

A STUDY ON CEGANA VATHAM

Dissertation Submitted To

**THE TAMIL NADU DR.M.G.R Medical University
Chennai – 32**

For the Partial fulfillment for The Award of Degree of

**DOCTOR OF MEDICINE (SIDDHA)
(Branch – III, SIRAPPU MARUTHUVAM)**



**DEPARTMENT OF SIRAPPU MARUTHUVAM
GOVERNMENT SIDDHA MEDICAL COLLEGE
PALAYAMKOTTAI – 627 002**

MARCH - 2009

ACKNOWLEDGEMENT

First of all I am extremely grateful to **my Lord Almighty** who empowered with his blessings and strengthening me to reach the milestone successfully.

I bend my head with melliflows thanks to **my parents**.

I take this opportunity to express my gratitude and acknowledgement to **The Vice Chancellor**, The TamilNadu Dr. M.G.R. Medical University, and **The Special Commissioner**, Indian medicine and Homeopathy Department - Chennai for permitting me to undertake this dissertation work.

I express my deep sense of gratitude to our Principal **Dr. R. Devarajan M.D(S)**., Government Siddha Medical College, Palayamkottai for his auspicious support in bringing out the dissertation and I also thank our Vice Principal **Dr. S. Soundararajan M.D(S)**., for his support regarding this study.

It is my pleasure to express my grateful thanks to **Dr. R. Janarthanan M.D(S)**., Head of the Department, PG- Sirappu Maruthuvam department for his support to do this study.

I feel very proud to record my deep sense of thanks to **Dr. K. Somasekaran B.Sc., M.D(S)**., Previous Head of the Department.

I express my wholeheartly thanks to **Dr. S. Kaniraja M.D(S)**., Lecturer and **Dr. D. Rajasekar M.D(S)**., Asst. Lecturer and **Dr. K. Saibudeen M.D(S)**., Former Asst. Lecturer – PG Sirappu Maruthuvam for rendering their valuable suggestion, guidance and support for my dissertation work.

I express my cordial thanks to **Dr. A. Kumar M.D(S)**., Head of the Aruvai Maruthuvam Department, **Dr. R. Sankaranarayanan M.D(S)**., and **Dr. V. Muthukumar M.D(S)**., Asst. Lecturers, Aruvai Maruthuvam Department for their kind help to do this study.

Its my pleasure to express my sincere thanks to **Dr. S. Ramaguru B.Sc., M.S (Ortho)**, Prof. of Orthopaedics, Tirunelveli Medical College, Palayamkottai, for his valuable guidance for this study.

My sincere thanks to **Mr. K. Kalaivanan M.Sc.**, Lecturer, Department of Pharmacology and I also thank **Prof. Mrs. L. Nagaprema M.Sc., M. Phil.**, Head of the Biochemistry Department., & all other technical experts for their help in laboratory studies.

The author expresses his gratitude to **Dr. S. Baheerathi M.B.B.S., M.D.**, and all technicians of Clinical Pathology Department for giving a kind co-operation in doing investigation procedures and in clinical studies.

I extend my faithfulness to Librarian, **Mrs. Poonkodi B.Lib.Sc.**, Govt. Siddha Medical College, Palayamkottai who helped for the reference of this dissertation work.

It is my duty to express my cheerful thanks to my Family members for their unvarying pleasant encouragement during the whole study period.

It's very pleasure to express my exquisite gratitude to my Beloved Friends for their help and encouragement to complete this work.

My sincere thanks to **Broad Bank Net Café (BBNC)** Palayamkottai for their co-operation in bringing out this dissertation work in full fledged manner.

INTRODUCTION

Man is the most wonderful creature of nature when discussing the issue of health, it is common for people in all cultures to talk just about their body, its ailments and the medicines they right to treat these ailments.

However health is not merely a matter of the state of the body, since it is obvious we are much more than just this material forms. A system of health that only takes into account the structure and the functioning of the physical body cannot effectively address human health is its totality siddha is not just a medical approach to health, rather it is a complete philosophy of life.

Siddha gives equal importance to the parts of life which are more objective and material, those aspects we can observe with out physical senses. In fact it is a view of life which understands that the non-material components of our life, our consciousness, mind, thoughts and emotions animate and direct our more physical parts. In siddha system of medicine we can save our body from diseases and attain our soul to the “Nature”.

The siddha system of medicine is the ancient system of medicine, which has been presented by the siddhar. The unique nature of this system is its continous service to humanity in computing diseases and in maintaining its physical, mental and moral health, while many of these contemporaries had completed their forces long ago. This system of medicine is purely scientific and peculiar complex system of science and philosophy.

Siddha provides rational methods for the treatment of many diseases, which are considered to be obstinate and incurable in other system of medicine.

Good health is considered essential for the achievement of these objectives, according to siddhars. In the process of maintaining good health, the disease, aging process and death are considered as obstacles.

The prevention and cure of illness are the basic aims of all system medicine. The siddha system has in addition to cure diseases, a transcendental motivation, and concern for what might be called the immortality of the body. The siddha philosophy admits two modes of salvation. One is salvation, after leaving behind the mortal body which is called Viedhu Mukthi. The other salvation in this life itself with the body called Jeeva Mukthi. The siddhar aimed at Jeeva Mukthi.

Saint Thirumoolar insists on attaining salvation by the following verse.

“மறுப்பது உடல்நோய் மருந்தென லாகும்
மறுப்பது உளநோய் மருந்தென சாலும்
மறுப்பது இனி நோய் வாரா திருக்க
மறுப்பது சாவை மருந்தென லாமே”.

So, perfect health leads to a perfect mind which ultimately leads an individual to salvation or Veedu Paeru, Sariai or Physical labour, Kiriyaai or ritual way, Gnanam or knowledge and Yogam are the for ways for attainment, according to siddhars. By these process the physioetheric being gets freed from the materialistic pleasures and becomes one with the supreme.

This can be inferred from the following Thirukkural.

“மிகினும் குறையினும் நோய் செய்யும்நூலோநர்
வளி முதலா எண்ணிய மூன்று.”

The dearrangement is basically attributes to improper food, and activities the season and normal physical constitution of a man.

Diagnostic methods of siddha system of medicine is very unique of solely based on the clinical acumen of the physician. The diagnosis is also made by eight tools of diagnosis as mentioned below.

“நாடிப்பரிசம் நா நிறம் மொழி விழி
மலம் மூத்திரமிவை மருத்துவராயுதம்.”

The treatment methodology of siddha medicine is aimed to keep the three dhoshas in equilibrium for the maintenance of seven thatus. So proper diet, medicine and regimen of life are advised for a healthy living. Treatment is classified into

1. Dheva Maruthuvam - Divine Method
2. Manuda Maruthuvam - Rational Method
3. Asura Maruthuvam - Surgical Method

The line of treatment is divided into Kappu, Neekkam and Niraiivu.

Sirappu Maruthuvam:

Sirappu Maruthuvam is a branch of medicine which deals with the bodily disorders and to increase the longevity of human lifespan by preventing diseases. It relieves mental tension and depression and gives peace.

This is achieved by following techniques.

1. Yoga and kayakalpam
2. Rejuvenation Therapy.
3. Muppu
4. Varmam thokkanam of enbu murivu
5. Kirigai and Kanma Noi
6. Dermatological disorders.

Since older days, in the treatment of vatha diseases, the siddha system of medicine has been very much popular.

The author of this dissertation work has selected “Cegana Vatham” under the vatha disease explained by lord yoogi in yoogi Munivar Vaidhya Sindhaamani Perunool - 800 and a clinical entity comparable to cervical spondylosis in modern medicine.

The author's choice of drugs for the clinical study is

1. Kadukkai Choornam – Internal Use

Ref (Sarabandirar Vaidhyam)

2. Yearanda Thaylam

Ref (Sarabandirar Vaidhyam)

The drugs were prepared personally by the author and were tried twenty selected ceganavatham cases of various aetiology.

The clinical study was undertaken in the in patient ward of post graduate department of sirappu maruthuvam at government siddha medical college, palayamkottai. Another twenty patients were also treated with the trial drugs in the out-patient ward.

Appreciation and appropriate application of siddha science are sure give us all a happy, healthy and harmonious life.

AIM AND OBJECTIVE

The main aim of the present study is to do a clinical study on the course of the disease ceganavatham with known observation on the aetiology, pathology, diagnosis, complications and the treatmental aspects using a time honoured siddha drugs Kadukkai Choornam as on internal medicine and Yearandathylam as an external medicine.

The present study includes the following.

1. Collection and detailed study of various siddha and modern literatures dealing with aetiology signs and symptoms, diagnosis, prognosis, complications and treatment of Cegana Vatham.
2. To have an idea of the incidence of the disease with reference to sex, age, habit, occupation, income, social status etc.
3. To have a clinical trial with some specific time honoured siddha drugs.
4. To ascertain the extent of correlation of aetiology, signs and symptoms of Cegana Vatham in siddha system with “Cervical spondylosis” a Clinical entity in the modern medicine.
5. To evaluate the Biochemical and pharmacological actions of the trial medicines.

LITERATURE STUDY ON SIDDHA ASPECT

NL] YôRm

"Û, ûYj ¾V °kRôU½" ÖÄp ĩ \lThås[80 YûL
YôReLÇp NL] YôRê m Juñ.

The details of Cegana Vatham is delt under following headings.

DEFINITION

A kind of Neurological pain (Vatha disease) affecting the cervical vertebral region and extending to the upper limbs and is associated with heaviness of body, giddiness, burning sensation of the eyes, discharge of urine with pain (Strangury or dysuria)

- T.V. Sambasivam Pillai Dictionary P.No. 1752.

AETIOLOGY

The aetiological factors, which aggravate vatha diseases are the most common causes of Cegana vatham. These factors which are explained by various authors as follows.

a. By Yugi Vaithya Chindhamani - 800'

"Gu] úY YôRkRô ù] i TRôám
CLj ¾úX UÉ RoLõ d ùLnëUôñ
Àu] úY ùTôuRû] úV úNôWgùNnç
ùTÃúVôoLs ÀWôUQ ùWj ÖP½j çm
Yu úRYf ùNôj ¾p úNôWgùNnç
UôRô ÀRô ái ûY U\kR úTodám
Lu] úY úYRj ûR çkûR ùNnRôp
LôVj ¾t LXk¾áúU YôRk Rôú] "

- Û, ûYj ¾V °kRôU½ TôPp - 243

"Rôù] u \ LNI úTôá çYol éû \l é
NôRLUôn Ágã, í m NûUj R Yi Q m
Bù] u \ YôÈ] ç é°j Rôí m
BLôVj úR\Xç á½j R Xôí m

Tôù] u \ TLí \ dL ÁWô ÅÆI é
 Th¼É úV ÁLî ñRp TôWùUnRp
 úRù] u \ ùUôÆVôo úUt °kûRVôRp
 Êd, WUôn YôRUç ùNÉ dák Rôú] ".
 - Û, ûYj ¾V °kRôU½ - TôPp 244

"YôRYoj ¾ RÛ] LôX úUúRô ùYu É p
 Uî î , u \ YôÉ Lod LPLUôám
 BRûYI T°úVôâ Lôoj ¾ûL Ru É p
 APì úU Ut\Uô ReLs Ru É p
 úTôRúY NÁdá, u \ LôXUôám"
 - Û, ûYj ¾V °kRôU½ - TôPp 245

"B] ô] YWu\û] úV U¾VôUôkRo
 AL¾ TWúR°VoLh Lu] °Vôo
 úLô] ô] áî ùUôÆûV U\kR úToLs
 ùLôûX L[î ùTôn LôUe áËj R úTodá
 F] ô] NPKRu É p YôRm Ykç
 E tTÁdám úYRj ¾u E i ûURóú] "
 - Û, ûYj ¾V °kRôU½ - TôPp 253

"TLWúY YôRUç úLôÀj RI úTô
 Ti TôLI ùTi úTôLUç Rôu ùNnÂp
 SLWúY ùYáÕW YÆ SPd, p
 SçWô] LôtnúU TÉ úUtThPôp
 ÁLWúY LônLs LÉ , Zeá Ru ú]
 ÁL Yi k¾ °ÈúV RÂoRôu ùLôî Pôp
 êLWúY êçùLí mùT êñd, ùSôkç
 êZeLôí m LûQ dLôí m Lálé E i PôáúU"
 - Û, ûYj ¾V °kRôU½ - TôPp 285

b. By Agasthiyar Kanma Kaandam - 300

YôR LuU YWXôñ

"ÖüXu\ YôRm YkR YûLRôú] ç
èi ûUVônd LuUj ¾u YûLûVj úLõ
LôÄúX úRôu ÈVç LâI TúRç
ûLLôÄp êPd, Vç ®dLúUç
úLôÄúX Tâ, u\ Âi hNUô]
áZkûR UWkRuû] ùYhPp úUpúRôp ÉYp
SôÄúX ÉYûNkç Lôpê Èj Rp
SpX ùLômé RûZ ê Èj Rp SÄj Rp LôúQ "
- ALj ¾Vo LuU Lôi Pm - 300 - TôPp 56

c. By Agasthiyar Gunavagadam

"ÅYWUPô AN¾ Nu É Øû [úSôî
ÅÄYô] Øû [Vç Âi çYô,
AYÉ RÉ p ¾PUôLI úTôYRôí m
AlTú] Øj ¾Wd ái ¼dLôn ÅVô¾Vôí m
RY ê É Yo šoLôdûL úUL úWôLm
RuûUës[êj Ri âd ùLô¼ ÅVô¾
AYÁXôl TÂN SWmTî j Re Li Pôp
Aæ áUPô YôRúSôn B ámTôúW.."

