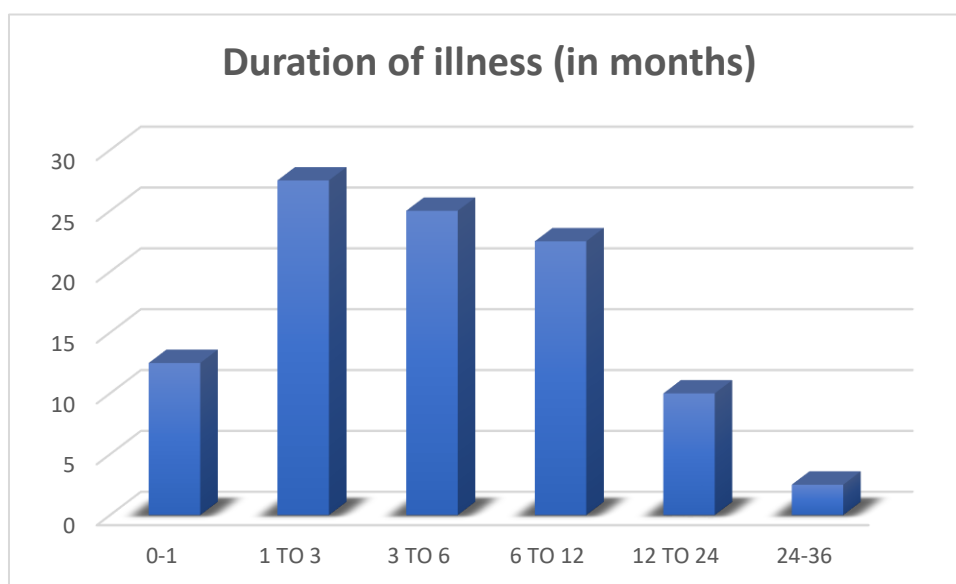


## INFERENCE

According to religion distribution, out of 40 patients, 92.5% patient belongs to hindu religion, 2.5% belongs to Christian religion and 5% belongs to muslim.

## DURATION OF ILLNESS:

S.No	Duration of Illness (In Months)	No Of Patients		Total No of Patients	Percentage (%)
		Group-I	Group-II		
1	0-1	2	3	5	12.5
2	1-3	5	6	11	27.5
3	3-6	7	3	10	25
4	6-12	4	5	9	22.5
5	12-24	2	2	4	10
6	24-36	0	1	1	2.5
	<b>TOTAL</b>	<b>20</b>	<b>20</b>	<b>40</b>	<b>100</b>

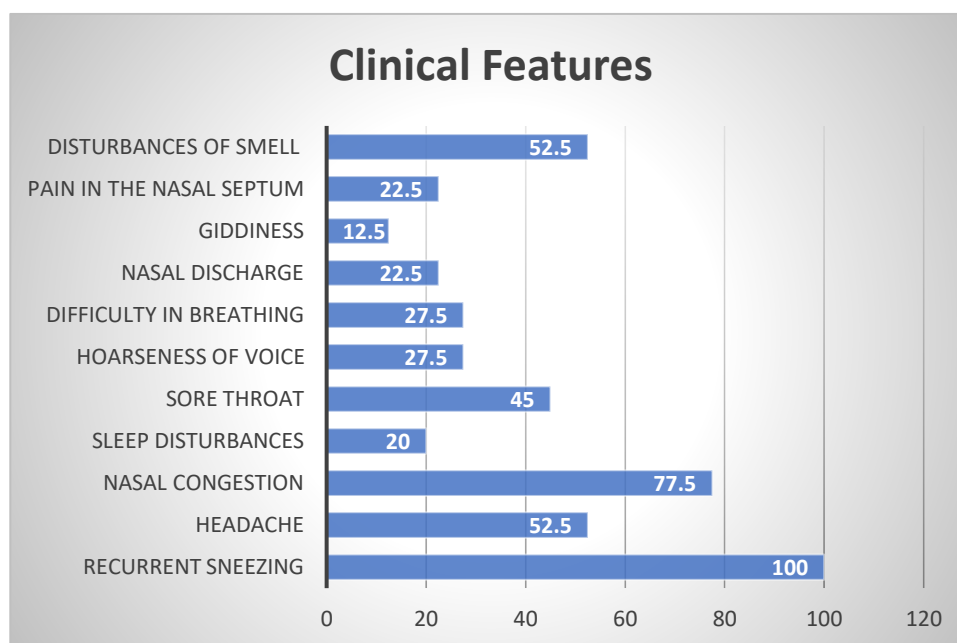


## INFERENCE

According to Group I & Group II. Out of 40 patients were got a symptoms from 0-1 month was 12.5%, 1-3 months 27.5%, 3-6 months 25 %,6 -12 months 22.5% ,12 – 24 months 10% and 24-36 months 2.5% patients were reported.

## CLINICAL MANIFESTATIONS:

S.No	Clinical Features	No Of Patients		Total No of Patients	Percentage (%)
		Group-I	Group-II		
1	Recurrent sneezing	20	20	40	100
2	Headache	9	12	21	52.5
3	Nasal congestion	14	17	31	77.5
4	Sleep disturbances	3	5	8	20
5	Sore throat	6	12	18	45
6	Hoarseness of voice	2	9	11	27.5
7	Difficulty in breathing	4	7	11	27.5
8	Nasal discharge	3	6	9	22.5
9	Giddiness	1	4	5	12.5
10	Pain in the nasal septum	2	7	9	22.5
11	Disturbances of smell	9	12	21	52.5



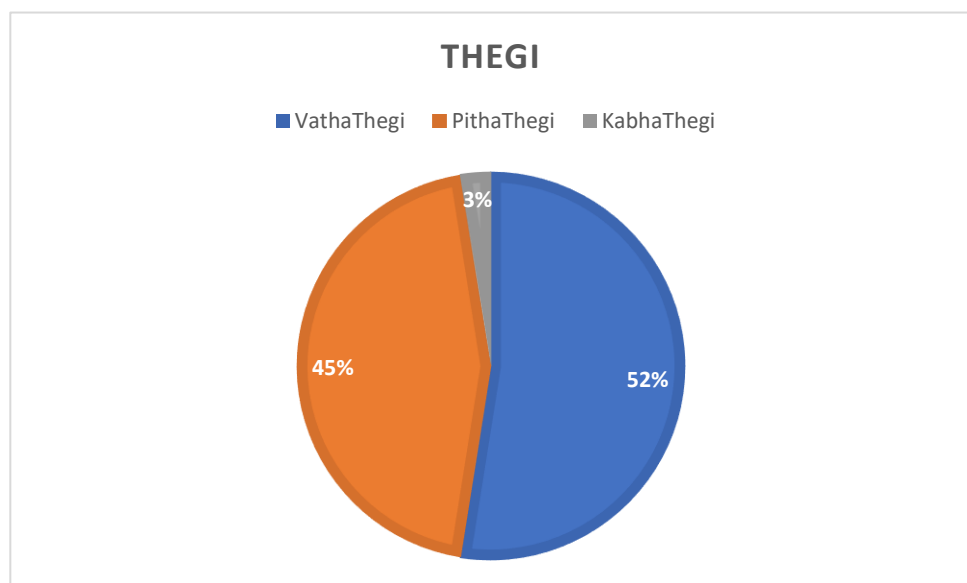
## INFERENCE:

According to Group I & Group II, all the 40 cases, had Recurrent sneezing 100%, Headache 52.5%, Nasal congestion 77.5%, Sleep disturbances 20%, Sore throat 45%, Difficulty in breathing 27.5%, Hoarseness of voice 27.5%, Pain in nasal septum 22.5%, Giddiness 12.5%, Nasal discharge 22.5% and Nasal discharge 22.5%.



## THEGI :

S.No	Thegi	No Of Patients		Total No of Patients	Percentage (%)
		Group-I	Group-II		
1	VathaThegi	12	9	21	52.5
2	PithaThegi	7	11	18	45
3	KabhaThegi	1	0	1	2.5
	<b>Total</b>	<b>20</b>	<b>20</b>	<b>40</b>	<b>100</b>

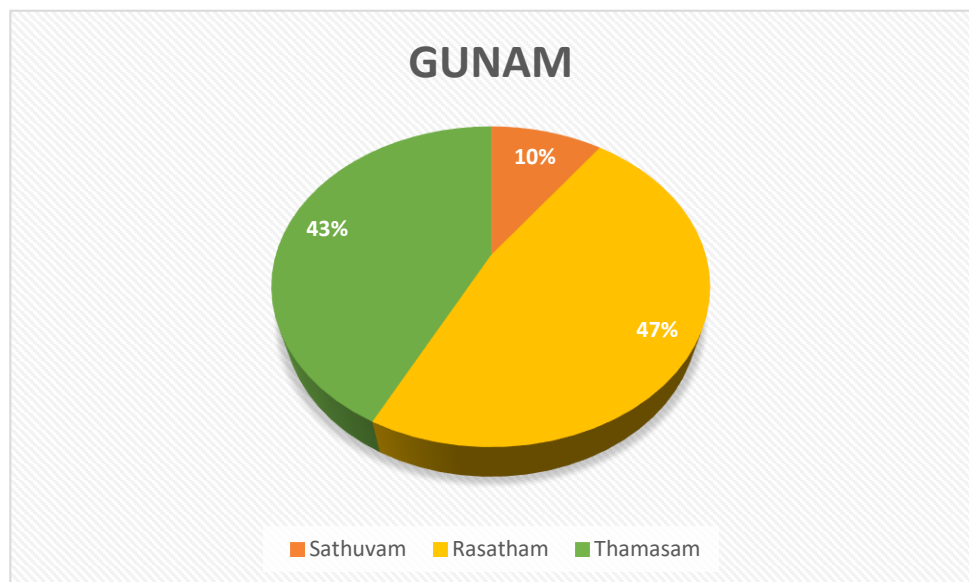


## INFERENCE

Out of 40 % patients, 52.5% of patients were vatha thegi, 45% were pitha thegi and 2.5% were kabha thegi.

## GUNAM:

S.No	Gunam	No Of Patients		Total No of Patients	Percentage (%)
		Group-I	Group-II		
1	Sathuvam	3	1	4	10
2	Rasatham	7	12	19	47.5
3	Thamasam	10	7	17	42.5
	<b>Total</b>	<b>20</b>	<b>20</b>	<b>40</b>	<b>100</b>

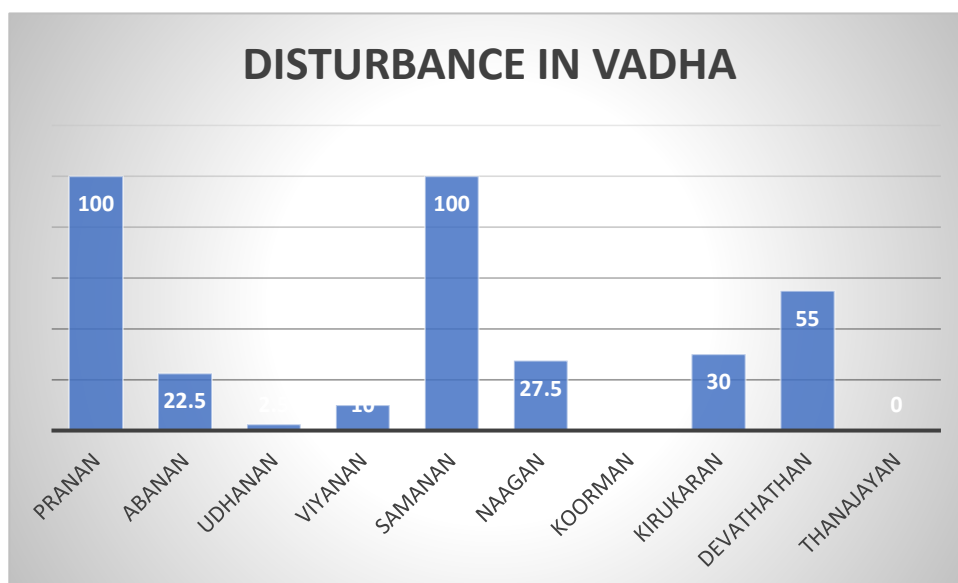


## INFERENCE

Among the 40 patients, 10% patients have sathva gunam, 47.5% have rasatha gunam, 42.5% have thamasa gunam.