To sum up

The following intrinsic and extrinsic factors are attributed to be the causative factors for the manifestations of Vatha disease.

EXTRINSIC FACTORS

1. Exposure to dampness and cold.
2. Precipitation of the disease in the months from Aani to karthigai. (From June to December).
3. Sleeping during day time and working throughout night.
4. Physical strain due to excessive weight lifting.
5. Walking for a long distance, exposing the body to dampness and cold.

INTRINSIC FACTORS

1. Diet

Intake of food items which are excessive in bitter, astringent and pungent taste, intake of previous day cooked food item, drinking rain water, harmful combination like taking excessive curd after eating fruits, vegetables and tubers causes toxic factors which affects bones and muscle.

2. Psycho Social Aspects

Breach of Trust, splitting the chastity of a women, abusing the holymen and ritualists, exploiting the properties of charities, ingratitude towards mother, father and teacher, abusing the holy scripts, disregarding the divinity, refusing the food for destitutes and saints, forgetting the advise of preceptors and wickedness such as murdering, stealing, lieing, involving in immoral activities, sexual perversion, removing the bark of living tree, breaking the leg of the animals, cutting the trees, cutting the living branches and removing leaves.

Even though on the above lines our legends Siddhars explain the common causes. we cannot understand how it produces the distresses of Cegana vatham. The author denotes that all this view should be for further analysis.

Common Signs and Symptoms:

The signs and symptoms of this disease Cegana vatham were explained by Yugimuni and Pararasasekaram as follows

a. By Yugimuni

“úLõ úU Li j ¾u j ZûWdá úUí e
ùL¼Vô] LWÁWi à ÁLúY ùSòkç
Yôõ úU N-WùUpXôm L] j ¾î dám
YôÄTodá U] eLi æ UVdLUôám

Hõ úU ĀWi å Li æ ùUĀfNí i Pô
 úUt\Uôn NXkRòð Āñ_d Lôæ k
 úRð úU ùLôh¼] ç úTôtLádám
 NL] Yô Rj ¼É P šodLk Rôú] "
 - Û_ °kRôU½ 800.

CkúSôn Li j ¼u ;Æi kç AûWĀu úUpYûWëm Es[
 CPêm, ûLLôpLõ m ĀL úSôRp, EPp êtñe L] j çd
 LôQ p, UVdLêi PôRp, Li Ls GĀRp, °ñ`o LhPp, EPp
 êi ûUëm úRs ùLôh¼Vç úTôuñ Láj ç úSôRp B_ V
 áÈLû[ùTñm.

b. By Pararasasekaram

"Li PúRôo NL] YôRe Li j ¼u ;ZûWdá úUí m
 Āi PXe LWĀWi å ĀLûSôkç L] j ¼i dám
 Ui ¼úV ¼Āoj çd áj çm YĀ Āáj çû[î i Pôám
 Yi PUo áZĀ] ôú[U¼Ā] ôí u ò YôúV"

PATHO PHYSIOLOGY

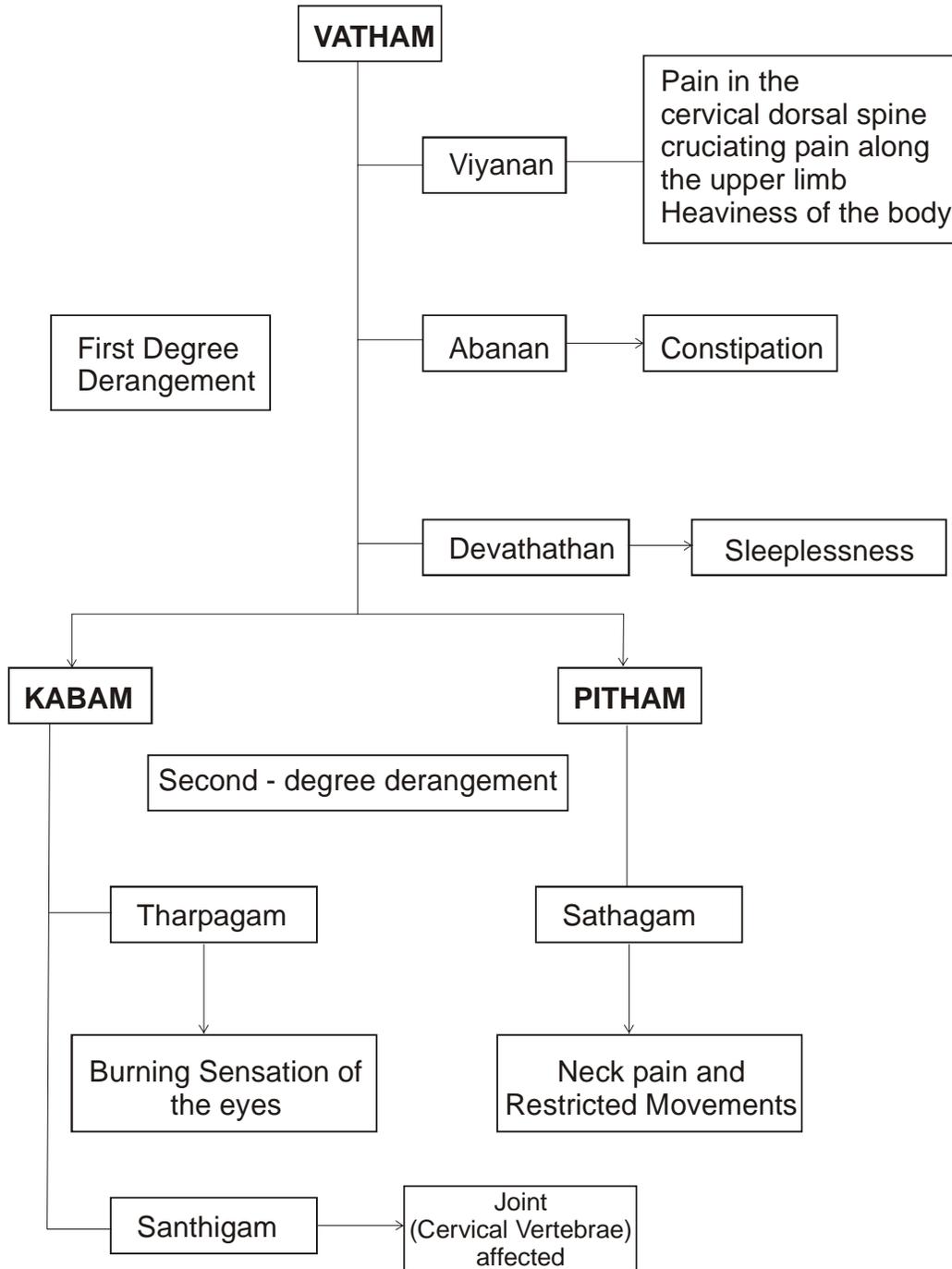
According to Panchapootha principle when elemental composition is altered naturally uyir thathugal or the three humors, which are made up of these elements get deranged. This simultaneously lead to derangement of seven udal thathugal which produce symptoms. This is one way of pathology, producing Cegana vatham.

Another theory which explains as follows, the etiological factors of Cegana vatham are both diet that produce excessive vayu and other agents which cause vitiation of vayu, aahayam, earth and fire, depending upon this corresponding uyir thathu is affected.

Here,

- Aahayam + Air - Vatham
- Earth + Water - Kabam
- Fire - Pitham

So vatham, pitham and kabam are deranged. Simultaneously udal thathugal get deranged. These events give rise to clinical features of Cegana vatham.



ஐம்பூதம் - தேகத்திற்கும் முள்ள ஒற்றுமையாவன:

"Ai Pj ¾p E s[úR Ài Pm
Ài Pj ¾p E s[úR Ai Pm
Ai Pêm Ài Pêm Juú\
AÈkçRôu TôdámúTôúR"

- NhPê É

ÀWTgNm I m×RUVUô] ç. úRôu È, çÛXj ç ,AÆkç
Al Tôp UñT¼ëm úRôu È, çÛXj ç, AÆkç úTôám ùTôì hLS
Vôî m KÃPj ¾p Jáeám. CçúY TWI ÀWmUm GuTo.
úRôu ñmúTôçm AqÅPj ¾Àì kúR TûPj Rp, Lôj Rp, AÆj Rp
Guò m Nd¾Lõ d, Q eL çLi m Cqî XLm I m×RUVUô] ç
GuTo. úRLê m I m×Rd ùLôSûLdá ÅXd, pûX.

"çXm ``o\$Yç ÅãmúTôûPkçm
LXkRUVd LêXLm Cç"

- úSônSôPp úSônêRp SôPp Tá¾ -I

1. EARTH (çXm) : Gives shape to the body and release its energy.
Bones, muscles and tissues represent it in the
body.
2. WATER (``o) : Makes the earth supple and helps in the transmission
of energy. Serum, lymph, Saliva etc, represent it in
the body.
3. FIRE (§) : Steadies the form of the body and gives vigour and
stimulation. Digestion and circulation represent it in
the body.
4. AIR (Yç) : Ignites the fire and works as a life carrier and is the
support of all contact and exchange. Respiration and
Nervous system represent it in the body.
5. ETHER (Åãmé): Is the creator of life itself in the body.

A harmonious combination and function of these five elements in
the body produce a healthy and beautiful life.

Man has gross physical body (√ ŌXm) and subtle physical body (ÑhNUm). The subtle physical body is immediately behind the gross physical body and is closely connected with it.

Vatham = Air + Ether

In Cegana Vatham both air and ether are affected.

The life - force which is different from material energy derived from food, prevades the gross physical through the subtle physical.

I m×ReLhám, AñãûYLŌ dáê s[JtñûUVôY] ;

“Ui æPú] é] pŞdLôp

êû\VôLf úNok¾hPôp Yi úU CÉ I é

¾i Q ÁXm çYol ÀWNm

NRôL¾úVô PôoŞÁi ¾PUôêû\Iém

Gi Q ĀV LNI é êi Pôk

Ri | Āp LJ ĀûQITô ùXi Uô êYol é

Ei Q ĀV AñãûYĀu

À\IĀûRò m ái °j Ri ûWj R Uû\úV”

- úRôt\d, WU BWôn f°ëm, °j RUì j çY YWXôñm

CÉ I é - Ài j Ā + AI é

éçI é - Ài j Ā + úRè

E Yol é - AI é + úRè

ûLI é - Yôë + BLôVm

Lôol é - úRè + Yôë

çYol é - Ài j Ā + Yôë

CfãûYLÇu Áá¾ûVd ùLôi á, úRLj ¾p

GI ×ReLÇ] [YôL Gdát\èLs À½ dLI Th¾i d, u \] GuTûR

AÈVXôm.

சகனவாதத்தில்:

கைப்பு, கார்ப்பு, துவர்ப்பு, ஆகிய சுவைகள் பாதிக்கப்படுவதால் அதற்கு காரணமான பூதங்களும் பாதிக்கப்படுகின்றன.

ஐம்பூதம் - முக்குற்றத்திற்கு முள்ள ஒற்றுமையாவன:

$$Y\check{C} = Y\check{C} + \check{A}i$$

$$AZp = \S$$

$$I Vm = \check{\text{''}}o + Ui$$

$$CWi \ \frac{1}{4}Wi \ \check{a} \ \times ReL\check{C}u \ \acute{u}Nod\acute{u}LV\hat{o}p \ E \ \check{A}oR\hat{o}\check{C}$$

E i P\hat{o}, u \ \check{C}.

பூதங்கள் பாதிக்கப்படும் போது உயிர்த்தாதுக்கள் பாதிக்கப்படுகிறது.

- Vatham : Represents Vayu, Mind, Dryness, Pain, Flatulence, sensitiveness, lightness and also air.
- Pitham : Represents gastric juice, bile, energy, heat, inflammation, anger and irritation etc.
- Kabam : Represents feeling of cold, heaviness, running of the nose, passing of mucoid discharge and also the saliva.

முக்குற்றஇயல்

Y\hat{o}Rm (Y\check{C})

Y\check{C} Y\frac{1}{4}Yj Ru\acute{u}U

\e\i \acute{u}U (A\ae j \check{C}Ym)

\u\hat{S}\hat{o}n\acute{u}U (L\frac{1}{4}] \check{A}u\acute{u}U)

\frac{3}{4}i \acute{u}U (\acute{a}\check{C}of\textcircled{\circ})

\u\check{Y}m\acute{u}U (E h\frac{1}{4}Q m)

Y\check{C} Y\hat{o}i \acute{A}Pm

AT\hat{o}] u, UXm, CPL\acute{u}X, E k\frac{3}{4}\check{A}u \ \check{r}, \emptyset Xm, C\acute{a}l \acute{e}

G\acute{i} m\acute{e}, \acute{u}R\hat{o}p, SWm\acute{e}d \acute{I} hPm, \ \check{r} pLs, U\check{A}odL\hat{o}pLs, F u.

Y\check{C}\check{A}u CVt\acute{u}LI Ti \acute{e}

- CVt\acute{u}L \ \check{C}\acute{u}X\check{A}p \ \check{C}u\check{r}ñ F dL\hat{e}i \ P\hat{o}dLp

- \emptyset f\check{a} \check{A}Pp, \emptyset f\check{a} Y\hat{o}eLp

- U] m, \u\hat{U}\hat{o}\acute{A}E \u\hat{U}nL\check{O} d\acute{a}f \u\hat{N}VpL\acute{u} [j RWp

- UXm \hat{e}R\check{A}V T\frac{3}{4}] \hat{o}u\acute{a} \acute{u}YLeL\acute{u} [\check{A}\acute{u}W\check{r} T\acute{a}j Rp

- N\hat{o}Wm \hat{e}R\check{A}V Hi \ E PtR\hat{o}\check{C}dL\check{O} d\acute{a}m Jj R \ \check{C}Lr f\textcircled{\circ}\acute{u}V RWp

- I m\hat{u}T\hat{o}\check{E}Lh\acute{a} Yu\acute{u}U\acute{u}Vd \u\hat{L}\hat{o}\acute{a}j Rp. B \ \check{C}VYt\check{E}p E Pt\acute{a}j

\ \check{C}\acute{u}Q \acute{e}\check{A}Rp.

YÇ EPÄu ùNn ùRôÆp

- E Pp úSôRp
- áj Rp
- À[j Rt úTôtLôQ p
- SWmé êRÄV] áu\p
- SådLp
- CñdLUôRp
- °olTûNÂuûU
- R¼Vôp A¼ThPç úTôp úYRû]
- ùTôì j ç Si Yp
- UXm, °ñ°o êRÄV] šnRp
- °ouYhûL
- Gí médás çû [ITç úTôu\ E Q of°
- UÂo ĩ fûNËRp
- ûL, LôpLû [°hPî m, UPdLî m ê¼VôûU
- çYolTôL Yón°ì \p
- úRôp, Li , UXm, °o êRÄV] Lì j çd LôQ p.

YÇÂu ÂÂî Ls

C@ç Ju\ôÂî IÀò m Ru Cpm, ùRôÆp, êRÄVYt\ôp
Tj ç YûLITâm AûY.

1. ÀWôQ u (E ÂodLôp)

Øfā ÅâRí m, YôeáRí m ùNnëm

2. ATô] u (j r úSôdáLôp)

UXNXj ûRd j r úSôd,j Rsõ m

3. ÂVô] u (TWî Lôp)

EPÄí s[AûNëm ùTôì s, AûNVôì ùTôì s Guò m
CWi ¼í Âì kç EñléLû [°hPî m UPdLî m ùNnëm.

4. ERô] u (úUp úSôdáLôp)

Yôk¾ûV GZf ùNnëm.

5. NUô] u (SådLôp)

Ut\ YôëdLû [ÁgN ùYôhPôUp ùNnëm.

6. SôLu

GpXôd LûXLû [ëm LtámT¼ AËûY Gi lém. Li Lû [CûUdámT¼ ùNnëm.

7. Ĩ oUu

ùLôhPôÅ ÅPfûNnëm. YôûV ØPI Ti æm. CûUûVd ùLôhåÅdám. Li Lõ dái ùTôì hLû [d Lôi Ådám.

8. Ÿì LWu

SôÅt L°î , Sô°dL°î , ÁdL T°, çmUp, Cì Up B ŸVYtû\ E i Pôdám.

9. úRYRj Ru

úNômTp, Ni ûP ùLôs [p, RodLm úTNp, ÁdL úLôTm B ŸVYtû\ E i Pôdám.

10. R] gùNVu

E Pmé êi ûUëm ®eLITi æm. C\kçÅ¼u Lôtû\pXôm ùYÇIThP Àu] o Øu\ôYç Sôçp RûX ùY¼jRÀu ùYÇf ùNpí m.

சகன வாதத்தில்:

கீழ்க்கண்ட உயிர்த்தாது (வாதம்) பாதிக்கப்பட்டுள்ளது

அபானன்	:	பாதிப்பு (மலசிக்கல் உள்ளது)
வியானன்	:	பாதிப்பு (கழுத்தை அசைப்பதில் சிரமம் வலியானது தோள்பட்டை மற்றும் கையில் பரவுதல் உள்ளது).
சமானன்	:	பாதிப்பு (பசியின்மை உள்ளது)
நாகன்	:	பாதிப்பு (மந்த புத்தி உள்ளது)
கூர்மன்	:	பாதிப்பு (கண்பார்வை மங்கலாக உள்ளது).
தேவதத்தன்	:	பாதிப்பு (குரக்கமின்மை உள்ளது)

Åj Rj ¼u YûLLs

1. A] tÅj Rm : E i P E Q î I ùTôì hLû [f ùNÅdámT¼f ùNnëm
2. CWgNLI Åj Rm : E Q ÅÄì kç ÅÄkçì Pô] Nôtñdáf ùNkç\j ûRj Rì m
3. NôRLI Åj Rm : Åì ITUô] ùRôÆûXf ùNnç ê ¼dám.

4. ÅWôNLm : úRôí dâ JÇÛVd ùLôåđám.
 5. B úXôNLm : Li LÕ dâI ùTôì sLÛ [j ùRÃÅđám.

சகன வாதத்தில்:

கீழ்க்கண்ட உயிர்த்தாது (பித்தம்) பாதிக்கப்பட்டுள்ளது

- அனற்பித்தம் : பாதிப்பு (பசியின்மை உள்ளது).
 இரஞ்சக பித்தம் : பாதிப்பு (இரத்தக்குறைவு உள்ளது).
 சாதக பித்தம் : பாதிப்பு (கழுத்தை அசைப்பதில் சிரமம் உள்ளது).
 ஆலோசக பித்தம் : பாதிப்பு (கண்பார்வை மங்கலாக உள்ளது).

LTj ¾u YÛLLs

1. AYXmTLm :Sôu á YÛL I VeLÕ dâm Ttñd úLôPôÃì dâm
 2. ¾úXRLm :E i Q I ThP EQ î I ùTôì s, ño
 êRÃVÛYLÛ [DWI Tâj ¾ ùUj ùR] f ùNnëm.
 3. úTôRLm : E i æ , \ ãÛYLÛ [AÈÅđám
 4. RtTLm :Li LÕ dâd áÇof° ÛVj Rì m.
 5. Nk¾Lm : ùTôì j çLÇp çuñ CVtÛLVôn GpXôd
 j pLÛ [ëm Juú\ùPôuñ ùTôì j ¾ R [Wf
 ùNnëm.

சகன வாதத்தில்:

கீழ்க்கண்ட உயிர்த்தாது (கபம்) பாதிக்கப்பட்டுள்ளது.

- அவலம்பகம் : பாதிப்பு (சந்திகம் பாதிக்கப்பட்டுள்ளது)
 தற்பகம் : பாதிப்பு (கண் எரிச்சல் உள்ளது)
 சந்திகம் : பாதிப்பு (கழுத்தை அசைப்பதில் சிரமம் உள்ளது)

DIAGNOSIS

சித்த மருத்துவ அடிப்படையில் நோய் கணிப்பில் எண்வகைத் தேர்வு முதன்மையானது. மற்ற தேர்வுகளாவன:

- | | |
|--------------------|--------------------|
| 1. பொறியாற்றேர்தல் | 2. புலனாலறிதல் |
| 3. வினாவுதல் | 4. உயிர் தாதுக்கள் |
| 5. உடல் தாதுக்கள் | 6. ஞானேத்திரியம் |
| 6. கன்மேந்திரியம் | 7. தினைகள் |
| 8. பருவகாலம். | |

1. பொறியாற்றேர்தல்:

- | | |
|-----------|----------------|
| 1. மூக்கு | 2. நா (வாய்) |
| 3. கண் | 4. தோல் (மெய்) |
| 5. செவி | |

மருத்துவர் ஐம்பொறிகளைக் கொண்டு நோயை கணிக்க முடியும்.

2. புலனாலறிதல்

- | | |
|-------------------|---------|
| 1. நாற்றம் (மணம்) | 2. சுவை |
| 3. ஒளி | 4. ஊறு |
| 5. ஒசை | |

மருத்துவர் ஐம்புலன்களைக் கொண்டு நோயை கணிக்க முடியும்.

சகனவாதத்தில்

வலியானது கழுத்துப் பகுதி மற்றும் கைகளில் பரவுதல் காணப்படுகிறது. இரு கைகளும் மரத்துப்போதல் காணப்படுகிறது. எனவே ஐம்புலன்களில் ஊறு பாதிக்கப்பட்டுள்ளது.

3. வினாவுதல்

மருத்துவர் நோயாளியிடம் வினாவுதல் மூலம் நோயை கணிக்க முடியும் நோயாளியால் பேச முடியாத நேரத்தில் அவன் சுற்றத்தாரிடம் வினாவுதல் மூலம் நோயை கணிக்க முடியும்.

Gi YŪLj ūRōî

“Sô¼l TĀNm Sôç\m ùUôÆĀÆ
UXm Øj ¾WÁŪY Uì j çY WòèRm”

- நோய் நாடல் நோய் முதல்நாடல் பகுதி - I

“ùUndáÈ ç\kùRôÉ ĀÆ SôĀì UXm ŪLdáÈ”

- தேரையர்

1. Sô¼ (Pulse reading)
2. √ TĀNm (Tactile sensation)
3. Sô (Tongue)
4. ç\m (Colour)
5. ùUôÆ (Speech or voice)
6. ĀÆ (Eye)
7. UXm (Faeces)
8. Øj ¾Wm (Urine)

1. Sô¼

E PĀp E Āo RĀj ¾ì ITRtád LōWQ Uô] Nd¾ GçúYô AçúY
Rôç ApXç Sô¼ G] ITām.

CúR εYNd¾ YôRm. ĀpRm. LTm Gu\ Øuñ ĀĀî LŪ [AŪPkç, Øuñ áQ eLŪ [I ùTtñ EPŪXëm, E ĀŪWëm JuñTP Y [oj ç LōlTôtÈ Yì ç\ç.

Sô¼LŪ [d L½ ITRtá Tj ç √Rô] eLs áÈIÀPIThás [ç. AYtñs êd, VUôL BŪW Sô¼úV (Radial artery) °\kRùR] I ĀWUêÉ ĩ Èës [ôo.

“RôçêŪ\ úLs RÉ j Rá¾f NkúRôâ
KçñLôÁV êk¾ ùSåUôoé
Lôç ùSåØdád Li Pm LWméi Ym
úTôçì êf° éLr Tj çm Tôoj ¾úP”

- திருமூலர் நாடி நூல்

NL] YôRj ¾p

1. YôRĀj Rm

“ùTôì [ô] YôRj ¾p Āj RgúNokRôp

ùLLôp RĀI é SôdLNdám Au] m”

2. Āj R YôRm

“Āj Rj ¾p YôRUô_p ĀPĀëeLóí e ùLëm

áj Rç úTôúXVôám áñ_ùUnTRñm Āuú] ”

2. √TĀNm (ùRôhĀI Tôoj Rp)

E Pp ùYITçùX, āWāWl é, úRôp E Xok¾î j Rp, úRUp,
ùLôIT[m, Lh¾Ls, LZùX, ùNôĒ, °Weá, TùP, ĀWQ m, ®dLm,
F Rp B_ VùY ùRôhĀI Tôoj Rp ØXm AĒVXôm.