## DISTURBANCE IN VATHAM:

S.No	Vatham	No Of Patients		Total No of Patients	Percentage (%)
		Group-I	Group-II		
1	Pranan	20	20	40	100
2	Abanan	4	5	9	22.5
3	Udhanan	1	0	1	2.5
4	Viyanan	2	2	4	10
5	Samanan	20	20	40	100
6	Naagan	5	6	11	27.5
7	Koorman	0	0	0	0
8	Kirukaran	7	5	12	30
9	Devathathan	10	12	22	55
10	Thanajayan	0	0	0	0

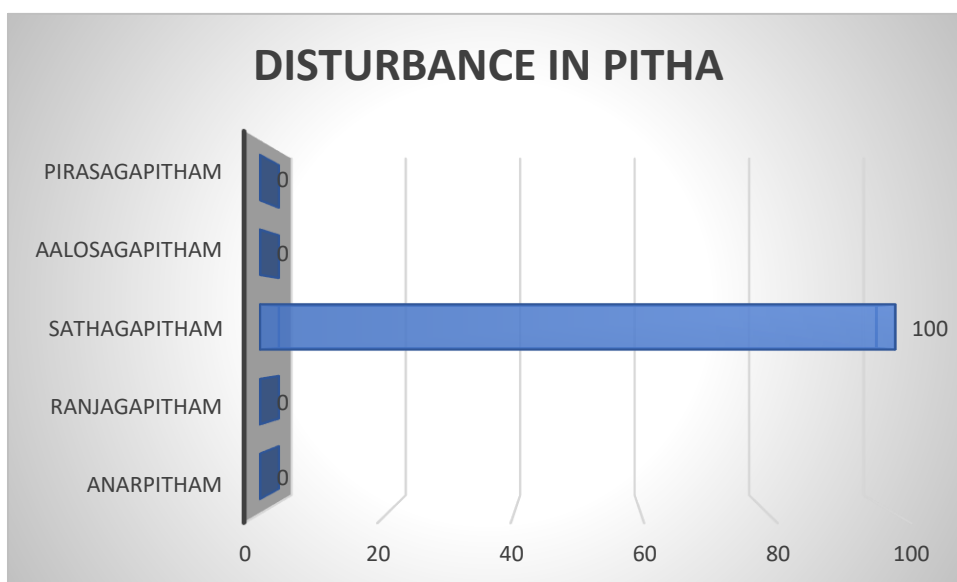


## INFERENCE

According to Group I & Group II ,Among the 40 Patients were examined by 10 types of vatham.Hence Abanan deranged for 22.5% of patients, Pranan deranged for 100%,udhanan deranged for 2.5%, Samanan deranged for all the 100% of patients and Devathathan was abnormal in 55%.

## DISTURBANCE IN PITHAM:

S.No	Pitham	No Of Patients		Total No of Patients	Percentage (%)
		Group-I	Group-II		
1	Anarpitham	0	0	0	0
2	Ranjagapitham	0	0	0	0
3	Sathagapitham	20	20	40	100
4	Aalosagapitham	0	0	0	0
5	Pirasagapitham	0	0	0	0

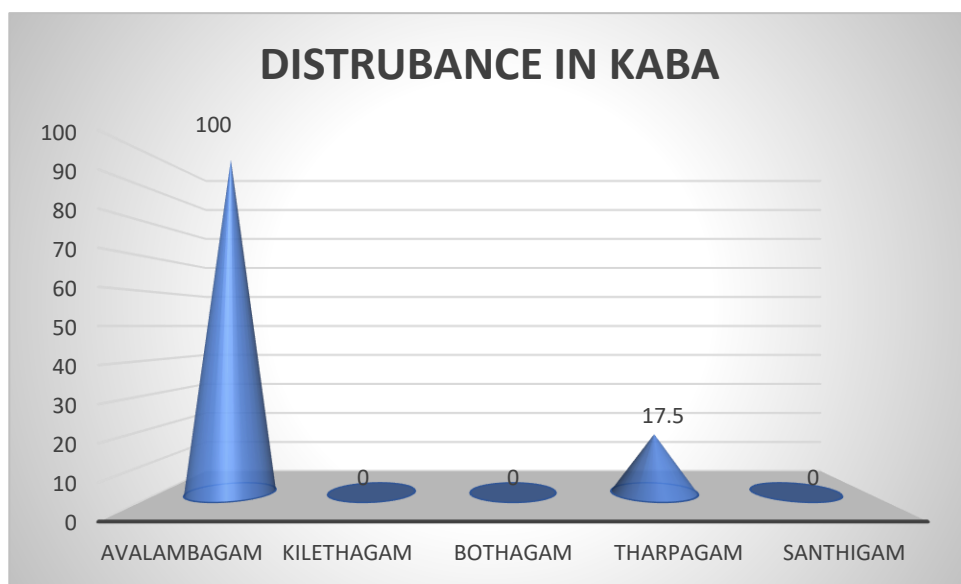


## INFERENCE:

According to Group I & Group II, In Pitham examination Sathagapitham affected for all the patients 100%.

## DISTURBANCE IN KABAM:

S.No	Kabam	No Of Patients		Total No of Patients	Percentage (%)
		Group-I	Group-II		
1	Avalambagam	20	20	40	100
2	Kilethagam	0	0	0	0
3	Bothagam	0	0	0	0
4	Tharpagam	4	3	7	17.5
5	Santhigam	0	0	0	0

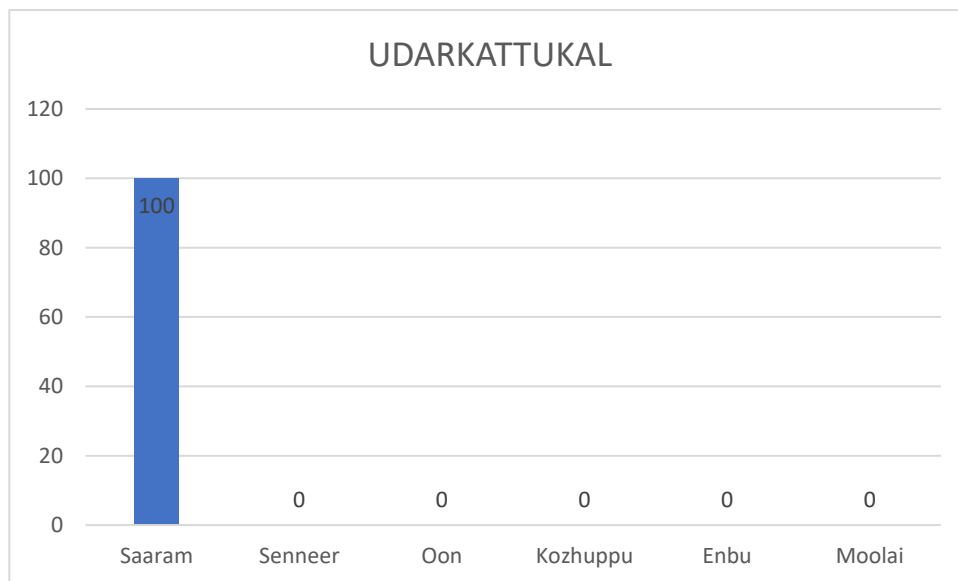


## INFERENCE

By the Examination of Kabam, Avalambagam and Santhigam deranged for all the 40 patients, Tharpagam deranged for 17.5%.

**UDAL THATHUKKAL:**

S.No	UdalThathukkal	No Of Patients		Total No of Patients	Percentage (%)
		Group-I	Group-II		
1	Saaram	20	20	40	100
2	Senneer	0	0	8	0
3	Oon	0	0	0	0
4	Kozhuppu	0	0	0	0
5	Enbu	0	0	0	0
6	Moolai	0	0	0	0
7	Sukkilam/Suronitham	Normal	Normal	Normal	Normal

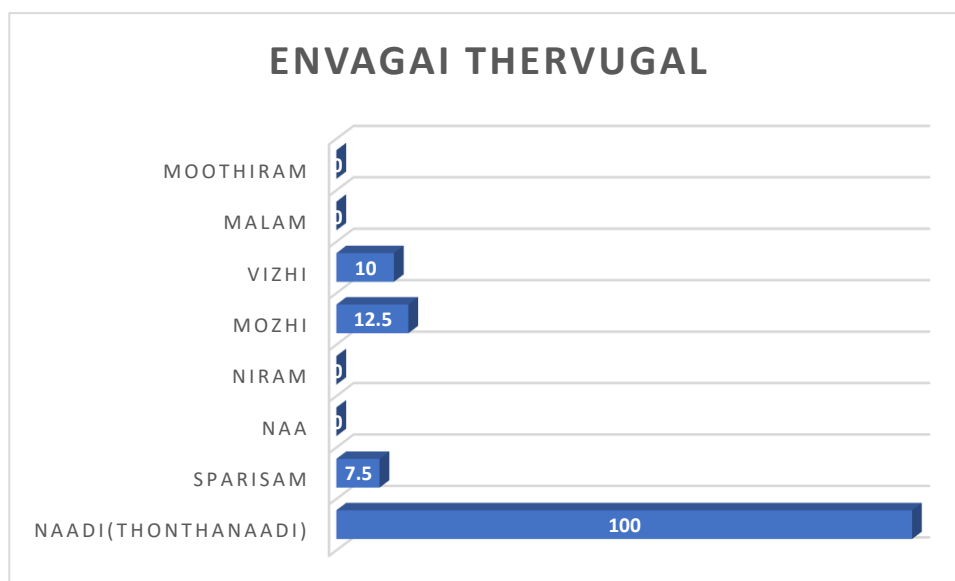


**INFERENCE**

According to Group I & Group II, 40 patients were examined by Saaram affected for 100%.

## ENVAGAI THERVUGAL:

S.No	EnvagaiThervugal	No Of Patients		Total No of Patients	Percentage (%)
		Group-I	Group-II		
1	Naadi(Thonthanaadi)	20	20	40	100
2	Sparisam	2	1	3	7.5
3	Naa	0	0	0	0
4	Niram	0	0	0	0
5	Mozhi	2	3	5	12.5
6	Vizhi	2	2	4	10
7	Malam	0	0	0	0
8	Moothiram	0	0	0	0

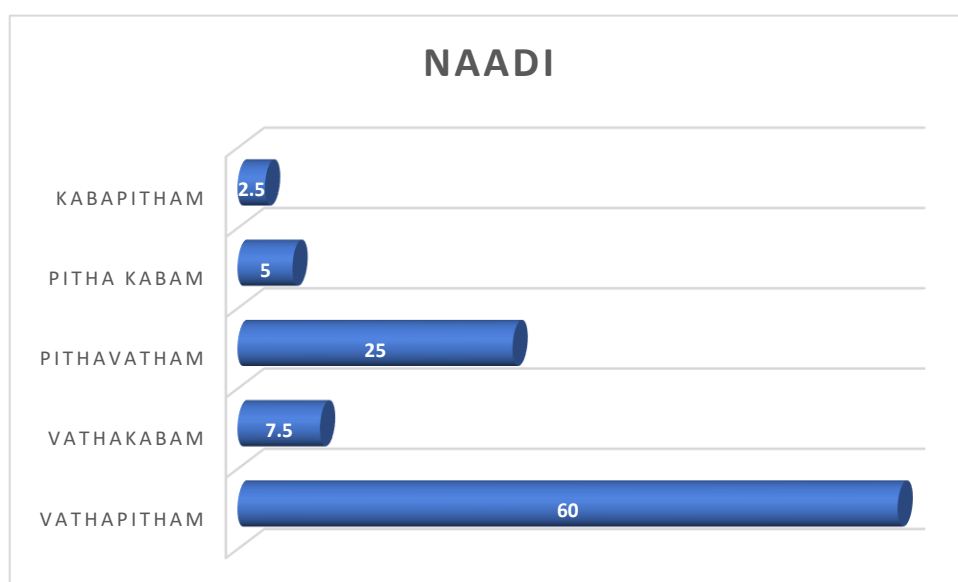


## INFERENCE

According to Envagaithervugal thontha naadi was noted in all 40 cases, mozhi was affected in 22.5% of cases, sparisam affected in 7.5% of cases.

## NAADI (PULSE READING):

S.No	Parameters	No Of Patients		Total No of Patients	Percentage (%)
		Group-I	Group-II		
1	VathaPitham	11	13	24	60
2	VathaKabam	2	1	3	7.5
3	PithaVatham	7	3	10	25
4	Pitha Kabam	0	2	2	5
5	KabaPitham	0	1	1	2.5



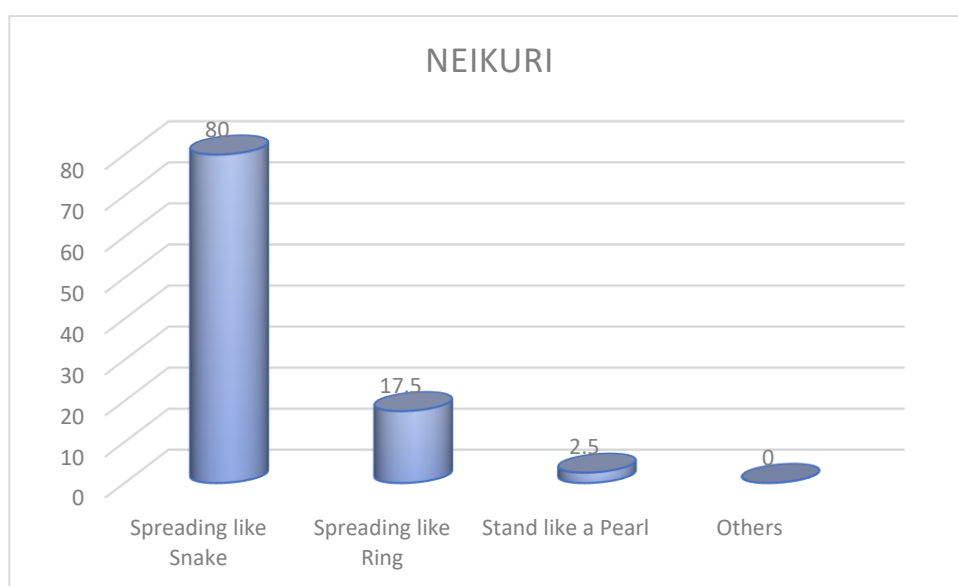
## INFERENCE

As mentioned above thontha naadi was noted in all cases and among them 60% were vatha pitha naadi, 25% were pitha vatha naadi, 7.5% were vatha kaba naadi, 5% were pithakaba naadi & 2.5% were Kabapitham.



## NEIKURI :

S.No	Inference	No Of Patients		Total No of Patients	Percentage (%)
		Group-I	Group-II		
1	Spreading like Snake	15	17	32	80
2	Spreading like Ring	4	3	7	17.5
3	Stand like a Pearl	1	0	1	2.5
4	Others	0	0	0	0
	<b>Total</b>	<b>20</b>	<b>20</b>	<b>40</b>	<b>100</b>

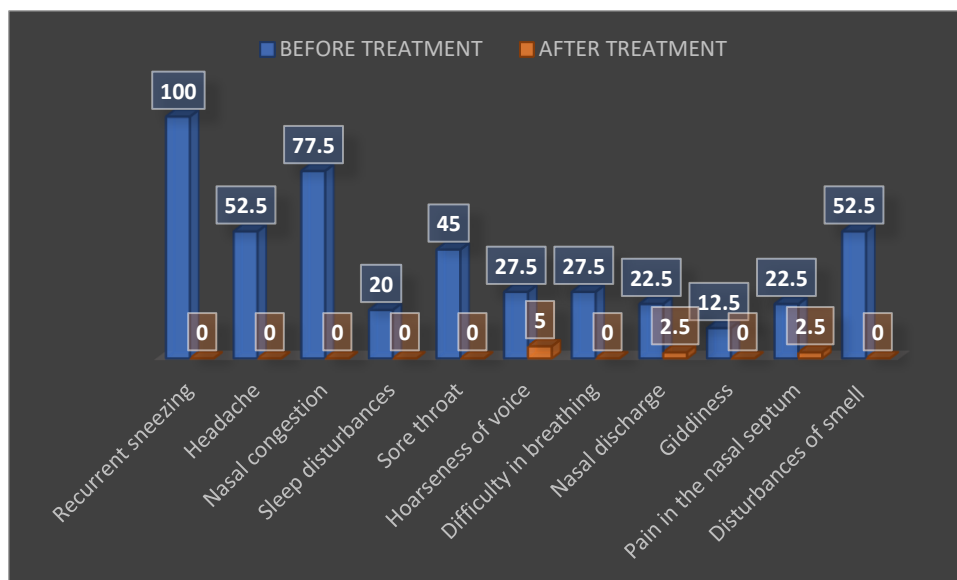


## INFERENCE

In neikuri examintaion 80% of the patients with vatha neer, 17.5% with pitha neer and 2.5% with kaba neer.

**PROGRESS CHART :**

S.No	Clinical Features	Before Treatment		After Treatment	
		No of Patients	Percentage (%)	No of Patients	Percentage (%)
1	Recurrent sneezing	40	100	0	0
2	Headache	21	52.5	0	0
3	Nasal congestion	31	77.5	0	0
4	Sleep disturbances	8	20	0	0
5	Sore throat	18	45	2	5
6	Hoarseness of voice	11	27.5	0	0
7	Difficulty in breathing	11	27.5	1	2.5
8	Nasal discharge	9	22.5	0	0
9	Giddiness	5	12.5	0	0
10	Pain in the nasal septum	9	22.5	0	0
11	Disturbances of smell	21	52.5	0	0



**EFFECT OF THERAPY BASED ON LIKERTS SCORING  
METHOD :**

**A. GROUP –I SIDDHAR YOGAM THERAPY:**

<b>S.NO</b>	<b>BT</b>	<b>AT</b>	<b>PROGNOSIS</b>
1.	++	-	Good
2.	+++	++	Moderate
3.	+++	++	Mild
4.	+++	-	Good
5.	+++	+	Moderate
6.	++	+	Mild
7.	++	-	Good
8.	+++	+	Moderate
9.	++	-	Good
10.	+++	-	Good
11.	+	-	Good
12.	+++	-	Moderate
13.	++	-	Good
14.	+	-	Good
15.	+++	-	Good
16.	+++	+	Moderate
17.	++	-	Good
18.	+++	+	Mild
19.	++	-	Moderate
20.	++	-	Good

NOTE:

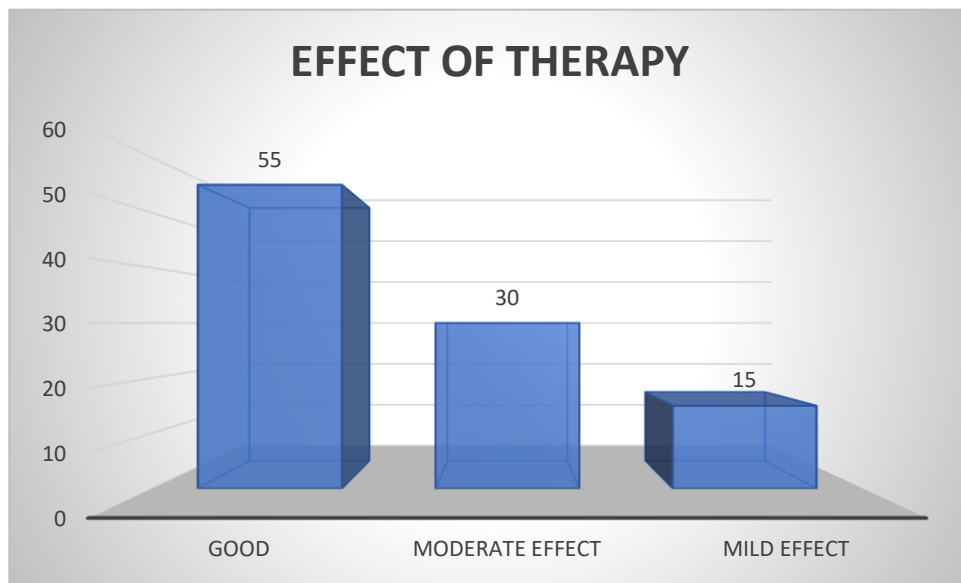
NIL -

MILD +

MODERATE ++

## EFFECT OF SIDDHAR YOGAM THERAPY ALONE.

S.No.	Effect of therapy	No of patients	Percentage (%)
1	Good	11	55
2	Moderate effect	6	30
3	Mild effect	3	15



### INFERENCE

Thus from the analysis of the data collected during the course of treatment effect of yoga therapy are good effect in 11 cases (55%), moderate effect in 6 cases (30%), mild effect in 15 cases (3%)