In Cegana vatha patients, general body temperature - slight warmth
but diffuse tenderness may be present in neck and upper extremities.

3. Sô

UôI T¾k¾î j Rp, ùYĪ j ¾î kRp

Yôn ‘‘o Y\i ¾î j Rp

Ā[î Th¾î j Rp

éi Q ôĀî j Rp

āùY UôñTôâ

In Cegana vatham patients, the Tongue is normal.

4. ç\m

úRôp ç\m

NçfNqî

UĀo Utñm SLM êRĀVYtĒu ç\m

In Cegana vatham patients, colour of the skin appears normal.

5. ùUôĒ

JĀ úYñTôâ (Low or High Pitched)

ĀRt\p, á[\p

áWp LmĀV úTfā

In Cegana vatham patients, No change of voice is found.

6. ÅÆ

Li Tôoû YÂu çû Xû U
Li °Yk¾î j Rp, ùYð j Rp
Li GÃfNp

In Cegana vatham patients, burning sensation of eyes is present.

In aged patients acuity of vision is diminished.

7. UXm

UXm GuTç EPÄÉ uñm LÆ, u\ ùTòì s
ç\m, èûW
CñLp, C[Lp
UXdLhå

Cegana vatham patients have constipation.

8. Øj ¾Wm

°odáË
ùSndáË

°odáË

“Aì kçUòË WRê m AÅúWòRUôn
A@Lp AXòRp ALòXÛu RÅokRZt
át\[Yi k¾ E \e, ùYLû\
B¼d LXNj RòÅúV LôçùTn
ùRòì èí oj Rd LûXdáhTå °Åu
ç\dáË ùSndáË çì Áj Rp LPú] ”

- நோய் நாடல் நோய் முதல்நாடல் பகுதி - I

Ei æ, u\ AñãûYI ùTòì sLõ m JuñdùLòuñ
úYtñûUVûPVòUí m, T°dáj RdLT¼ áû\j Rp, A¾LÃj Rp, LôXk
RYÈ Ei æRp, èRÄV át\leLõ i PòLò Yi Q m é°jç
E \e, Å¼VtLòXj ¾p T¼L Tôj ¾Wj ¾p ùTnR °ûW BÅúTòLòRT¼,
¾ SòÆûLdás (1½ U½ úSWm)ARu ç\dáËûVèm A¾p
Gi ùQ nÅhåì Tôojç LôQ ITå, u\ áËûVèm LYÉ jç
Å½ LÇu §ì m, §Wòd áËLû[AËVXòm.

°ñ ``Ãu ùTôçdáQm

“YkR ``odLĀGŪP UQ m èŪWGgNŪXu
ù\k¾Vī [YŪY VŪ\áç êŪ\úV”

- நோய் நாடல் நோய் முதல்நாடல் பகுதி - I

CVtŪL ``o CXdLQm

“ĀLj R¼I ém ĀLj úR\í m CuŪ\É p
ãLj ŪRj Rì m ùUnãTôY ``o Suú\”

- தேரன் நீர்க்குறி நெய்க்குறி

According to Theraiyar, urine should be of low density and with discoloration. In Cegana vatham, urine is yellow colour with low density.

ùSndáĒ

“ç\dáĒd áŪWj R çì UôQ ``Āt
°\dL ùYi ùQ núVôo °ñçç SãĀáj
ùRuñ\j ¾\kŪRôĀ úVLôRŪUj R¾
É u\ ¾YŪX úTôm ùSĒĀÆVĒî m
ùNu\ç éLí k ùNn¾ŪV èQ úW”

- நோய் நாடல் நோய் முதல்நாடல் பகுதி - I

``oç\ d áĒVôp úSôŪVd Li á Ā¼j RtùTôì hãf
ùNôpĀĀî d, u\ Ā¾ ùTôì k¾V °ñ ``Āp Jì °ĒV çç
Gi ùQ ŪV SãĀp ŪLVNĀ] ôp Gi ùQ nçç °R\ôUp Āhã
ùYnĀXô] ç, Ak ``Āp TãmT¼ ¾\kç Lôt\ô] ç, A¾p ®° AkR
Gi ùQ nj çç BPôRT¼ ŪYj ç Af°ñ ``Āp ĀPITh¼î d, u\
Gi ùQ nj ççVô] ç. ùNpí, u\ YÆĀp Li Q ĒŪYëm
E ĀWĒŪYëm ùNí j¾, Aj çç ùRĀĀdám úSôn Ā [dLj ŪR ``
ùRĀkç ùLôsYôVôL.

“AWŪY] ``i ¼] @úR YôRm”
“BÆ úTôtTWĀu A@úR Āj Rm”
“êj ùRôj ç çt, u ùUôÆYŪRu LTúU”

- நோய் நாடல் நோய் முதல்நாடல் பகுதி - I

In Cegana vatham patients during Neikuri examination the oil spreads like snake and sometimes like ring and pearl.

ACCESSORY EXAMINATION

UYIR THATHUKKAL

VATHAM

Vatham	Physiological Function	Feature in Ceganavatham
Pranan	Inspiration and Expiration responsible for sneezing coughing and belching	Not affected
Abanan	Act with downward movement	Affected Constipation present
Viyanan	Helps in various movements of body, responsible for sensation	Affected Restricted neck movements Radiating pain in shoulder and arm with tingling sensation.
Uthanan	Regulates in higher functions of brain. Responsible for physiological reactions like hiccough and vomiting	Not Affected
Samanan	Regulates all other vayus	Affected
Nayan	Responsible for intelligence Helps in opening and closing of eyes.	Affected In aged patients acuity of vision is diminished
Koorman	Responsible for lacrimation. Helps in visualization of all things of world	Affected In aged patients acuity of vision is diminished.
Thevathathan	Responsible for laziness, Rotation of eye balls	Affected Sleeplessness due to pain.
Thananjeyan	Responsible for tinnitus, oedema.	-

PITHAM

Pitham	Physiological Function	Feature in Ceganavatham
Anar Pitham	Digests all the ingested particles	Affected
Ranjaga Pitham	Increase the blood and gives blood colour	Affected Anemia present
Saathaga Pitham	Makes the work to complete what mind thinks to do	Affected Neck pain and Restricted movement
Aalosaga pitham	Responsible for clear vision	Affected in old aged people.
Prasaga Pitham	Gives colours to skin	Not Affected.

KABAM

Kabam	Physiological Function	Feature in Ceganavatham
Avalambagam	Controls other 4 types of kabam	Affected (Santhigam Affected)
Kilethagam	Moistens the food	Not Affected
Pothagam	Helps to know the taste	Not affected
Tharpagam	Gives cooling effect to the eyes	Affected Burning sensation of Eyes present
Santhigam	Gives lubrication to joint	Affected

SEVEN PHYSICAL CONSTITUENTS OF BODY

Seven Physical Constituents	Physiological Function	Feature in Ceganavatham
Saaram	Strengthens the body and mind	Affected
Senneer	Preserves brightness boldness power and knowledge	Affected
Oon	Gives structure and shape to the body	Early Stage – Not Affected Later Stage – Affected
Kozhuppu	Responsible for movement lubricates the joints	Affected
Enbu	Responsible to joint movements	Affected
Moolai	Present inside the body and gives strength to the bones	Not Affected
Sukkilam or Suronitham	-	Not Affected

GNANINTHRIYAM

Gnaninthriyam	Physiological Function	Feature in Ceganavatham
Mei	Feels the sensation of touch	Affected paresthesia present in upper limb
Naa	Analyses taste	Not Affected
Kan	For Vision	Not Affected
Mooku	For smell	Not Affected
Sevi	For hearing	Not Affected.

Kanmenthiriyam

Kanmenthiriyam	Physiological Function	Feature in Ceganavatham
Kai	-	Affected Radiating pain with tingling sensation
Kal	-	Not Affected
Vaai	For Speaking	Not Affected
Eruvaai	For defaecation	Affected constipation present
Karuvaai	For reproduction	Not Affected

Thinaigal

The Geographical Distribution of the land is classified into 5types

They are,

S. No.	Thinaigal	Land	Diseases
1.	Kurinji	Mountain and its surroundings	Kaba noi liver diseases are common
2.	Mullai	Forest and its surroundings	Pitha and vatha diseases liver diseases and common
3.	Marutham	Field and its Surroundings	Safest place to maintain good health
4.	Neithal	Sea and its surroundings	Vatha diseases and liver enlargement are common
5.	Palai	Desert and its surroundings	Vatha Pitha and Kabha diseases and common

Most of the Patients came from Marutha Nilam. Patients were also reported from Kurinji Nilam.

Paruva Kaalangaal:

Siddhars have classified year into six seasons, each consisting of two months.

Sl.No.	Paruvakaalangaal	Kuttram
1.	Kaarkaalam Aavani and Purattasi (August 16 - October 15)	Vatham ↑↑ Pitham ↑
2.	Koodhir kaalam Ayppasi and Kaarthigai (October 16 - December 15)	Vatham (-) Pitham ↑↑
3.	Mun pani kaalam Margali and Thai (December 16 – February 15)	Pitham (-)
4.	Pinpani Kaalam Maasi and Panguni (February 16-April 15)	Kabam ↑
5.	Elavenir Kaalam Chithirai and vaigasi (April 16 – June 15)	Kabam ↑↑
6.	Mudhuvenir Kaalam Aani and Aadi (June 16 – August 15)	Vatham ↑ Kabam (-)

↑ Thannilai Valarchi

↑↑ Vetrunilai Valarchi

(-) Thannilai adaithal

According to alteration of kalam (Thannilai Valarchi, vetrunilai Valarchi) the diseases can be diagnosed.

DIFFERENTIAL DIAGNOSIS

1. ámT YôRm

"SÁXúY úRôs^a çe LWj ¾u^a ç
 SÄkç ùUj RYô₃úV SNî i Pôám
 LÁXúY Lu] ùUôâ SV] k Rôð e
 Láj çúU ĀñĀñlé ùUĀî e Lôæm
 çĀXúY ç¼ITóág °Wā RuÉ t
 āZtĒúV SôĀdj r YĀë êi Pôm
 AĀXúY V¼Sôd₃ XZuñ Lôæ
 UXì úU Yi ámT YôRk Rôú] "

- Û₃ ũYj ¾V °kRôU½

úRôsThûP, ũL êRĀV CPeLÇp ĀdL úSôèi Pô₃
 AũYLŪ[ĩhPî m, êPdLî m JhPôUp úSôRí m, Lu] êm
 Li æm Láj ç ĀñĀñj ç GĀRí m, EPp ç¼j çj RŪX ātĒ ĀL
 āWêi Pôn SôĀĀu j r YĀëm A¼Sôd₃p AZt°ëm B₃V
 áĒáQ eLs CkúSôĀt Lôæm.

Mimic Features	Altering Features
➤ Burning Pain in Shoulder and Upper limbs	➤ Twitching over the scalp
➤ Burning Sensation in the cheek and eyes	➤ Pain in the lower abdomen, Glossitis.

2. Tô½dLmT YôRm

"UôodLUôn Yônî Uôn ùUnç ũ\kç
 YĀñRÉ t T°ĀXô ŌæUtñ
 SôodLUôn OôXj ç SPdŭLVtñ
 SâdLUôn ũLĀWi ĩk ¾Āî i Pôm
 F odLUô ë\dlĀpXô çQ of° Vtñ
 ERĒúV N-W ùUeá êXokç Lôæm
 TôodLUôn YônĀhă AXoj RXôám
 Tô½ dLmT YôRj ¾u TôeáRôú] "

- Û₃ ũYj ¾V °kRôU½

CkúSôn E Pp ê tĒí m YÇdát\j ūR ġŪ\j ċl T°j §ŪVd
 ūLáj ċ, SPdL ê¼VôŪU, ūL, Lôp, SådLm, ūL¾ÁoRp,
 ŌdLÁuŪU, EQ of°ÁuŪU E Pp YtĒI úTôRp, YônĀRt\p,
 B ,V áĒLŪ [ěm Lôh¼d LôŪX UPdLj ê¼VôUt ūLômŪTI úTôp
 ġŪXdLf ūNnċĀām.