## EFFECT OF THERAPY BASED ON LIKERTS SCORING METHOD:

### B .GROUP – II INTERNAL MEDICINE :

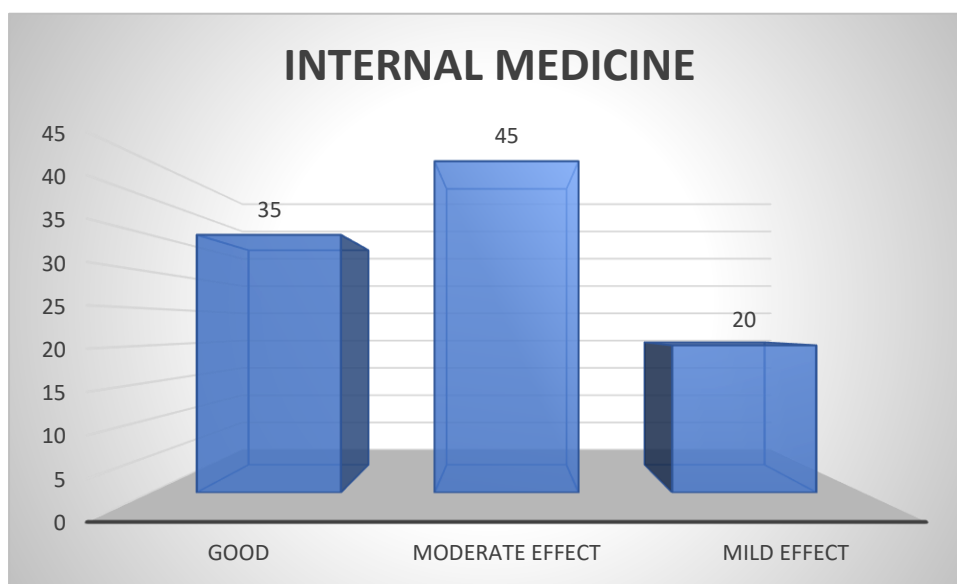
S.NO	BT	AT	PROGNOSIS
1.	++	-	Good
2.	+++	++	Moderate
3.	+++	++	Mild
4.	+++	-	Good
5.	+++	+	Moderate
6.	++	+	Mild
7.	++	-	Good
8.	+++	+	Moderate
9.	++	-	Moderate
10.	+++	-	Good
11.	+	-	Good
12.	+++	-	Moderate
13.	++	-	Mild
14.	+	-	Moderate
15.	+++	+	Moderate
16.	+++	+	Moderate
17.	++	-	Good
18.	+++	+	Mild
19.	++	-	Moderate
20.	++	-	Good

#### NOTE:

NIL -  
MILD +  
MODERATE ++  
SEVERE +++

## EFFECT OF INTERNAL MEDICINE ALONE

S.No.	Effect of therapy	No of patients	Percentage (%)
1	Good	7	35
2	Moderate effect	9	45
3	Mild effect	4	20

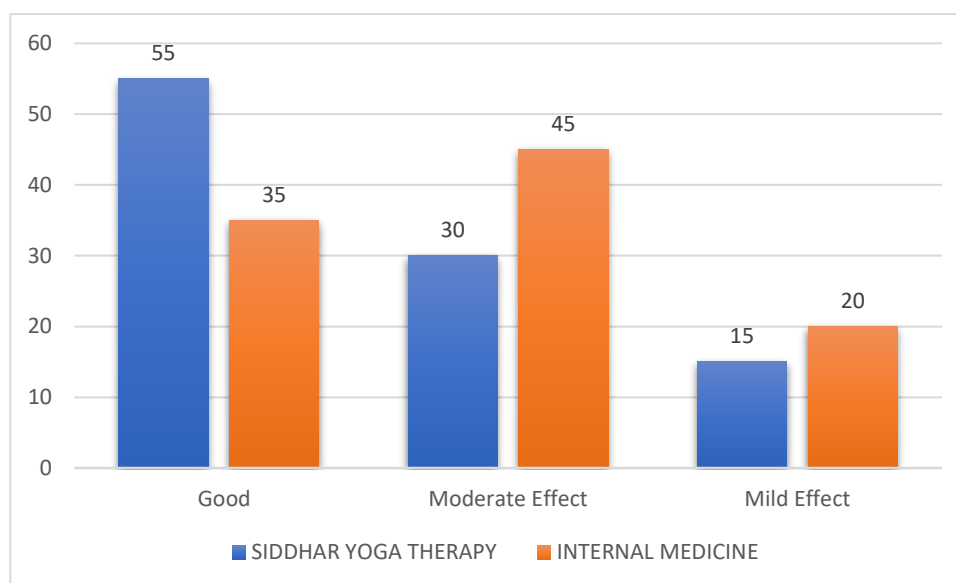


## INFERENCE

Thus from the analysis of the data collected during the course of treatment effect of internal medicine are good effect in 7 cases (35%), moderate effect in 9 cases (45%), mild effect in 4 cases (20%)

**ANALOGY OF EFFECTIVENESS OF GROUP – I & GROUP – II :**

S.No	Analogy of Effectiveness of Group-I and Group-II	SiddharYogam Therapy Alone GROUP-I		Internal Medicine alone GROUP-II	
		No of Patients	Percentage (%)	No Of Patients	Percentage (%)
1	Good	11	55	7	35
2	Moderate Effect	6	30	9	45
3	Mild Effect	3	15	4	20



**Inference:**

The comparison between yoga therapy alone and internal medicine alone Kandankathiri samoolam. Yoga therapy is effective than internal medicine

**QUALITATIVE AND QUANTITATIVE ANALYSIS BIOCHEMICAL  
ANALYSIS OF SIDDHA MONOHERBAL DRUG KANDANKATHIRI  
SAMOOLA CHOORANAM**

**PREPARATION OF THE EXTRACT:**

5gms of the drug was weighed accurately and placed in a 250ml clean beaker then 50ml of distilled water is added and dissolved well. Then it is boiled well for about 10 minutes. It is cooled and filtered in a 100ml volumetric flask and then it is made to 100ml with distilled water. This fluid is taken for analysis.

**QUALITATIVE ANALYSIS**

S.No	EXPERIMENT	OBSERVATION	INFERENCE
01	<b>TEST FOR CALCIUM</b> 2ml of the above prepared extract is taken in a clean test tube. To this add 2ml of 4% Ammonium oxalate solution	No white precipitate is formed	Absence of calcium
02	<b>TEST FOR SULPHATE</b> 2ml of the extract is added to 5% Barium chloride solution.	A white precipitate is formed	Indicates the presence of sulphate
03	<b>TEST FOR CHLORIDE</b> The extract is treated with silver nitrate solution	A white precipitate is formed	Indicates the Presence of chloride
04	<b>TEST FOR CARBONATE</b> The substance is treated with concentrated Hcl.	No brisk effervescence is Formed	Absence of carbonate
05	<b>TEST FOR STARCH</b> The extract is added with weak iodine solution	NoBlue colour is formed	Absence of starch
06	<b>TEST FOR FERRIC IRON</b> The extract is acidified with Glacial acetic acid and potassium ferro cyanide.	No blue colour is formed	Absence of ferric iron



07	<p align="center"><b>TEST FOR FERROUS IRON</b></p> <p>The extract is treated with concentrated Nitric acid and Ammonium thiocyanate solution</p>	Blood red colour is formed	Indicates the presence of ferrous iron
08	<p align="center"><b>TEST FOR PHOSPHATE</b></p> <p>The extract is treated with Ammonium Molybdate and concentrated nitric acid</p>	No yellow precipitate is formed	Absence of phosphate
09	<p align="center"><b>TEST FOR ALBUMIN</b></p> <p>The extract is treated with Esbach's reagent</p>	No yellow precipitate is formed	Absence of albumin
10	<p align="center"><b>TEST FOR TANNIC ACID</b></p> <p>The extract is treated with ferric chloride.</p>	No blue black precipitate is formed	Absence of Tannic acid
11	<p align="center"><b>TEST FOR UNSATURATION</b></p> <p>Potassium permanganate solution is added to the extract</p>	It gets decolourised	Indicates the presence of unsaturated compound
12	<p align="center"><b>TEST FOR THE REDUCING SUGAR</b></p> <p>5ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 minutes and add 8-10 drops of the extract and again boil it for 2 minutes.</p>	No colour change occurs	Absence of reducing sugar
13	<p align="center"><b>TEST FOR AMINO ACID</b></p> <p>One or two drops of the extract is placed on a filter paper and dried well. After drying, 1% Ninhydrin is sprayed over the same and dried it well.</p>	Violet colour is formed	Indicates the presence of Amino acid
14	<p align="center"><b>TEST FOR ZINC</b></p> <p>The extract is treated with Potassium Ferrocyanide.</p>	No white precipitate is formed	Absence of zinc

**INFERENCE:**

The Biochemical analysis of the trial drug kandankathiri samoolam was tabulated above in table.

The trial drug, kandankathiri samoola chooranam contains,

- Sulphate
  
- Chloride
  
- Ferrous Iron
  
- Unsaturated Compounds
  
- Amino acid

## 6. DISCUSSION

Sinusitis refers to an inflammatory condition involving the four paired structures surrounding the nasal cavities. Although most cases of Sinusitis involve more than one sinus, the maxillary sinus is most commonly involved; next, in order of frequency, are the ethmoid, frontal, and sphenoid sinuses. Each sinus is lined with a respiratory epithelium that produces mucus, which is transported out by ciliary action through the sinus ostium and into nasal cavity. Sinusitis affects a tremendous amount of proportion of the population, accounts for millions of visits to primary care physicians each year and is the fifth leading diagnosis for which antibiotics are prescribed.

### **Symptoms:**

- Headache
- Recurrent sneezing
- Facial pain
- Nasal discharge
- Breathing difficulty
- Nasal congestion

The trial drug given below was used in treating the disease Peenisam the trial drug are **SIDDHAR YOGAM THERAPHY [EXTERNAL]** and siddha medicine **KANDANKATHIRI SAMOOLA CHOORANAM [INTERNAL]** .

The clinical approval was done as per the protocol and the data were collected by using approved forms. The disease Peenisam as considered under various criteria to gather the secondary objectives of the study and the result were observed and tabulated. A variety of criteria and the result were discussed here under.

### **SELECTION OF PATIENTS:**

50% of patients were selected for Group I and 50% for Group- II

### **GENDER DISTRIBUTION:**

According to Group I & Group II , out of 40 patients 40% were male and 60% were female.

**AGE DISTRIBUTION:**

Out of 40 patients, 10% of patients under the 15-25years,25% of patients were in 26-35 years, 32.5% were 36 – 45 age group,17.5% were in 46 – 55 age group,15% were 56-65 age group. Higher incidence of affected age group is 36-45.

**OCCUPATION:**

According to Group I & Group II, out of 40 cases, in this study the rate of incidence is higher in house wife's 15%, cook 2.5%, Tailors in 2.5%, shopkeeper 5%, Teachers 7.5%, coolie 20%, driver 7.5%, electrician 2.5%, security 2.5%, student 15%, farmer 5%,sales man 5%,typist 2.5%,plumber 2.5%,hotel server 2.5%,police 2.5%.

**KAALAM:**

Among the 40 patients selected in this study, its shows the higher incidence was initiated to be 80% of cases were in the pitha kalam and 20% of cases were in the vatha kalam.

**THINAI:**

According to Group I & Group II, Among the 40 patients 85% were from Marutham nilam and 15% cases were from Neithal nilam.

**PARUVAKAALAM:**

According to Group I & Group II Among 40 cases, 5% of patients were reported in Kaarkaalam, 15% of patients were reported in Koothirkaalam, 37.5% patients were reported in Munpanikaalam, 27.5% of patients were reported in Pinpanikaalam, 15% of patients were reported in Mudhuvanirkaalam and 0% of patients were admitted in Elavenirkaalam.

**SOCIO-ECONOMIC STATUS:**

According to 40 patients, 17.5% of patients from Low class, 70% of patients from Middle class and 12.5% from High class

**DIET HABIT:**

According to diet habits 15% of patients were took the vegetarian diet and 85% of the patients were took mixed diet.

**RELIGION DISTRIBUTION:**

According to religion distribution, out of 40 patients, 92.5% patient belongs to hindu religion, 2.5% belongs to Christian religion and 5% belongs to muslim.

**DURATION OF ILLNESS:**

According to Group I & Group II. Out of 40 patients were got a symptom from 0-1 month was 12.5%, 1-3 months 27.5%, 3-6 months 25 %,6 -12 months 22.5% ,12 – 24 months 10% and 24-36 months 2.5% patients were reported.

**CLINICAL MANIFESTATIONS:**

According to Group I & Group II, all the 40 cases, had Recurrent sneezing 100%, Headache 52.5%, Nasal congestion 77.5%, Sleep disturbances 20%, Sore throat 45%, Difficulty in breathing 27.5%, Hoarseness of voice 27.5%, Pain in nasal septum 22.5%, Giddiness 12.5%, Nasal discharge 22.5% and Nasal discharge 22.5%.

**THEGI :**

Out of 40 % patients, 52.5% of patients were vatha thegi, 45% were pitha thegi and 2.5% were kabha thegi.

**GUNAM:**

Among the 40 patients, 10% patients have sathva gunam, 47.5% have rasatha gunam, 42.5% have thamasa gunam.

**DISTURBANCE IN VATHAM:**

According to Group I & Group II ,Among the 40 Patients were examined by 10 types of vatham. Hence Abanan deranged for 22.5% of patients, Pranana deranged for 100%,udhanan deranged for 2.5%, Samanan deranged for all the 100% of patients and Devathathan was abnormal in 55%.

**DISTURBANCE IN PITHAM:**

According to Group I & Group II, In Pitham examination Sathagapitham affected for all the patients 100%.

**DISTURBANCE IN KABAM:**

By the Examination of Kabam, Avalambagam and Santhigam deranged for all the 40 patients, Tharpagam deranged for 17.5%.

**UDAL THATHUKKAL:**

According to Group I & Group II, 40 patients were examined by Saaram affected for 100%.

**ENVAGAI THERVUGAL:**

According to Envagaithervugal thontha naadi was noted in all 40 cases, mozhi was affected in 22.5% of cases, sparisam affected in 7.5% of cases

**NAADI (PULSE READING):**

As mentioned above thontha naadi was noted in all cases and among them 60% were vatha pitha naadi, 25% were pitha vatha naadi, 7.5% were vatha kaba naadi, 5% were pithakaba naadi & 2.5% were Kabapitham.

**NEIKURI :**

In neikuri examintaion 80% of the patients with vatha neer, 17.5% with pitha neer and 2.5% with kaba neer.

**Pre-Clinical Studies:**

The Biochemical study of Medicine KANDANKATHIRI SAMOOLA CHOORANAM had revealed the presence of Chloride, Ferrous Iron, Sulphate, Amino acid, Ferrous Iron and unsaturated compound in it.

**Treatment:**

The treatment was aimed to retain the deranged dhosham and providing relief from symptoms. The author treated the patients with trial drug KANDANKATHIRI SAMOOLA CHOORANAM (Internal Medicine) 2-4 GM BD and SIDDHAR YOGAM THERAPY. In this Study patients fulfilling criteria of clinical information sheet, were recruited to group I and group II containing 20 cases in each group. First 20 patients were subjected to Group I treatment protocol and second 20 patients were subjected to Group II treatment protocol. GROUP I(GI) Siddhar yogam therapy alone. GROUP II (GII) treating by Kandankathiri samoola chooranam were treated as Opd and Ipd.

During treatment, the patients were advised to follow pathiyam (avoid tarmarind, tubers, meat etc). But all aspects of pathiyam could not be imposed due to practical difficulties.

## 7. SUMMARY

A collective study of the disease Peenisam is made covering the all aspect of the disease enclosing siddha and modern aspect. Study during drug standardised are botanical, biochemical, these are supportive of trial drug for our peenisam.

40 cases with peenisam were diagnosed clinically, every 20 patients havereceived Siddhar yogam therapy alone (Pranayamam, Trikonasanam, Bhujanasanam and savasana) and another 20 patients have received Siddha internal medicine Kandankathiri samoola chooranam and all the patients observed for clinical diagnosis, laboratory investigations and treating of trial medicine.

The peak age incidence of peenisam 30-55 years age group. Clinical diagnosis of the above disease was done on the basis of clinical features described in Siddha maruthuvam. Before admission for study their careful detailed history of the sufferings, duration, their occupation, nativity etc, are elicited for the 40 patients.

Biochemical analysis of Kandankathiri samoola chooranam shows that the presence of Chloride, Sulphate, Amino acid, Ferrous Iron and unsaturated compound in it.

During treatment all the patients keep under pathiyam and a specific dietary regiment, It has been clearly mentioned in review of siddha literature. Daily improvement was observed to assess the efficacy.

S.No	Analogy of Effectiveness of Group-I and Group-II	Siddhar Yoga Therapy GROUP-I		Internal Medicine GROUP-II	
		No of Patients	Percentage (%)	No Of Patients	Percentage (%)
1	Good	11	55	7	35
2	Moderate Effect	6	30	9	45
3	Mild Effect	3	15	4	20

The result obtained were found to be Siddhar yoga therapy is effective. No adverse reactions were found, Hence the trial drug was found to safe and effective.

## 8. CONCLUSION

40 patients (Both OPD and IPD with as comparative study with trial medicine) were treated for this dissertation work . Siddhar yogam therapy alone for 20 patients and Kandankathiri samoola chooranam (Int) for 20 patients.

The clinical study shows significant decrease in the symptoms of the disease. The Siddhar yoga therapy gives a good confidence in the management of Peenisam and economically very low cost. No contra indication was noted in the course of treatment.

<b>S.NO</b>	<b>EFFECTIVENESS OF GROUP I AND GROUP II</b>	<b>GROUP I SIDDHAR YOGA THERAPY PERCENTAGE (%)</b>	<b>GROUP II INTERNAL MEDICINE PERCENTAGE (%)</b>
1	GOOD	55	35
2	MODERATE EFFECT	30	45
3	MILD	15	20

Finally concluded that the trial medicine Siddhar yogam therapy is effective than Kandankathiri Samoola Chooranam in the treatment of Peenisam.



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**CASE PRESENTATION SUMMARY OF OUT PATIENT AND IN PATIENT IN BRANCH – IX, SIDDHAR  
YOGA MARUTHUVAM DEPARTMENT SIDDHAR YOGAM THERAPY(GROUP-I)**

S. NO.	OPD/IPD	OP NO.	NAME	AGE/SEX	OCCUPTION	DATE OF REGISTRATION	DATE OF COMPLETION OF TREATMENT	NO. OF DAYS TREATED	RESULT
1	OPD	39995	MR.SUNDAR	39/M	SALESMAN	30-07-2021	13-08-2021	15	MODERATE
2	OPD	40279	MR.NAYANAR	28/M	STUDENT	31.07.2021	18-08-2021	19	GOOD
3	OPD	6917	MRS.MOHANA	27/F	STUDENT	24.01.2022	08.02.2022	16	MILD
4	OPD	9134	MR.SARAVANAN	35/M	PLUMBER	02.02.2022	08.03.2022	35	GOOD
5	OPD	10211	MR.GANESAN	42/M	ELECTRICIAN	07.02.2022	07.03.2022	29	MODERATE
6	OPD	11888	MR..KANMANI	40/F	HOUSEWIFE	15.02.2022	15.03.2022	32	MILD
7	OPD	20354	MR. SHANKAR	35/M	COOLIE	21.03.2022	15.04.2022	26	GOOD
8	OPD	20774	MR. JEEVA	32/M	POLCE	22.03.2022	28.04.2022	38	MODERATE
9	OPD	20812	MRS. KAVTHA	35/F	HOUSEWIFE	27.03.2022	18.04.2022	23	GOOD
10	OPD	6409	MRS.MARY	35/F	TEACHER	22.01.2022	23.02.2022	33	GOOD
11	OPD	2837	MR.RAJESH	25/M	STUDENT	19.01.2022	26.01.2022	18	MILD
12	OPD	9131	MRS.SANTHANAM	35/F	SALESWOMAN	05.02.2022	17.03.2022	40	GOOD
13	OPD	13542	MRS.KAMALINI	21/F	STUDENT	22-02-2022	24-03-2022	31	MODERATE
14	OPD	14394	MR.ABDHUL	23/M	STUDENT	25-02-2022	15-03-2022	19	MODERATE
15	OPD	14835	MR.BASKAR	41/M	DRIVER	26-02-2022	30-03-2022	33	GOOD
16	IPD	911	MRS.LAKSHMI	37/F	SHOPKEEPER	14-07-2021	09-08-2021	26	GOOD
17	IPD	991	MRS.SELVI	49/F	HOUSE WIFE	28-07-2021	26-08-2021	30	GOOD
18	IPD	1676	MR.ESAKKIMUTHU	54/M	SECURITY	6.12.2021	28.12.2021	23	MODERATE
19	IPD	1810	MR.RAKESH	18/M	STUDENT	28-12-2021	10-01-2022	14	GOOD
20	IPD	182	MRS.POORNAKAALA	40/F	COOLIE	03-02-2022	17-02-2022	15	MID

**CASE PRESENTATION SUMMARY OF OUT PATIENT AND IN PATIENT IN BRANCH – IX, SIDDHAR  
YOGA MARUTHUVAM DEPARTMENT INTERNAL MEDICINE (KANDANKATHIRI SAMULA  
CHOOANAM) GROUP-II**

S. NO.	OPD/IP D	OP/IP NO.	NAME	AGE /SEX	OCCUPTION	DATE OF REGISTRATION	DATE OF COMPLETION OF TREATMENT	NO. OF DAYS TREATED	RESULT
1	OPD	39626	MRS.RAMALAKSHMI	38/F	HOUSEWIFE	28.07.2021	28-08.2021	32	GOOD
2	OPD	38536	MRS.LAKSHMI	37/F	TEACHER	23-07-2021	08-08-2021	17	MILD
3	OPD	8232	MR.KUMAR	40/M	DRIVER	29-12-2022	15-02-2022	18	MILD
4	OPD	38541	MR.ABDHULA	47/M	COOLIE	23-07-2021	14-08-2021	23	MODERATE
5	OPD	2746	MRS.SAKTHI	33/F	TYPIST	08-01-2022	26-01-2022	19	GOOD
6	OPD	16707	MR.PRASANNA	43/M	TAILOR	05-03-2022	24-03-2022	20	GOOD
7	OPD	20468	MRS.SANGEETHA	35/F	TEACHER	21-03-2022	10-04-2022	21	MODERATE
8	OPD	22454	MR.PANDI	39/M	DRIVER	30-03-2022	27-04-2022	29	MODERATE
9	OPD	4079	MR.AGNIMUTHU	45/M	COOLIE	13-01-2022	08-02-2022	31	GOOD
10	OPD	4358	MR.BASIRMOOKATHIN	53/M	SHOPKEEPER	15-01-2022	17-02-2022	35	MODERATE
11	OPD	5731	MRS.MALLIGA	43/F	FARMER	20-01-2022	21-02-2022	33	MILD
12	OPD	8421	MR.ANASELVAM	48/F	SERVER	31-01-2022	27-02-2022	28	MODERATE
13	OPD	11544	MR.SHANMUGA SUNDARI	50/F	HOUSEWIFE	14-02-2022	25-03-2022	40	MILD
14	OPD	15049	MRS.PARVATHI	51/F	COOLIE	28-02-2022	31-04-2020	41	MARKED
15	IPD	909	MRS.SELVAKANI	60/F	COOK	14-07-2022	05-04-2022	37	GOOD
16	IPD	1575	MRS.MEENA	59/F	COOLIE	20-11-2021	08-12-2021	20	GOOD
17	IPD	1622	MRS.EASAKKIAMMAL	60/F	COOLIE	25-11-2021	15-12-2021	21	MODERATE
18	IPD	1621	MRS.SORANA	60/F	COOLIE	25-11-2021	19-12-2021	25	MILD
19	IPD	1756	MRS.JAYALAKSHMI	56/F	HOUSEWIFE	06-12-2021	31-12-2021	26	MODERATE
20	IPD	506	MRS.SEVANTHIKANI	56/F	FARMER	07-03-2022	17-03-2022	10	MODERATE