Mimic Features	Altering Features
➤ Loss of Sensation in both upper limbs	➤ Anorexia
➤ Numbness in upper limb, Sleeplessness	➤ Shivering of upper limbs

3. கண்டகிரக வாதம்:

“வகையான குரலதனைப் பற்றி நொந்து
 மர்போடு பிடரிதனில் வலியுண்டாகி
 நுகரான சரீரமெல்லாம் நொந்த மூலாற்றி
 நுணக்கமாய் சுவாசமது புறப்படாமல்
 முகையான நாவாலே மூச்சு மாறி
 முகத்திலே வியர்வாகி விலாநேர வுண்டாம்
 பகையான வன்னத்தைப் பருகொட்டாது
 பரிய கண்ட கிரகத்தின் பண்பு தானே”

- யுகி வைத்திய சிந்தாமணி - 800

Mimic Feature	Altering Features
➤ Pain in the throat, chest & occipital region.	➤ Anorexia
➤ Breathing through mouth, Bachache, Sweating on Face	➤ Loss of appetite

TREATMENT OF CEGANAVATHAM

In Siddha system the main aim of treatment is not only for the removal of physical illness but also for the mental illness. Treatment is considered with prevention and improvement of the general body condition also.

This said as follows

Lôl é	-	Prevention
''dLm	-	Treatment
¿û\î	-	Restoration

Lôl é

To prevent Cegana Vatham

1. Reduce the body weight by diet and exercise
2. Modify the nature of work which gives stress and strain to the neck region. Avoid prolonged writing with constant position of the neck
3. Use pillows of minimum height.
4. Avoid excessive intake of sour, astringent, salt and bitter tasted foods which increases the vatha and pitha kuttram.

DIET FOR DIABETIC AND HYPERTENSIVE PATIENTS:

- Salt free diet was advised for hypertensive patients.
- For an overweight diabetic, reduction in the number of calories is essential. Total calories should be approximately 30 cal/kg body weight.
- Simple sugars like canesugar, glucose, sweets, soft drinks, cakes, ice-cream should be avoided in day to-day diet.
- Diet should be rich in fibre content 20 to 30 gm per day
- Animal fats (saturated) ingestion should be avoided.

Line of Treatment (Line of Treatment)

The aim of Noi Neekam is based on

- To bring the three dhosa in equilibrium.
- Treatment of the disease by internal medicine and external application.
- Pathiyam (ie) dietary regimen to suit the drug and the disease.
- Yoga therapy.
- Thokkanam.
- Kanma niverthy (Expiation).

The line of treatment as described as follows

1. Bring the Three Dhosas in Equilibrium:

“ê | À½ Uî Á ê Èî ùLôs áÈI ùT
RI TòRÈèm Ru ùUèm YòRÀj R ùYVI
ÀÃùYëUù] Y Rôm
HÈ Æ\e , CùQ kç LXkç
UòÈ UòÈ Yî gùNnùLVôt À½
úSoùUVÈkç “hã Uî kúR
£ÃVRòùU] f ùNI éYo °j RúW”

- úSôn SòPp úSôn êR] ôPp Tá¼ - 1

since Siddha system of medicine is based on the Mukkutra theory, the treatment is mainly aimed to bring down the three dhosas to its equilibrium state and thereby restoring the physiological condition of various thathu.

Derangement of Vatha is the prime factor for “Cegana Vatham”

Kalichal Maruthuvam (Purgation) corrects the elevated Vatham.

The Following Verses reveals the Importance of Kalichal Maruthuvam.

"ÁúWN] j Rôp YôRm Rôî m"
"KÇ_ u \ UXdLhûP JÆV û Yj Rôp
E PÁí s[YôûRùVXô ùUôâe_ l úTôám"
"AËk¾ám YôRm APeá UXj ¾É p"

5 gm Nilavagai chooranam with luke warm water at bed time or 15ml of vellai ennai with luke warm water was administered at early morning as a kalichal medicine in the first day of treatment.

2. Internal Medicine and External Application

Internal Medicine

Kadukkai Choornam - 1 gm

- Twice a day (Morning and Night) with butter milk or honey.

External Application

Yearanda thylam After oil application for 10 minutes, patients are advised to perform the exercises, which are explained by the author in this dissertation later.

GENERAL SIDDHA TREATMENT FOR CEGANA VATHAM

We can use the following drugs also in cegana vatham.

Purgatives:

Kuzhambu

1. Agathiyar kuzhambu - 65 mg

Mathirai

1. Astabairava Mathirai - 3 to 4
2. Sanjeevi Mathirai - 2 to 4
3. Kudasoori Mathirai - 2 to 3
4. Meganatha Mathirai - 2 to 3

Thylum

- | | | |
|----------------------|---|---------|
| 1. Vellai Ennai | - | 10-20ml |
| 2. Kazharchi Thylam | - | 10-15ml |
| 3. Merugulli Thylam | - | 10-15ml |
| 4. Vaathanasa Thylam | - | 15-30ml |

INTERNAL MEDICINES

Kudineer

1. Nilavembu Kudineer
2. Kasakasa Kudineer
3. Amukkara Kudineer
4. Seenthil Kudineer

Chooram

1. Amukkara Chooram
2. Parangi Pattai Chooram
3. Thirikadugu Chooram

Mathirai

- | | |
|------------------------------|------|
| 1. Emathanda Kuligai | 1-Bd |
| 2. Kodasoori Mathirai | 1-Bd |
| 3. Pachai Karpoora Mathirai | 1-Bd |
| 4. Vatha Ratchasana Mathirai | 1-Bd |
| 5. Vatha Madakki Mathirai | 1-Bd |

Chendooram

- | | | |
|-----------------------------|---|-----------|
| 1. Gowri Chinthamani | - | 100mg Bd |
| 2. Chanda Marutham | - | 600 mg Bd |
| 3. Arumuga Chendoorum | - | 100 mg Bd |
| 4. Shunmugathala Chendoorum | - | 65 mg Bd |
| 5. Thalaga Chendoorum | - | 65mh Bd |
| 6. Thiriloga Chendoorum | - | 100mg Bd |
| 7. Linga Chendoorum | - | 100mg Bd |
| 8. Maharathvajam | - | 65 mg Bd |

Parpam

1. Velli Parpam	-	50mg Bd
2. Thanga Parpam	-	50mg Bd
3. Velvanga Parpam	-	165 mg Bd
4. Rasa Parpam	-	50mg Bd

Mezhugu

1. Rasagenthi Mezhugu	-	1gm Bd
2. Rasa Mezhugu	-	50 - 100mg Bd
3. Panja Sootha Mezhugu	-	50 - 100mg Bd
4. Ganthi Mezhugu	-	50 - 100mg Bd
5. Maha Veera Mezhugu	-	100 - 200mg Bd

Nei

Chenkkottai Nei	-	5ml (Bd)
-----------------	---	----------

Legiyam

Chenkkotai Legium	-	2 - 5g (Bd)
Aswaganthi Legium	-	5 - 10g (Bd)

Pathangam

Neela Kandavaalai	-	65mg Od
Kalanatha Gowri	-	65mg Od
Veera Rasa Pathangam	-	65mg Od

Kattu

Poora Kattu	-	25mg Od
Linga Kattu	-	25mg Od

3. Tj $\frac{3}{4}$ Vm

Diet Regimen

During the course of Treatment according to the nature of illness and the drug administered, the patient were advised to follow certain special dietary methods called "Pathiyam". The importance of pathiyam is clearly mentioned by Theraiyar as follows

“Tj ¼Vj ¼] ôúX TXò i Pôám Uì kç
Tj ¼VeLs úTô] ôp TXu úTôám - Tj ¼Vj ¼p
Tj ¼VúU ùYtÈ Rì m Ti ¼Rodá BRÄ] ôt
Tj ¼VúU ëd¼ ùVuTôo”

- úRÛWVo ùYi Tô TôPp 449

Proper dietic regimen enhance the bio-availability of the drug and are conductive to the maintenance of good health. If dietic regimen is not followed certain food may be incompatible and antagonise the drug effect and produce harmful effect to the body.

Three types of pathiyam are commonly told. They are Lãm Tj ¼Vm, CfnôTj ¼Vm, E lÀpXô Tj ¼Vm, (salt free dieting) also mentioned in many ancient Siddha literatures especially for the mercurial preparations of drug.

Vatha Roga Pathiyam

“éÇçYo Ågãe LÈVôt xÃdám YôRm”

- TRôoj R áQ °kRôU½

ie .,Tamarind and Astringents increase vatham. So the Cegana Vatham patients were advised to avoid tamarind and astringents.

In “Pathartha Guna Chinthamani” - the following are advised to avoid

“Láá StÈXj ùRi ùQ n ĩ rTôi PeLs LPÛX
YáL Rô,V ùReLUô Yi dÛL StLôVm
U¼ÅXôR ùYs ð sÇùLôs éûLÃûX UçùTi
CPñTôLúXô PLj ¼ ïd, PÄf NôTj ¼Vm”

CfnôTj ¼Vj ¼p ïdám ùTôì hL[ôY] :

Láá, GsùSn, LÄVôQ xN½ dLôn, LPÛX, úReLôn,
UôeLôn, TXô, LôVm, ùLôs , éûLÃûX, TôLp ,ALj ¼
êRÄV] .

Strict Pathiyam (Lâm Tj ¾Vm):

“LãûU ùVuÈã Tj ¾V êYo Yñj çI Pp
AûPÃXô UñTj ¾Vj çYo Yñj Rì kRp
ùLôãûUùNn éÇRû] f âhâd Ì h¼XuÈI
T¼Ãp Lj RÃ °dài I Æg°û] I Tì Lp
- ãkRWô] kRo Bës úYRI ùTôçXhNQ m.

ie A small quantity of fried salt is added to cooked rice which is taken after adding hot water. Fried tamarind, unripe bringal and drumstick are taken in the form of soup along with fried salt.

Bám ùTôì hLs:

The following food materials are good for the Vatha diseases.

“úLõ g °ñTÃñ TãÅuTôp RÃo ùSnVôám
YôNùUôj çj ç YûWëP Tì I éUôám - ûUkRú]
éPXeLôV YûWdLôëm úSNùUôt\ êì eûLdLôn
°ñj ûWVôám ùSpÄdLôn ÔçYû [Tì ITômTôúW”
- ALj ¾Vo YpXô¾ - 600

4. LuU çYoç ¾ (Expiation)

Our Siddha literature says, Poorva kanmam is one of the reasons for diseases among mankind. It should be expiated.

“SÄVôúX YkR LuUm §WùYu\ôp
SuUWeLs úRôI é SûPNôûX ûYj Rp
ùRçYô] çQ ñùYhPp, á[eLs ùYhPp
ùRnYj RXm úLôÃp LhPj §ì m Tôì
GçRô] TôXLodá BTWQ m °Rp
Gi TùRu\ YôRùUpXôm CûPkç úTôám
TÆYô] úSôn YkRôÄIT¼úV ùNnç
T¾YôL ûYj ¾Vj ûR Æ\á ùNnúV”

To expiate misneeds of Kanmam, planting trees, establishing gardens, laying roads and pathways digging wells, pools, lakes, construction of temples, donating ornaments to poor children must be done. These are advised to patient.

APPLICATION OF SPECIAL MEDICINE

Methods

All the wonders of modern science will not bring happiness, peace of mind, health or a long life. Although wonders have been achieved in our External Environment, Space, Travel, Computers etc. Our internal environment has been neglected. In the manner of rectifying this negligence and also as an immediate and preventive cure for Cegana vatham patients in our Sirappu Maruthuvam branch, the author have explained special medicine methods like Yoga, Thokkanam, Pranayamam, Exercises, Varmam and Mudra.

YOGA

Yoga is one of India's wonderful gifts to mankind.

The word "Yoga" is derived from its Sanskrit origin "Yuj" which means to bind, to join or to apply.

Traditionally philosophers had interpreted this to read "Yoking of all powers of the body, the mind and soul to God".

Another frequently used definition of 'Yoga' is that of Union of the individual spirit with the Universal, since that is its highest aim.

The parallel classical western concept of '**mens sana in corpore sano**'- a healthy body in a healthy mind has always been recognised and is finding increasing emphasis today.

It has eight clearly defined aspects and in its purest form is a complete system capable of answering all human needs.

"CVU 2VUúU Gi ½ pXô BR] m
SVê ñ ÀWôQ ôVôUm ÀWj ¾ VôLôWm
NVÁá RôWû Q ¾Vô] m NUô¾
AVê ñm AhPôeLm BYç UôúU"

- ¾î ØXo¾î UK¾Wm

CVUm	:	Universal Moral Tenets
¿VUm	:	Codes of Self Purification
BN] m	:	Control of Posture and activation of Physiological systems.
ÀWôQ ôVôUm	:	Control over the respiratory system.
ÀWj ¾VôLôWm	:	Withdrawal of mind from external sensory stimulation to introspection
RôWû Q	:	Concentration
¾Vô] m	:	Meditation
NUô¾	:	A state of transcendental consciousness when the individual merges with the object of Meditation - the universal spirits.

PRANAYAMA

Role of Pranayama

Pranayama has been assigned a very important role in the yogic system of exercise. In fact according to some yoga experts this is much more important than the yogasanas for keeping a sound health.