**CASE PRESENTATION SUMMARY OF OUT PATIENT AND IN PATIENT IN BRANCH – IX, SIDDHAR  
YOGA MARUTHUVAM DEPARTMENT SIDDHAR YOGAM THERAPY(GROUP-I)**

S.NO	OP/ IPD	OPD/ IPD NO.	TC		DC										HB		ESR		BLOOD SUGAR				UREA		SERUM CHOLESTE -ROL	
			BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	F		PP					
					N		L		E		B		M								BT	AT	BT	AT	BT	A T
1	OPD	39995	7300	7100	54	57	36	37	10	6	0	0	0	0	12.4	11.2	11	10	90	88	110	100	36	35	194	180
2	OPD	40279	8200	8000	65	68	29	28	6	4	0	0	0	0	13.6	13	15	10	88	85	115	120	29	32	139	150
3	OPD	6917	6700	6900	60	69	26	25	14	6	0	0	0	0	10.1	11.5	31	22	80	75	100	110	28	29	179	180
4	OPD	9134	7700	7700	60	62	30	34	10	4	0	0	0	0	12.5	12.5	18	14	50	70	90	100	40	35	240	220
5	OPD	10211																								
			6300	6900	61	60	31	36	8	4	0	0	0	0	10.1	12.	18	12	76	78	120	110	34	30	150	146
6	OPD	11888	7000	7100	56	58	30	36	14	6	0	0	0	0	10	10.2	16	15	80	82	130	126	24	26	185	170
7	OPD	20354	6800	7000	65	65	25	30	10	5	0	0	0	0	12	11.3	17	15	86	88	126	130	26	24	250	230
8	OPD	20774	6200	6500	59	60	36	36	5	4	0	0	0	0	13	13.1	18	10	98	49	128	120	30	26	205	200
9	OPD	20812	7800	8000	60	62	30	33	10	5	0	0	0	0	11.9	12	15	13	88	85	120	160	32	30	170	160
10	OPD	6409	8200	7500	65	66	26	28	9	6	0	0	0	0	12.2	12.1	26	16	86	90	123	138	36	32	159	160
11	OPD	2837	6900	6700	61	53	34	44	5	3	0	0	0	0	10.5	11.5	18	15	79	77	132	120	38	36	199	200

S.NO	OP/ IPD .	OPD/ IPD NO.	TC		DC										H B		ESR		BLOOD SUGAR				UREA		SERUM CHOLOSTE -ROL	
			BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	F		PP					
					N		L		E		B		M					BT	AT	BT	AT	BT	AT	BT	AT	BT
12	OPD	9131	6700	6900	60	63	33	35	7	2	0	0	0	0	11.1	11.2	16	9	83	87	100	110	19	27	221	210
13	OPD	13542	7300	7100	60	60	35	38	5	2	0	0	0	0	18.2	12.5	10	10	82	90	110	120	20	23	185	180
14	OPD	14394	8000	8200	55	62	36	35	9	3	0	0	0	0	13	13	32	16	83	87	100	110	21	22	179	160
15	OPD	14835	6700	6900	65	63	25	33	10	4	0	0	0	0	13	13.5	28	16	99	98	105	100	26	27	160	150
16	IPD	911	9200	900	60	58	33	37	7	5	0	0	0	0	12.2	12.5	16	14	87	90	110	100	30	29	200	196
17	IPD	991	7500	8100	60	61	30	33	10	6	0	0	0	0	10.5	11	19	15	79	77	90	95	23	25	232	220
18	IPD	1676	8800	8900	59	59	37	37	4	4	0	0	0	0	12.2	13.5	26	12	87	83	107	110	28	27	159	130
19	IPD	1810	7300	7500	63	74	24	22	13	4	0	0	0	0	11.9	12	25	18	80	82	100	105	36	32	208	210
20	IPD	182	9200	9100	59	63	36	34	5	3	0	0	0	0	10	11.3	19	14	87	90	97	110	29	33	159	140

**CASE PRESENTATION SUMMARY OF OUT PATIENT AND IN PATIENT IN BRANCH – IX, SIDDHAR  
YOGA MARUTHUVAM DEPARTMENT INTERNAL MEDICINE (KANDANKATHIRI SAMULA  
CHOOANAM) GROUP-II**

S .NO	OPD/ IPD	OPD/ IPD	TC		DC										HB		ESR		BLOOD SUGAR		UREA				SERUM CHOLOSTE- ROL	
			BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	F		PP							
					N		L		E		B		M							BT	AT	BT	AT	BT	AT	BT
1	OPD	39626	6300	6900	60	60	31	34	8	6	0	0	0	0	12	12.1	22	12	76	78	120	110	34	30	150	146
2	OPD	38536	6900	7100	58	60	37	36	4	4	0	0	0	0	13	10.2	25	15	80	82	130	126	24	26	185	170
3	OPD	8232	6800	7000	65	63	26	30	9	7	0	0	0	0	12	11.3	34	20	86	88	126	130	26	24	250	230
4	OPD	38541	6200	6500	59	59	36	37	5	4	0	0	0	0	11	13	18	10	98	49	128	120	30	26	205	205
5	OPD	2746	7600	8000	60	62	33	33	7	5	0	0	0	0	11.9	12	15	8	88	85	120	160	32	30	170	160
6	OPD	16707	8200	7500	61	65	34	31	5	4	0	0	0	0	12.2	12.1	26	16	86	90	123	138	36	32	159	160
7	OPD	20468	6900	6700	57	65	34	29	9	6	0	0	0	0	8.5	10	28	20	79	77	132	120	38	36	199	200
8	OPD	22454	7300	7100	59	60	36	37	5	3	0	0	0	0	12	12	11	8	90	88	110	100	36	35	194	180
9	OPD	4079	8200	8000	68	68	29	27	3	4	0	0	0	0	13.5	13.1	15	10	88	85	115	120	29	32	139	150
10	OPD	4358	6700	6600	63	65	30	28	7	6	0	0	0	0	10	11.5	31	22	80	75	100	110	28	29	179	180

S .NO	OPD/ IPD	OPD/ IPD	TC		DC										HB		ESR		BLOOD SUGAR		PP	UREA		SERUM CHOLOST E-ROL		
			BT	AT	BT	AT	B T	A T	B T	A T	B T	A T	B T	A T	B T	A T	BT	AT	B T	A T		F				
11	OPD	5731	7700	7700	60	62	33	34	7	4	0	0	0	0	7.6	10.5	18	14	50	70	90	100	40	35	240	220
12	OPD	8421	7500	8100	60	61	30	33	10	6	0	0	0	0	11	11.5	19	10	79	77	90	95	23	25	232	220
13	OPD	11544	8800	8900	59	60	37	36	4	4	0	0	0	0	12.2	12.5	26	12	87	83	107	110	28	27	159	130
14	OPD	15049	7300	7500	63	65	27	27	10	8	0	0	0	0	12.5	12	36	20	80	82	100	105	36	32	208	210
15	OPD	909	9200	9100	59	63	36	34	5	3	0	0	0	0	11	11.3	28	14	87	90	97	110	29	33	159	140
16	IPD	1575	6700	6900	64	63	33	35	3	2	0	0	0	0	11.1	11	16	8	83	87	100	110	19	27	221	210
17	IPD	1622	7300	7100	57	60	34	34	9	6	0	0	0	0	12	12.5	10	10	82	90	110	120	20	23	185	180
18	IPD	1621	8000	8200	59	63	36	34	5	3	0	0	0	0	13	13	32	16	83	87	100	110	21	22	179	160
19	IPD	1756	6700	6900	65	67	25	26	10	7	0	0	0	0	9	11	34	20	99	98	105	100	26	27	160	150
20	IPD	506	9200	9500	60	60	33	35	7	5	0	0	0	0	12.3	12.5	16	14	87	90	110	100	30	29	200	196

**URINE EXAMINATION BEFORE & AFTER TREATMENT - OUT PATIENTS AND  
IN PATIENT INBRANCH – IX, SIDDHAR YOGA MARUTHUVAM DEPARTMENT.**

**SIDDHAR YOGAM THERAPY(GROUP-I)**

S.NO	OPD/IPD	OPD/IP D NO.	BEFORE TREATMENT			AFTER TREATMENT		
			ALBUMIN	SUGAR	DEPOSIT	ALBUMIN	SUGAR	DEPOSIT
1	OPD	39995	NIL	NIL	NIL	NIL	NIL	NIL
2	OPD	40279	NIL	NIL	NIL	NIL	NIL	NIL
3	OPD	6917	NIL	NIL	NIL	NIL	NIL	NIL
4	OPD	9134	NIL	NIL	NIL	NIL	NIL	NIL
5	OPD	10211	NIL	NIL	NIL	NIL	NIL	NIL
6	OPD	11888	NIL	NIL	NIL	NIL	NIL	NIL
7	OPD	20354	NIL	NIL	NIL	NIL	NIL	NIL
8	OPD	20774	NIL	NIL	NIL	NIL	NIL	NIL
9	OPD	20812	NIL	NIL	NIL	NIL	NIL	NIL
10	OPD	6409	NIL	NIL	1-2 PUS CELLS	NIL	NIL	NIL
11	OPD	2837	TRACE	NIL	NIL	NIL	NIL	NIL
12	OPD	9131	NIL	NIL	NIL	NIL	NIL	NIL
13	OPD	13542	NIL	NIL	NIL	NIL	NIL	NIL
14	OPD	14394	NIL	NIL	NIL	NIL	NIL	NIL
15	OPD	14835	NIL	NIL	NIL	NIL	NIL	NIL
16	IPD	911	NIL	NIL	NIL	NIL	NIL	NIL
17	IPD	991	NIL	NIL	3-4 PUS CELLS	NIL	NIL	NIL
18	IPD	1676	NIL	NIL	NIL	NIL	NIL	NIL
19	IPD	1810	NIL	NIL	NIL	NIL	NIL	NIL
20	IPD	182	NIL	NIL	1-2 PUS CELLS	NIL	NIL	NIL



**URINE EXAMINATION BEFORE & AFTER TREATMENT - OUT PATIENTS AND IN PATIENTS INBRANCH – IX, SIDDHAR YOGA MARUTHUVAM DEPARTMENT.**

**INTERNAL MEDICINE (KANDANKATHIRI SAMULA CHOORANAM) GROUP-II**

S.NO	OPD/IPD	OPD/ IPD.NO	BEFORE TREATMENT			AFTER TREATMENT		
			ALBUMIN	SUGAR	DEPOSIT	ALBUMIN	SUGAR	DEPOSIT
1	OPD	39626	NIL	NIL	4-6 PUSCELLS	NIL	NIL	3-4 DEPOSITS
2	OPD	38536	NIL	NIL	NIL	NIL	NIL	NIL
3	OPD	8232	NIL	NIL	NIL	NIL	NIL	NIL
4	OPD	38541	NIL	NIL	NIL	NIL	NIL	NIL
5	OPD	2746	NIL	NIL	NIL	NIL	NIL	NIL
6	OPD	16707	NIL	NIL	NIL	NIL	NIL	NIL
7	OPD	20468	NIL	NIL	NIL	NIL	NIL	NIL
8	OPD	22454	NIL	NIL	3-6 PUS CELLS	NIL	NIL	4-5PUS CELLS
9	OPD	4079	NIL	NIL	NIL	NIL	NIL	NIL
10	OPD	4358	NIL	NIL	NIL	NIL	NIL	NIL
11	OPD	5731	NIL	NIL	NIL	NIL	NIL	NIL
12	OPD	8421	NIL	NIL	NIL	NIL	NIL	NIL
13	OPD	11544	NIL	NIL	NIL	NIL	NIL	NIL
14	OPD	15049	TRACE	NIL	NIL	TRACE	NIL	NIL
15	IPD	909	NIL	NIL	NIL	NIL	NIL	NIL
16	IPD	1575	NIL	NIL	NIL	NIL	NIL	NIL
17	IPD	1622	NIL	NIL	NIL	NIL	NIL	NIL
18	IPD	1621	NIL	NIL	NIL	NIL	NIL	NIL
19	IPD	1756	TRACE	NIL	NIL	TRACE	NIL	NIL
20	IPD	506	NIL	NIL	NIL	NIL	NIL	NIL

## **ANNEXURES - ASSESSMENT FORMS**

<b>FORM I</b>	:	Screening form
<b>FORM II A</b>	:	Consent form
<b>FORM II B</b>	:	Consent form
<b>FORM III</b>	:	History Proforma
<b>FORM IV</b>	:	Clinical Assessment
<b>FORM V</b>	:	Laboratory investigation
<b>FORM VI A</b>	:	SIDDHAR YOGA THERAPY Drug Compliance Form
<b>FORM VI B</b>	:	KANDANKATHIRI SAMOOLAM CHLOORANAM (INTERNAL) Drug Compliance Form
<b>FORM VII</b>	:	Adverse Reaction form
<b>FORM VIII</b>	:	Patient withdrawal form

**GOVERNMENT SIDDHA MEDICAL COLLEGE & HOSPITAL,  
PALAYAMKOTTAI, TIRUNELVELI DISTRICT.  
DEPARTMENT OF SIDDHAR YOGA MARUTHUVAM**

**"AN OPEN LABELED DOUBLE ARM NON RANDOMIZED PHASE II CLINICAL  
TRIAL TO EVALUATE THE EFFICACY OF SIDDHAR YOGA MARUTHUVA  
MURAIGAL AND SIDDHA MEDICINE KANDANKATHIRI SAMOOLAM  
CHLOORANAM (INTERNAL MEDICINE) IN THE MANAGEMENT OF PEENISAM"**

**FORM-I  
(SCREENING AND SELECTION PROFORMA)**

**1. OPD/IPD No:** \_\_\_\_\_ **2.Date:** \_\_\_\_\_ **3.SI.No:** \_\_\_\_\_  
**4. Name:** \_\_\_\_\_  
**5. Age:** \_\_\_\_\_ **6. Gender:** \_\_\_\_\_ **7. Phone No:** \_\_\_\_\_.

Screening test is documented using screening proforma.

**INCLUSION CRITERIA:**

1. Age : Between 15-60 Yrs
2. Sex : Both male and female
3. Patient having the symptoms of headache, facial pain, nasal congestion and discharge, sneezing, malaise.
4. Patients who are willing to give radiological investigation and provide blood for lab investigation.
5. Patients who are willing to participate in this study with the knowledge of potential risks and who are willing to sign the informed consent form.

**EXCLUSION CRITERIA:**

1. Age : Below 15 Years and Above 60 Years
2. Patients who face difficulties or hesitate to practice Yoga are excluded.
3. Fractures & tumors of nose
4. Epitaxis
5. Tuberculosis
6. Patients with any other serious illness

7. Pregnancy women and lactating mothers
8. Wheezing
9. Asthma

**WITHDRAWAL CRITERIA:**

1. Intolerance to the drug and development of adverse reactions during drug trial.
2. Poor patient compliance & defaulters.
3. Patient turned unwilling to continue in the course of clinical trial.
4. Occurrence of any serious illness.

DATE :

STATION :

Signature of the Investigator

**GOVERNMENT SIDDHA MEDICAL COLLEGE & HOSPITAL,  
PALAYAMKOTTAI, TIRUNELVELI DISTRICT.  
DEPARTMENT OF SIDDHAR YOGA MARUTHUVAM**

**"AN OPEN LABELED DOUBLE ARM NON RANDOMIZED PHASE II CLINICAL TRIAL  
TO EVALUATE THE EFFICACY OF SIDDHAR YOGA MARUTHUVA MURAIGAL AND  
SIDDHA MEDICINE KANDANKATHIRI SAMOOLAM CHOORANAM (INTERNAL  
MEDICINE) IN THE MANAGEMENT OF PEENISAM"**

**FORM-II A  
CONSENT FORM  
Certificate by Investigator**

**I certify that I have disclosed all details about the study in the terms readily understood by the patient.**

Date: .....

Signature of the

Signature of the Investigator: .....

Guide/HOD: .....

Name: .....

Name: .....

**Consent by Patient**

I have been informed to my satisfaction, by the attending physician, the purpose of the clinical trial, and the nature of drug treatment and follow-up including the laboratory investigations to be performed to monitor and safeguard my body functions.

I am aware of my right to withdraw from the trial at any time during the course of the trial without having to give the reasons for doing so.

I, exercising my free power of choice, hereby give my consent to be included as a clinical trial of **SIDDHAR YOGA THERAPY** for the Treatment of **PEENISAM (SINUSITIS)**.

Date: .....

Signature: .....

Place: .....

Name: .....

Relationship: .....

Signature of Witness: .....

Name: .....

**அரசினர் சித்த மருத்துவக் கல்லூரி மற்றும் மருத்துவமனை  
பாளையங்கோட்டை  
பட்டமேற்படிப்பு சித்தர் யோக மருத்துவத் துறை**

சித்தர் யோக மருத்துவ முறையின் பரிகரிப்புத் திறனைக் கண்டறியும்  
மருத்துவ ஆய்வு ஒப்புதல் படிவம் ஆய்வாளரால் சான்றளிக்கப்பட்டது.

நான் இந்த ஆய்வைக் குறித்த அனைத்து விபரங்களையும்  
புரியும் வகையில் எடுத்துரைத்தேன் என உறுதியளிக்கிறேன்.

தேதி : துறைத்தலைவர் கையொப்பம்:

இடம் :

பெயர்:

ஆய்வாளர் கையொப்பம் :

பெயர் :

**நோயாளியின் ஒப்புதல்**

என்னிடம் இந்த மருத்துவ ஆய்வின் காரணத்தையும் மருந்தின் தன்மை மற்றும் மருத்துவ வழிமுறையைப் பற்றியும் தொடர்ந்து எனது உடல் இயக்கத்தை கண்காணிக்கவும், அதனைப் பாதுகாக்கவும் பயன்படும் மருத்துவ ஆய்வுக் கூட பரிசோதனைகள் பற்றியும் திருப்தி அளிக்கும் வகையில் ஆய்வு மருத்துவரால் விளக்கிக் கூறப்பட்டது.

நான் இந்த மருத்துவ ஆய்வின் போது காரணம் எதுவும் கூறாமல் எப்பொழுது வேண்டுமானாலும் இந்த ஆய்விலிருந்து என்னை விடுவித்துக் கொள்ளும் உரிமையை தெரிந்திருக்கின்றேன்.

நான் என்னுடைய சுதந்திரமாகத் தேர்வு செய்யும் உரிமையைக் கொண்டு பீனிசம் என்னும் நோய்க்கான சித்தர் யோக மருத்துவ முறையின் பரிகரிப்புத் திறனைக் கண்டறியும் மருத்துவ ஆய்விற்கு என்னை உட்படுத்திக்கொள்ள ஒப்புதல் அளிக்கிறேன்.

தேதி : கையொப்பம்:

இடம் :

பெயர் :

சாட்சிக்காரர் கையொப்பம்:

பெயர்:

**GOVERNMENT SIDDHA MEDICAL COLLEGE & HOSPITAL,  
PALAYAMKOTTAI, TIRUNELVELI DISTRICT.  
DEPARTMENT OF SIDDHAR YOGA MARUTHUVAM**

**"AN OPEN LABELED DOUBLE ARM NON RANDOMIZED PHASE II CLINICAL TRIAL  
TO EVALUATE THE EFFICACY OF SIDDHAR YOGA MARUTHUVA MURAIGAL AND  
SIDDHA MEDICINE KANDANKATHIRI SAMOOLAM CHOORANAM (INTERNAL  
MEDICINE) IN THE MANAGEMENT OF PEENISAM"**

**FORM-II B  
CONSENT FORM  
Certificate by Investigator**

**I certify that I have disclosed all details about the study in the terms readily understood by the patient.**

Date: .....

Signature of the

Signature of the Investigator: .....

Guide/HOD: .....

Name: .....

Name: .....

**Consent by Patient**

I have been informed to my satisfaction, by the attending physician, the purpose of the clinical trial, and the nature of drug treatment and follow-up including the laboratory investigations to be performed to monitor and safeguard my body functions.

I am aware of my right to withdraw from the trial at any time during the course of the trial without having to give the reasons for doing so.

I, exercising my free power of choice, hereby give my consent to be included as a clinical trial of **KANDANKATHIRI SAMOOLAM CHOORANAM** for the Treatment of **PEENISAM (SINUSITIS)**.

Date: .....

Signature: .....

Place: .....

Name: .....

Relationship: .....

Signature of Witness: .....

Name.....

**அரசினர் சித்த மருத்துவக் கல்லூரி மற்றும் மருத்துவமனை  
பாளையங்கோட்டை  
பட்டமேற்படிப்பு சித்தர் யோக மருத்துவத் துறை**

கண்டங்கத்திரி சமூல சூரண மருந்தின் பரிகரிப்புத் திறனைக் கண்டறியும்  
மருத்துவ ஆய்வு ஒப்புதல் படிவம் ஆய்வாளரால் சான்றளிக்கப்பட்டது.