Pranayama - Pranana+Niyama

“Prana” Means - breath, vitality, air, energy and strength

‘Niyama’ Means - control

Hence the literal translation is ‘Control of Breathing’.

In the pranayama practices there are four important aspects of breathing which are utilized These are

1. Pooraka or inhalation.
2. Rechaka or exhalation.
3. Antar kumbhaka or internal breath retention.
4. Bahir kumbhaka or external breath retention.

“HñRp xWLM DùWhå YôUj Rôp
B ñRp ámTLM AñTj ç SôX¾p
F ñRp ê I Tj ¾Wi P¾p úWNLm
UôñRp Ju Èu Li Yg NLUóúU”

- ¾î ØXo ¾î Uk¾Wm

In our Siddha system various type of Pranayana are explained by our legend Siddhars.

Instructions for Pranayama

Sit in the position of Padmasana or Siddhasana.

Inhale through the left nostril, keeping the right one closed with the thumb of the right hand.

Hold the breath, close the left nostril with the ring finger and the little finger of the right hand, and exhale through the right nostril.

Then inhale through the right nostril, keeping the left one closed with the ring finger and the little finger of the right hand.

Hold the breath, close the right nostril with the thumb of the right hand, and exhale through the left nostril.

This completes one round of the exercise. Repeat the activity 4-5 times. Never exhaust yourself while doing this exercise.

How Pranayama Acts on Cegana Vatham Patients?

Pranayama produce a huge storage of energy in the solar plexus area. This will cause the body to radiate vitality and if any sickness is developing, the body can call upon some of this energy reserve to combat the pain. This pranayama can also improve brain function as well as increase the elimination of toxin from the body.

ASANAS

Prior to everything, asana is spoken of as the first part of hatha yoga.

Having done asana, one attains steadiness of body and mind freed from diseases and lightness of the limbs

- Hatha Yoga Pradipika (1:17)

Asana means a state of being in which one can remain physically and mentally steady, calm, quiet and comfortable.

In the Yoga sutras of Patanjali there is a concise definition of yogasanas. “Sthiram Sukham Aasanam”, meaning that position which is comfortable and steady. Asanas are specific body position which opens the energy channels and psychic centres. They are tools to higher awareness and provide the stable foundation for our exploration of the body, breath, mind and beyond.

Our Siddhars were well aware of the importance of the spine in relation to disease. Hence they explained many asanas and postures which were designed to make the spine more flexible to prevent spinal mis-alignments, and some may even correct minor spinal mis-alignments. The author had explained about few asanas for Ceganavatham patient as a preventive cure.

Vertical Stretching Asanas:

Tadasana (The palmae pose)

Parvatasana (Mountain pose)

Lateral Stretching Asanas

Konasana (angle pose)

Posterior stretching asanas: (Forward bending Asanas)

It should be kept in mind that in Ceganavatham patients who has the etiology of pain during forward bending should be prohibited from doing this type of asanas.

Asana	Complementary asanas
Yoga mudra (The Symbol of Yoga)	Bhujangasana
Hasta padasana (Arm Leg Pose)	Dhanurasana
Janusirasana (The Head Knee Pose)	Paschimottasana
Paschimottasana	Dhanurasana

By these forward bending Asanas the posterior spine is extended and which bring mental peace.

Anterior stretching Asanas:

(Backward bending posture)

Asana	Complementary asanas
Bhujangasana (Snake Pose)	Yoga mudra
Chakrasana (The Wheel Pose)	Pada Hastasana
Matsyasana (The Fish Pose)	Paschimottasana
Shalabhasana (Locust Pose)	Utthanapadasana
Ustrasana (Camel Pose)	Pada Hastasana
Dhanurasana (Bow Curve Pose)	Paschimottasana

Backward bending asanas increase the activity of jatharagni, which helps to burn and eliminate dross from the physical and subtle bodies. They open up the front vertex of the chakras. (Chakras are energy centres along the spine to the top of the head). In terms of the distribution of prana, samana, viyana vayu are stimulated by these types of asanas.

Spinal twisting Asanas:

- Meru wakrasana (spinal twist)
- Bhu Namanasana (spinal twist prostration pose)
- Ardha matsyendrasana (half spinal twist)

The twist imposed on the spine and the whole trunk exercises the muscles, makes the spinal coloumn more flexible and stimulates the spinal nerves.

Relaxation Asanas:

They are especially recommended for any back/spinal problem.

- Advasana (reversed corpse pose)
- Jyestikasana (superior posture)
- Makarasana (Crocodile pose)

Procedures of Few Asanas:

1. Yoga Mudra (Reintegration posture)

Starting Position

Sit in Padmasana

Method of practice

Bring the hands to the backside of the trunk and hold the wrist of the right hand by the left hand.

Bending the trunk slowly forward and try to touch the ground with the forehead. If it is not possible try to hold the forehead as nearer to the ground as possible.

Benefits

It allows the spinal column more flexible.

2. Paschimottasana

Starting position

Sit on the floor with the legs outstretched, feet together and hands on the knees

Method of practice

Raising the hands slowly sideward, upward without bending the elbows and hold them above the head.

Bringing the hands slowly downward, forward without bending the elbows and try to catch the toes with fingers. If it is not possible try to hold the knees.

Bending the body forward and try to touch the knees with the forehead without any strain anywhere in the body.

Benefits

It gives more flexibility to the vertebral column.

It stimulates circulation to the nerves and muscles of spine.

3. Bhujangasana (Snake pose)

Final position resembles handed snakes

Method of practice

1. Lie on the floor with facing downward. Keep the legs straight and together place the hands close to the body with palms facing downward.
2. Raising the head, neck and shoulder slowly one by one.
3. Raising the chest as much as possible in such a way that the lower abdomen should keep on in touching with the floor.

Benefits

- It strengthens the neck and back muscles
- It gives more flexibility to the vertebral column.

4. Matsyasana: (Fish pose)

Starting Position

Sit in Padmasana

Method of practice

Carefully bend backward, supporting the body with the arms and elbows. Lift the chest slightly, take the head back and lower the crown of the head to the floor. Hold the big toes and rest the elbows on the floor. Adjust the position of the head so that the maximum arch of the back is attained.

Benefits

It recirculates stagnant blood in the back, alleviating backache and cervical spondylosis.

5. Dhanurasana (The Bow Curve Pose)

Starting position

Same as Bhujangasana

Method of practice

Folding the right leg slowly at the knee and holding the angle with the right hand. Folding the left leg slowly at the knee and holding the ankle with the left hand. Raising the head, chest and thigh as high as possible by gradual application of force on the head and legs. Raising the body slowly and making a perfect back arch on the vertebral column as much as possible.

Benefits

Relaxes the spinal column

6. Gomukhasana: (Cow Face Pose)

Posture

Try to clasp the fingers of both hands behind shoulder blades, sitting with both legs bent in a manner where knees are overlapping.

Benefits

- Induce relaxation
- Relieves stiffness of shoulder and neck.

7. Ardha Matsyendrasana: (Half Spinal Twist)

Posture

Sit with right leg bent at the knee and bring heel under left thigh. Inter lock left heel with right knee.

Inhale and grasp left big toe with right hand fingers, give twist to the whole trunk with exhalation.

Benefits

It reduces the tendency of adjoining vertebrae to develop osteophytes. When practised with care, it has proved beneficial for mild cases of slipped disc.

8. Makarasana: (Crocodile Posture)

Method of practice

- This is a lying posture and taking rest.
- Lie flat on the stomach.
- Raise the head and shoulders and rest the chin in the palms of the hands with the elbows on the floor.
- Keep the elbows together for a more pronounced arch to the spine, Separate the elbows slightly to relieve excess pressure on the neck.

Benefits

- Stops cervical bone disorders and to helps one avoid using Neck brace.
- Releases compression of spinal nerves.

How Asanas relief the pain in Ceganavatha patients?

1. Effect on Spinal muscle

Asanas dampens the inflow of sensory impulses to the brain, which causes less stimulation to the emotional brain. (Limbic cortex, Hypothalamus, Anterior pituitary and their connectives with Adrenal glands). Therefore, there are less visceral disturbances to disturb attention and concentration. The reduction of sensory input creates a reciprocal chain, relaxing the muscle. Inhibition of synapses at the relaxed neuro muscular junctions in turn reduces the sensory input further. Thus asanas made musculature of spine as relaxed as possible.

2. Effects on tendons and ligaments

The accentuated curve of the spine makes it supple and mobile. The action on the ligaments and tendons of the spine has important effects on the nervous activity.

3. Effects on Nervous system

Acts on the spine by stretching it, generates reflex actions in the vegetative functions and tones the chains of ganglions situated on both sides of the spine.

EXERCISE

What is Exercise?

Exercise involves movements of muscles and joints that work in opposition to an external force. The direction range and elasticity of movement are predetermined by the state of muscle tone and their nourishment, the types of joints involved and the pull of the gravity.

Broadly there are three types of exercise

I. Active Exercise

Free hand exercise : Which acts only against gravity

II. Passive Exercise

Assisted Exercise - Which involves external force to assist a weak muscle or an incoordinated movement to achieve the desired status.

III. Exercise against resistance

The resistance is applied in a graded manner to improve the strength and endurance of the muscles.

In Cegana Vatham patients both active and passive exercise are advised depending on to the patient's condition.

Earlier stages - Active exercise

Later stages with Muscle atrophy - Passive exercises are recommended.

EXERCISE ADVISED FOR CEGANAVATHAM

Patient is advised to apply Yearanda thylam over the nape of the neck with both hands for 10 minutes and after, they are asked to do the following exercises.

1. NECK BENDING

a. Starting position

- Sit with both legs straight
- Place the palms on the floor by the side of the buttocks
- Keep the back, neck, and head straight
- Close the eyes

b. Practice

Stage I (Forward - Backward movements)

- Slowly move the head forward and try to touch the chin to chest
- Then move the head back far as comfortable
- Try to feel the stretch of the muscles in front and back of the Neck and the loosening of the spine in the Neck
- Practice 10 times
- Inhale on the backward movements and exhale on the forward movements.

Stage II (Bending to Right and Left)

Close the eyes and face directly forward.

- Slowly bend the head to the right side as ear touches the shoulder or lifting the shoulder.
- Bring the head back to the normal position.
- Then bend it to the left side and try to touch left shoulder with the left ear in the same fashion Lift the head to the centre.
- This is one round. Practice 10 rounds.
- Inhale with the upward movement and exhale with the downward movement.

Stage III (Turning the head to Right and Left)

- Keep the head upright and eyes closed.
- Gently turn the head to the right so that the chin is in line with the shoulder.
- Slowly turn the head to the left through the centre till the chin is in line with the shoulder. Bring the head to centre
- This is one round. Practice 10 round
- Inhale while turning to the front Exhale while turning to side.

c. Note (for all the three stages)

- Move the head as far as comfortable
- Keep the shoulder relaxed and unmoved.
- Feel the release of tension in the neck muscles and the shoulder muscle.

CONTRA INDICATIONS

- Should not be performed extreme positions by elderly people
- Cervical spondylosis cases should avoid during acute pain.

Benefits

- These asanas release tension (accumulated especially after prolonged work at a desk) and also heaviness and stiffness in the head, neck and shoulder region.

Additional points to note

- Make the movements cautiously and slowly when there is Neck pain
- Hold the Neck in the final position for a few movements
- If patients have pain at any stage, they are asked to stop in that position for a while.

ùRôdLQ m

Massage

ùRôdLQ m = ùRôdá + A Q m

ùRôdá - úRôp

A Q m - Aû Q j Rp

úRôúXôâ Aû Q j çd ûLVô[I Tâ m Uì j çYê û\.

Massage is a method originating in China in 300 B.C

Definition

Many definitions of massage have been offered from time to time.

Given below are some of the definitions.

- Massage is the scientific mode of curing certain forms of disease by systematic manipulations.

- Murrel

- Massage refers to all mechanical procedures that can cure illness.

- Hoffa

- Massage is a term applied to certain manipulations of the soft tissues. These manipulations are most efficiently performed with the palmar aspect of hand and administered for the purpose of producing effects on the nervous system, muscular system as well as on the local and general circulation of the blood and lymph

- Beard

- Massage is a healing art.