நான் இந்த ஆய்வைக் குறித்த அனைத்து விபரங்களையும்  
புரியும் வகையில் எடுத்துரைத்தேன் என உறுதியளிக்கிறேன்.

தேதி : துறைத்தலைவர் கையொப்பம்:

இடம் :

பெயர்:

ஆய்வாளர் கையொப்பம் :

பெயர் :

**நோயாளியின் ஒப்புதல்**

என்னிடம் இந்த மருத்துவ ஆய்வின் காரணத்தையும் மருந்தின் தன்மை மற்றும் மருத்துவ வழிமுறையைப் பற்றியும் தொடர்ந்து எனது உடல் இயக்கத்தை கண்காணிக்கவும், அதனைப் பாதுகாக்கவும் பயன்படும் மருத்துவ ஆய்வுக் கூட பரிசோதனைகள் பற்றியும் திருப்தி அளிக்கும் வகையில் ஆய்வு மருத்துவரால் விளக்கிக் கூறப்பட்டது.

நான் இந்த மருத்துவ ஆய்வின் போது காரணம் எதுவும் கூறாமல் எப்பொழுது வேண்டுமானாலும் இந்த ஆய்விலிருந்து என்னை விடுவித்துக் கொள்ளும் உரிமையை தெரிந்திருக்கின்றேன்.

நான் என்னுடைய சுதந்திரமாகத் தேர்வு செய்யும் உரிமையைக் கொண்டு பினிசம் என்னும் நோய்க்கான கண்டங்கத்திரி சமூல சூரண மருந்தின் பரிகரிப்புத் திறனைக் கண்டறியும் மருத்துவ ஆய்விற்கு என்னை உட்படுத்திக்கொள்ள ஒப்புதல் அளிக்கிறேன்.

தேதி : கையொப்பம்:

இடம் :

பெயர் :

சாட்சிக்காரர் கையொப்பம்:

பெயர்:



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TRIAL TO EVALUATE THE EFFICACY OF SIDDHAR YOGA MARUTHUVA  
MURAIGAL AND SIDDHA MEDICINE KANDANKATHIRI SAMOOLAM  
CHLOORANAM (INTERNAL MEDICINE) IN THE MANAGEMENT OF PEENISAM"**

**FORM III  
HISTORY PROFORMA ON ENROLLMENT**

1. Serial No of the case: \_\_\_\_\_ 2. OPD/IPD No: \_\_\_\_\_

3. Name: \_\_\_\_\_ 4. Gender:

5. Age (years): \_\_\_\_\_ DOB     
Date Month Year

6. Address: -----  
-----  
-----

7. A. Occupation: ----- B. Income -----

8. Educational Status: A) Illiterate  B. Literate

9. Height: ----- cms 10. Weight:-----kg

11. Complaints and Duration:

12. Past History

Hypertension \_\_\_\_\_

Diabetes mellitus \_\_\_\_\_

Asthma \_\_\_\_\_

PT \_\_\_\_\_

Other \_\_\_\_\_

**13. HABITS**

A) Smoking: 1. Yes  duration \_\_\_\_\_ years; Number - \_\_\_\_\_ 2. No   
120

B) Alcoholism: 1. Yes  duration \_\_\_\_\_ years; Quantity- \_\_\_\_\_ ml 2. No

C) Tobacco chewing: 1. Yes  duration \_\_\_\_\_ years 2.No

D) Betel chewing : 1. Yes  duration \_\_\_\_\_ years 2.No

14. Dietary style: A.Pure vegetarian  B.Non-vegetarian  C. Mixed diet

15. Drug history: Had the patient been treated before with allopathy drug?

A) Yes  2) No

16 Marital status: 1.Married  2. Unmarried

17. Family history:

Whether this problem runs in family? 1. Yes  2.No

(If yes, mention the relationship)

18. Bowel habits & micturition: Normal  Abnormal

(Details of an abnormality)

19. Psychological state: Normal  Anxiety  Depression

**Signature of the Investigator**

**Signature of the Guide/HOD**

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**FORM IV**

**CLINICAL ASSESSMENT ON ENROLLMENT AND ON VISITS**

1. S.No: \_\_\_\_\_ 2. OPD/IPD No: \_\_\_\_\_  
3. Name: \_\_\_\_\_ 4. Gender : \_\_\_\_\_  
5. Date of assessment: \_\_\_\_\_

**SIDDHA SYSTEM OF EXAMINATION**

**1. NILAM: [LAND WHERE PATIENT LIVED MOST]**

Kurinji  Mullai  Marutham thal    
(Hilly terrain) (Forest range) (Plains) (Coastal belt) (Arid regions)

**2. KAALAM:**

Kaarkalam -  Pinpanikalam -   
Koothirkalam -  Ilavenil -   
Munpanikalam -  Muthuvenil -

**3.THEGI:**

**4. GUNAM:**

Sathuvam -  Rasatham -  amasam -

## **5. IMPORIGAL (SENSORY ORGANS) :**

- Mei (Skin) :
- Vai (Buccal Cavity) :
- Kan(Eyes) :
- Mooku(Nose) :
- Sevi(Ears) :

## **6. KANMENDRIYAM (MOTOR ORGANS):**

- Kai (Upper limb) :
- Kaal(Lower limb) :
- Vai(Buccal Cavity) :
- Eruvai(Excretory organs) :
- Karuvai(Reproductive organs):

## **7. UYIR THATHUKKAL:**

### **A) VATHAM:**

- Pranan :
- Abanan :
- Viyanan :
- Udhanan :
- Samanan :
- Nagan :
- Koorman :
- Kirukaran :
- Devathathan :
- Dhananjeyan :

### **B) PITHAM:**

- Analpitham :
- Ranjagam :
- Sathagam :
- Prasagam :
- Aalosagam :

### **C) KABAM :**

- Avalambagam :
- Kilaethagam :
- Pothagam :
- Tharpagam :
- Santhigam :

### **8. UDAL THATHUKKAL**

- Saaram[Chyme] :
- Senneer[Blood] :
- Oon[Muscle] :
- Kozhuppu[Fat] :
- Enbu[Bone] :
- Moolai[Bone Marrow]:
- Sukkilam/Suronitham :
- [Genital Discharges] :

### **9. ENVAGAI THERVUGAL**

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

### **10.NEER KURI**

- Niram :
- Manam :
- Nurai :
- Edai :
- Enjal :

## **11.NEI KURI:**

### **GENERAL EXAMINATION:**

- Conscious level :
- Body weight :
- Height :
- BMI :
- Built :
- Nourishment :
- Temperature :
- Blood Pressure :
- Pulse rate :
- Heart rate :
- Respiratory rate :
- Anaemia :
- Jaundice :
- Clubbing :
- Cyanosis :
- Pedal oedema :
- Significant Lymphadenopathy:

### **SYSTEMIC EXAMINATIONS:**

- Central Nervous System :
- Cardio Vascular System :
- Respiratory System :
- Gastro Intestinal System :
- Genito Urinary System :

- Central Nervous System :
- Cardio Vascular System :
- Respiratory System :
- Gastro Intestinal System :
- Genito Urinary System :

**CLINICAL ASSESSMENT:**

<b>S.NO</b>	<b>SIGNS &amp; SYMPTOMS</b>	<b>BEFORE TREATMENT</b>	<b>AFTER TREATMENT</b>
1	RECURRENT SNEEZING		
2	HEADACHE		
3	NASAL CONGESTION		
4	SORE THROAT		
5	DIFFICULTY IN BREATHING		
6	NASAL DISCHARGE		
7	DISTURBANCE IN SMELL		

**CLINICAL ASSESSMENT:**

History Taking

The changes observed in the signs and symptoms were assessed by LIKERTS scoring method

NIL –

MILD – +

MODERATE – + +

SEVERE - + + +

Signature of the Investigators

Signature of the Guide / HOD



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**FORM V  
LABORATORY INVESTIGATION FORM**

**Sl.No** :

**OPD/IPD No** :

**Name** :

**Age/Sex** :

**I.BLOOD**

<b>Sl.No</b>	<b>Blood</b>	<b>Before Treatment</b>	<b>After Treatment</b>
1	TC (cells/mm)		
2	DC (%)		
	a)Neutrophils		
	b)Lymphocytes		
	c)Monocytes		
	d)Eosinophils		
3	ESR(mm)		
	a)1/2 hour		
	b)1 hour		
4	Haemoglobin		
5	Blood glucose		
6	Blood urea/ creatinine		
7	Serum cholesterol		

## URINE

Sl.No	Urine	Before Treatment	After Treatment
1	Albumin		
2	Sugar		
3	Epithelial cells		
4	Pus cells		
5	Red blood cells		
6	Casts/Crystals		

Date :

Station :

**Signature of the Investigator**

**Signature of the Guide/HOD**

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**FORM VI -A  
(DRUG COMPLIANCE FORM)**

OPD/ IPD No : \_\_\_\_\_ DOA : \_\_\_\_\_

Name : \_\_\_\_\_ Age/Sex : \_\_\_\_\_

S.No : \_\_\_\_\_ Name Of The Drug and Therapy:

**SIDDHAR YOGA THERAPY**

S.NO	DATE	YOGA THERAPY	SIGNATURE	STAFF SIGNATURE

DATE:

**Signature of the Investigator**

**Signature of the Guide/HOD**

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**FORM VI -B  
(DRUG COMPLIANCE FORM)**

OPD/ IPD No : \_\_\_\_\_ DOA : \_\_\_\_\_

Name : \_\_\_\_\_ Age/Sex : \_\_\_\_\_

S.No : \_\_\_\_\_ Name Of The Drug and Therapy:

**KANDANKATHIRI SAMOOLAM CHLOORANAM (INTERNAL  
MEDICINE)**

S.NO	DATE	KANDANKATHIRI SAMOOLAM CHLOORANAM (INTERNAL)	SIGNATURE	STAFF SIGNATURE

DATE:

**Signature of the Investigator**

**Signature of the Guide/HOD**

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**FORM -VII  
ADVERSE DRUG REACTION FORM**

Name: \_\_\_\_\_ OPD/ IPD No : \_\_\_\_\_

Age: \_\_\_\_\_ Gender: \_\_\_\_\_

Date of trial commencement: \_\_\_\_\_

Date of withdrawal from trial: \_\_\_\_\_

Description of adverse reaction: \_\_\_\_\_

Date:

Station:

Signature of the Investigator

Signature of the Guide/HOD

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**FORM VIII  
WITHDRAWAL FORM**

Name: \_\_\_\_\_ OPD/ IPD Number: \_\_\_\_\_

Age : \_\_\_\_\_ Gender : \_\_\_\_\_

Date of trial commencement: \_\_\_\_\_

Date of withdrawal from trial: \_\_\_\_\_

**Reasons for withdrawal:**

	YES	NO
• Long absence in without reporting	<input type="checkbox"/>	<input type="checkbox"/>
• Irregular treatment :	<input type="checkbox"/>	<input type="checkbox"/>
• Shift of locality :	<input type="checkbox"/>	<input type="checkbox"/>
• Increase in severity of symptoms :	<input type="checkbox"/>	<input type="checkbox"/>
• Development of severe adverse drug reactions:	<input type="checkbox"/>	<input type="checkbox"/>

Date :

Station :

Signature of the investigator

Signature of the Guide/HOD