“Uoj R] Uô,V ùRôdLQ j ¾u ùNVp YáI úTu NRô

çj Rê m YôRm À½j R À½ I û Tf ùNáI úTú]

UpXLôWu ÆPLo ûLùVu ,\ Yô[ôúXh À½

YpÄûV ùUnÄÄt úN¾I TWók ¾\ûU Yô[ôúX

RhP ÄñdLp Ä¼j Rp êñdLp ûLûR E kç LWe
 LhPX ï j R Äï j Rp UpXôj çRp ûR Ykç
 AûNj RÄp ùYôuTç Uj R] j ¾u ç\Uô] ôí m- C¾p
 CûNKR áQ eLû [f ùNôpXI úTôúUô"

- °j R Uì j çYôeLf ãì dLm (úRWu Rì)

The above nine are the Thokkana procedures described in our system. In our in patient ward, the author had advised the following Thokkana methods for the Cegana vatha patients.

Therapeutic Uses

"ùRôdLQ j ¾] ôÄWj Rk úRôp F ½ YûLhá
 Ádá Nî d VgN °Wò m úTô- ùUndL¾L
 éh¾è\dLm éQ of° ÄûYL¾dám
 ThP AûXfNXñm Tôo"

- °j Ro AñûY Uì j çYm

ùRôdLQ m CçúY Uoj R] m G] ITâm.YçVôp E i PôLd
 ï ¼V úSônLs GpXôYtû\ëm ``dáYRtLôL TVuTâm.

CI TÄLôWm YôRI Ä½ Lû [ùVpXôm áQ ITáj ¾
 YôRI Ä½ Ä] ôp Gi k¾i dL ê¼VôRYoLû [ëm Gi kç SPdLf
 ùNnëm.

In physiotherapy, massage is used for the following purpose

- To improve the mobility of the soft tissues.
- To reduce muscle spasms and pain under abnormal conditions.
- To reduce oedema.
- To increase circulation.
- To mobilise secretions in the lung.
- To induce local and general relaxation.

SEQUENCE OF THE MASSAGE

NECK REGION

Effleurage

Performed with palmar aspect of adducted fingers. It consists of 3 strokes in the following order. The direction of stroke is from upper to lower neck.

- i) Side of Neck : Supra clavicular area
- ii) Back of Neck : Supra clavicular area
- iii) Middle : Side of Neck-Scapular Muscle – axilla

Kneading

- Finger pads are used on the posterior aspect from the occiput
- On the lateral aspect of the neck the fronts of the two distal phalanges of all four fingers are used.
- Flat handed kneading in upper thoracic area

Picking up

The lower part of the upper fibers of trapezus are compressed against the underlying bone

Wringing

Done for sternocleido mastoid muscle

Scapula rolling

The deep scapular muscles are intermittently compressed against the rib cage with potentials.

Hacking and clapping

- Performed on the Neck alone
- Start from occiput to lateral part of the Shoulder

HOW MASSAGE REDUCE CERVICAL SPONDYLOTIC PAIN ?

Reflex in which peripheral and central portions of the nervous system both cerebro spinal and sympathetic are chiefly active, an impression made upon the nerve ends of the sensory or afferent fibres

(this is the area, the nerve is pinched where it leaves the spine) connected with the nerve centres of the cerebrospinal and sympathetic system being transmitted to the related centres, Where new activities are setup resulting in the sending out of nerve impulse by which vital changes are effected not only on the parts directly acted upon but in related parts also.

VARMAM

A slight misalignment of a vertebra, which impinges on the nerve, that travels to that particular organ. This cause interference to the life forces [nerve impulse] to the organ. As a result, the organ cannot function at its optimum level. If the spinal misalignment is not corrected to organ may develop pathology.

In our Siddha system, Siddhars explained these words as Varma diseases, results from derrangments of varma areas around cervical spine, which is given later.

The traumatological cervical disc lesion (Acute cervical disc lesions) may grouped under two categories:

1. Occurs in normal spine, as the result of sports injury in a young person.
2. Occurs in a person who already has an abnormal neck due to cervical spondylosis. For this patient sudden flexion or extension of the neck may lead to the symptoms of disc herniation.

What is varma?

A varma points is a place where the life forces is acting. If it is hurt in a particular manner and with forces, signs and symptoms develop according to the site of the point. If these signs and symptoms are not set right within the stipulated period death will occur. So these varma emergencies which can be called as orthopaedic emergencies according to recent medical science.

According to sites and symptoms, the author had given 3 Varmas.

1. Pinnuvathi Varmam:

“..பின் தலையில் பொருத்தில் தானே
பின்னுவாதி என்றதற்கு பேரு

.....

மையமாகும் இத்தலத்திலடியகள் கொண்டால்
மயங்கிடாது போதமுண்டாம்
அப்பனே தரிப்புடன் உளைச்சல் குத்து
சகிக் கொணாது தலைசுற்றி வலிக்கும்பபா
பிடரி நோயாம்.....

.....ஓராண்டு கழிந்த பின்பு
பிடரி என்ற நரம்பிதிலே நீரிறங்கி தரிப்புண்டாகும்
ஆகும்பபா குறுக்கதிலே நோயுண்டாகி
கைதனிலே வாத நீர் வந்திறங்கும் பாரே”.

Mimic Features:

- Giddiness
- Pain in the cervical region
- Pain in the shoulder and upper limb after one year

Altered Features:

- History

Site of Varmam:

பின் தலை பொருத்து (Atlanto occipital Joint)

2. Suzhiyaadi Varmam:

“வளமான சுழியாடி வர்மம் கேளு
துகையுடனே பிடரி பெரு நரம்புக்கு மேல்
முடி முடிந்த குழிவதிலே சுழியாடி வர்மம்
அப்பனே இத்தலத்தில் குத்திடிகள் ஊக்கம் கொண்டால்
தடுதலானே கைஇ காணும் குளிர்ந்து போகும்
வாய்பிளக்கும் சடுதியிலே மரணம் வந்து சாவாள்”

Site of Varmam:

முடி முடிந்த குழிவு (Atlanto occipital joint)

Mimic Features

- Quadriperesis

Altered Features

- Death

3. Vilangu Varmam:

When vilangu varmam is injured it leads to symptoms of saganavatham. The symptoms are pain in cervical region, pain in the shoulder and upper chest, difficulty in lifting the corresponding upper limb. This should be differentiated from the saganavatham. The verse for vilangu varmam is as follows.

“அலவாடி வர்மத்தின தரழே
காரைஎல்லுக்குள்ளே விலங்கு வர்மம்
விலங்கு வர்மம் கொண்டால் குணத்தைக் கேளு
கையதினே வசத் தொடமல்
நெஞ்சுள்ளே கொளுத்திக் கொள்ளும்
காரை எல்லுக்குள்ளே வுளைச்சல் குத்தும்
தலை தன்னை நிமிரவொட்டாமல்
குறுக்கோடே கொளுத்திக் கொள்ளும்”

- வர்ம ஆணி

MUDRA

Mudra is a hand gesture (or) position of body which is a symbol of energy centre. Mudra is a medium of communication of pranic energy and balancer of five elements. It brings harmony between conscious and sub conscious mind.

Importance of Mudras:

- Mudra is a switch board of the body
- Chakras are activated by mudras
- Give the body energy
- Mudras control tridosas – vatha, pitha and kabha.
- Mudras purify the nerves, leads to knowledge, energy and joy of consciousness.

1. Aathi Mudra (or) Mustimudra.

The tip of thumb should touch the Little finger base. The other fingers should enclose the palm.

Effects:

Symptom of Spondylitis gets reduced.

2. Visutha or Cervical Mudra:

The tip of the index finger should touch the middle phalange of the thumb, while the other four fingers should point out in one direction. The pressure given by the under finger should be mild.

Effect:

Symptoms found in spondylitis, tonsillitis, thyroid dysfunction and lung disorders are reduced.

LITERATURE STUDY ON MODERN ASPECTS

ANATOMY

VERTEBRAL COLUMN

Human Skeleton is divided into axial and appendicular sections. The axial skeleton structures include cranium, vertebral column and associated ribs and sternum. The vertebral column protects the spinal cord and its meninges. It forms a pillar, which contains 33 segments and lengthens about 70 cm in male and 60 cm in female. The segments can be divided into cervical, thoracic, lumbar, sacral and coccygeal segments.

The cervical segment has seven vertebral bones, thoracic twelve, lumbar five, sacral five and coccygeal four. All are separate bones except sacrum and coccyx. Both are formed by fusion of separate bones.

The Curvature of the Spine

There are four curvatures in the vertebral column. They are two primary and two secondary curvatures.

The primary curvatures are the thoracic and sacral. They are convex posteriorly. The secondary curvatures are convex forwards. The cervical curvature becomes prominent when the child is able to hold its head up and sit upright. The lumbar curvature appears by 12-18 months after the child starts walking

Lateral Curvature

A slight lateral curvature seen in upper thoracic region. It is curved to the right in right handed person and vice versa.

General Features

a) Vertebrae

The vertebrae can be divided into vertebral body and vertebral arch. The body is cylindrical, large in lumbar region. Vertebral arch has two pedicles, seven processes, and two laminae. The laminae are vertical, plate like structures, faces together to form spinous process. The spinous

process projects downwards and is the levers for the muscles. The articular processes are four in number and bearing an articular facet and articulate with the adjacent vertebrae. Transverse processes projects laterally from the junction of pedicle and laminae. In thoracic region they articulate with ribs.

b) Inter vertebral discs

They are fibro cartilaginous discs and interposed between the adjacent surfaces of vertebral bodies. They are thicker in lumbar region than in thoracic. Their peripheral parts are supplied by the adjacent blood vessels. But the central part is avascular. They receive their nutrients by diffusion from spongy bone of adjacent vertebrae.

Cervical Vertebrae

Cervical vertebrae are seven in number. The first, second, and seventh are modified (or) atypical vertebrae.

The cervical vertebrae are smaller than lumbar and thoracic vertebrae. They have large vertebral foramen to accommodate the cervical swelling of the medulla. All cervical vertebrae have a foramen in the each side of the transverse process known as Foramen Trasversorium through which vertebral artery, vein and plexus of nerves are transmitted.

The body of the vertebrae is oval and its superior surface is concave from side to side.

Pedicles

These are short in size and projects upwards and backwards from the middle of posterolateral parts of body and then from the posteromedial wall of the foramen transversorium.

Laminae

These are long and rectangular and almost overlap their neighbours in extension

Spinous Processes

These are short and bifid.

Articular Facets

These are the oblique cut ends of short bone, the articular process lying at the junction of pedicle and laminae on each side. The superior facet faces upwards and backwards, the inferior facet faces downwards and forwards.

Vertebral Foramen

It is large and triangular in shape.

Transverse Process

Each transverse process is short and perforated by the foramen transversarium. The costal process projects laterally from the body. Behind the transverse foramen, the true transverse process lies laterally from the junction of pedicle and laminae to end in posterior tubercle.

Atypical Cervical Vertebrae

Atlas

It supports the globe of head. It has no body. It consists of two lateral masses united by an anterior and posterior arch. The body represented by the dens, a tooth like projection from the superior surface of body of C2. Lamina is present in posterior arch. It is grooved on its superior surface behind the lateral mass. The spine is replaced by the posterior tubercle. The superior and inferior facets lie on the lateral masses anterior to the first and second cervical nerves respectively.

The Axis

The axis has a peg like projection in the upper part of body known as dens (or) Odontoid process. It has a circular facet anteriorly, articulating with atlas. There are two articular facets on either side. Laminae are thick. The spine is large bifid and powerful. The transverse processes are small and possess a tubercle on its tip.

Seventh Cervical Vertebrae

The spine is long and non-bifid. The transverse process does not possess anterior tubercle. The foramen transversarium transmits only veins.

Joints of Vertebral Column

The vertebrae from the 2nd cervical to 1st sacral inclusive are articulated to one another by series of cartilaginous joints between vertebral bodies and a series of synovial joints between the vertebral arches. The vertebral bodies are united by antero-posterior longitudinal ligaments and by a central vertebral disc of fibro cartilage.

Atlanto-occipital Joint

It is a synovial condyloid variety joint. Articular ends are superiorly with convex occipital condyles, and inferiorly with superior articular facets of the atlas. Ligaments, capsules, anterior and posterior atlanto occipital membranes are the adjacent structures. Vertebral artery supply to this joint. Nerve supply is by first cervical nerve. Movements flexion, extension and lateral-flexion.

Atlanto-axial Joint

Comprises of

- a) A pair of lateral atlanto axial joints and
- b) Median atlanto-axial joints

a) Lateral Atlanto Axial Joint

Synovial Joint : Plane variety
Articular Ends : Inferior facets of atlas and superior facets of axis.
Ligaments : Anterior longitudinal ligament and
Ligamentum flavum.

b) Median atlanto axial joint

Synovial Joint : Pivotvariety
Articular Ends : Between the dens of axis, anterior arch of atlas.

Ligaments : Transverse ligament

Movements : Rotatory movements around a vertical axis.

Ligaments Between the Axis and Occipital Bone:

1. Occipito - Axoid

2. Odontoid / Chech Ligaments

Movement - Limit the extend of rotation of cranium

The Unco Vertebral Joints (Luschka's Joints)

These are not true synovial joints, which develop as a result of degenerative changes in the edges of the disc in early adult life.

Luschka's are important because

a) They are commonest site of osteophyte formation. These osteophytes may compress the cervical nerves.

b) Vertebral artery lies lateral to the joints. Intruding on the canal can cause distortion of the artery and leads to vertebro basilar insufficiency in atherosclerotic vessels.

Blood supply of vertebral column:

Vertebrae and longitudinal muscles attached to them are supplied by segmental arteries. The ascending cervical, intercostals, and lumbar arteries give multiple small branches to the vertebral bodies. The extensor muscles are supplied by occipital, deep cervical, and the transverse cervical arteries. In thoracic and lumbar regions the muscle receives posterior branches of the intercostals, lumbar, and lateral sacral arteries.

Venous drainage

The internal venous plexus lies within the vertebral canal but outside the spinal dura. It received tributaries from

i) The vertebrae through the basilo vertebral veins

ii) The meninges and the spinal cord

The internal vertebral venous plexus drained by the intervertebral veins which passout through the intervertebral foramina. Here they are

joined by the tributaries from the external vertebral and sacral veins. About the internal nervous plexus communicate with the occipital and basilar veins through the foramen magnum.

Nerve supply of vertebral column

The anterior longitudinal ligament has rich innervation from the vertebral plexus which derives sensory innervation from cervical, glossopharyngeal and vagus nerves and autonomic supply from inferior cervical and stellate ganglion. The sinus vertebral nerves and the sympathetic fibers supply posterior longitudinal ligament and perisoteum. The apophyseal joints and the interspinous ligaments are supplied by dorsal rami. There is significant overlap of segmental innervation.

Movements of vertebral column

The greater thickness of the discs in the cervical and lumbar regions as compared with the thoracic region is associated with the greater individual ranges of movements occurring in thoracic regions.

Flexion or forward bending, extension or backward bending, flexion- rotation, and circumduction are all possible in vertebral column. Numerous muscles are attached directly on the vertebra.

Movements	Muscles	Nerve supply
Flexion	Sternocleido mastoid Longus Coli Longus Capitis Rectus Capitis anterior	Accessory Cervical Ventral rami Cervical Ventral rami C-1 ventral ramus
Extension	Splenius cervicis and capitis Erector Spinae Rectus Capitus both Major & Minor Obliquus Capitis superior, Trapezeius	Cervical dorsal rami Dorsal Rami Dorsal Rami C1-Dorsal Ramus Accessory

Lateral, Flexion & Rotation	Sterno cliedo mastoid Scalene Longus Coli Levator Scapulae Rectus capitis Splenius Longissmus obliquus capitis Superior & Inferior	Accessory Cervical Ventral rami Cervical Ventral rami C1-Ventral ramus Cervical Dorsal ramus C1-Dorsal ramus.
-----------------------------	---	--

Structures Passing Through

A. Foramen Transversorium

- Vertebral Artery
- Vertebral Vein
- Plexus of Sympathetic nerve

B. Intervertebral Foramen

Spinal nerves form dorsal Medulla

Functional Anatomy

a) Cervical Nerve

There is 8 pair of cervical Nerves. Each nerve root contains sensory, motor, sympathetic fibres that innervate the upper extremities. .Sensory supply termed as dermatomes and motor supply as myotomes. 30 percent of the motor roots also transmit sensation toward the cord. The sympathetic fibres innervate the blood vessels, sweat gland and hair follicles

b) Cervical spine

The spine is divided into anterior and posterior columns. The component parts of anterior column are

- Anterior Longitudinal Ligament (ALL).
- Annulus Fibrosus (ANN)
- Unco Vertebral Joint.

Posterior column consist of

- Nerve Root (NR)
- Facet
- Superior Ligament
- Posterior Longitudinal Ligament

c) Intervertebral Disc

The gelatinous central portion of the disc is called the nucleus pulposus. It is composed of around 80-90% water. The outer ligamentous ring called the Annulus fibrosus, which hydraulically seals the nucleus, and this annulus fibrosus contains collagen bundle at peripheri and fibro cartilaginous tissue in the inner part.

The annulus has overlapping radial bands, not unlike the piles of a radial tire. The thickness of discs varies daily thick in morning due to absorption of fluids in lying posture during night and it is thin at night.

Intervertebral Disc - Physiology

i) As a Spacer

Proper spacing of intervertebral disc allows the intervertebral foramen to maintain its height, which allows the segmental nerve roots to exit each spinal level without compression.

ii) As a Shock Absorber:

iii) As a Motion Unit:

The elasticity of the disc allows motion coupling. So that the spinal segment can flex, rotate, and bend to the side all at the same time during a particular activity.

iv) As a Hydraulic Cylinder:

The annulus interacts with the nucleus. As the nucleus is pressurized the annular fibres serve a containment function to prevent the nucleus from bulging or herniating. The gelatinous nuclear material directs the forces of axial loading outward and the hoops of annular fibres help to distribute that force without injury.

Mid Sagittal Diameter of Cervical Spinal Cord

Level	Male(mm)	Female(mm)
C3	15.1 + 1.2	14.8 + 2.1
C4	14.8 + 1.7	14.3 + 2.07
C5	15.0 + 1.8	14.6 + 2.09
C6	15.1 + 1.6	14.4 + 2.1
C7	15.3 + 1.6	14.6 + 2.06
Mean	15.1 + 1.6	14.2 + 2.07

Below this value suggests cervical spondylosis.

CERVICAL SPONDYLOSIS

Nomenclature

- Cervic (o) - Latin Word, means neck.
- Spondylo - Greek Word, means Vertebra
- Osis - Condition

- Is a type of pathological condition involving cervical vertebra.

Synonyms:

- Cervical Spondylotic Myelopathy : Burner Syndrome
- Cervical Osteoarthritis : Pinched Nerve
- Cervical Degenerative joint disease: Brachial Plexus injury
- Cervical Radiculopathy : Cervical Discogenic Pain Syndrome
- Cervical Osteophytic bars. : Cervical Facet Syndrome
- Cervical spine sprain : Rotator cuff injury

Definition

Cervical spondylosis is a disorder characterized by changes in the vertebral disc and surrounding ligaments caused by abnormal wear on the cartilage and bone of the neck with degeneration and mineral deposits in the cushions between the vertebrae.

Chronology

In 1901, Sir Victor Harsely explained compression of cervical spine due to progressive CSM. Hayashi in 1987 contributed the Spondylotic changes of spine.

Epidemiology

Cervical Spondylosis is present in 20-25% of population by the age of 50 years and increases to 70-85% by the age of 65 years (From Radiographic evidence)

Location

- Generally the C5 and C6 roots are most commonly affected by cervical Spondylosis as a result of the increased mobility at the C5-C6 and C6-C7 levels.
- Acute disc lesions are seen most often at the C7 level followed by C6.
- High level cervical disc involvement are very uncommon.
- T1 Radiculopathy is caused by the result of involvement by Pancoast tumour in the apical pleura.

Etiology

Causes of this disorder are explained as follows.

a) Degenerative Causes:

They are primary and secondary

- Primary** - Senility
Genetic Factors
Metabolic factors
Manual Labour
- Secondary** - Osteo arthritis
Rheumatoid arthritis
Metastatic Carcinoma
Lymphoma of spine
TB Spine

b) Injury

- Automobile accidents with whiplash injury and athletic injury
- Sudden jerks on the arms during falling down.
- Previous injuries with fracture or disc prolapse.

c) Occupational Causes: Beedi rolling, Tailoring, Teamsters, Home maker

d) Hereditary Factors

Congenital narrowing of the cervical spinal canal (myelopathy is often seen when canal's sagittal diameter is 12mm or less.)

- Segmental defects - Hemi vertebra, Fused Vertebra.

e) Acquired narrowing of cervical spinal canal due to

- Osteophytes.
- Ossified posterior longitudinal ligament (OPLL).
- Facet joint hypertrophy (Results foraminal stenosis and compression of root of radicular artery).
- Hypertrophied ligamentum flavum (Compress the cord during extension).

Factors Responsible for Myelopathy in cervical spondylosis:

1. Uncovertebral osteophytes cause anterior compression of cord.
2. Bony ridges on the posterior vertebral bodies cause central compression on the cord.
3. Zygapophyseal osteophytes causing posterior compression.
4. In curving of the ligamentum flavum causing posterior compression on the cord.
5. Development of narrow cervical canal.
6. Dynamic effect of narrowing of the cervical canal.
7. Calcification of the posterior longitudinal ligament.
8. Teething of the roots to the osteophytes.
9. Arachnoiditis, postoperative scar.
10. Interference of blood supply to cord.

PATHOGENESIS

In disc degeneration the primary event is a progressive decrease in the degree of hydration. Glycoproteins diminish in size and number their ability to retain water diminishes. This results in loss of disc height, disc fibrosis and annular weakening. Adjacent vertebral bodies approximate each other and uneven abnormal movement in the affected areas probably results in osteophyte formation. These occur at all the joints, namely the disc, zygoapophyseal joints and the neurocentral joints of Luschka. Though osteophyte formation may be the body's attempt to stabilize the joints their growth can result in narrowing of the spinal canal and cord compression.

The **predisposing factors** which may accelerate of these changes viz.

1. Occupation requiring repetitive motion and chronic flexion of the cervical spine.
2. Previous injury with fracture or disc prolapses.
3. Segmentation defects like hemivertebrae or fused vertebrae.
4. May be a hereditary predisposition to intervertebral disc disease.

Pathology:

Cervical spondylosis is very common and histological evidence of degenerative changes is present in virtually even present over the age of 70. Osteophytes may form posteriorly with osteoarthritis of the apophyseal joints and also anteriorly in relation to degenerative changes and narrowing of the intervertebral disc with sclerosis of the bony end plates. The osteophytes may cause symptoms by encroaching on the spinal nerve foramina or in the cervical region on the vertebral artery foramen. In the cervical region intermittent pain and discomfort may be followed eventually by stiffness and limitation of movements.

At first injury to be chondrocytes occur and therefore, the maintenance of articular cartilage impairs and if this continues loss or decreased synthesis of proteoglycans occurs. Another theory is with decades of weight bearing. There is remodeling of the articular cartilage with redistribution of load stress chondrocyte integrity mainly depends on normal level of loads. Chondrocyte degeneration or injury occurs as a result of overloading or under loading and loss of proteoglycans has been contributed by alteration of subsynovial weave of collagen fibres.

Chondrocyte injury causes release of degradative enzymes particularly proteoglycanase and cathepsins. At the same time the capacity of synthesis of proteoglycans diminished due to age and chondrocyte injury. Injury causes alteration in collagens and there occurs change from type II to type I. The Type I collagen withstands minimally to stress. All this causes cartilage injury.

Morphology:

The early changes appear to be erosion and flaking of cartilaginous surface with advance of the disease clefts appear within the cartilage at right angles to the surface. The clefts may penetrate to sub chondral bone producing cartilage fibrillation. Sometimes fragments of cartilage break off to create joint mice. This cartilage injury results in growth of blood vessels from the subchondral bone into articular cartilage. These occur focal cystic areas within the subchondral bone and they contain fibrous tissues. The further progression of the disease, leads to deep or complete erosion of cartilage layer.

The disappeared and leaves denuded subchondral bone which is dense smooth, glistening to ivory. This is known as Eburnation. The loss of cartilage accounts for the so called thinning of joint space, which is seen radiographically.

Osteophytes developing from margins of articular cartilage may sometime extend to the ligamentous and capsular attachment and is called “bone spurs” of osteoarthritis. When large spurs project from opposing bones come into contact causing pain and limitations to movements. These bony spurs accounts for nodules known as “Heberden’s nodes.”

Intervertebral Disc Prolapse

This is common cause of compression of the nerve roots and more rarely causes compression of the cord. The inter vertebral disc consists of a central module semifluid matrix, the nucleus pulposus, surrounded by a ring of fibrous tissue and fibrocartilage, the annulus fibrosus. The posterior segment of the annulus is thinner and less firmly attached to bone and following unusual stress part of the matrix of the nucleus pulposus may herniate through it. The lesion often termed “Slipped disc” may occur after injury and symptoms depend on the direction taken by the extruded matrix. It usually tracks posterior laterally around the expansion of the posterior longitudinal ligament, appearing at one side and compressing the spinal nerve in the intervertebral foramen. Disc protrusion occurs, principally in C5 –C6 and C6 – C7 discs.

A single mid line posterior disc protrusion may compress the spinal cord, obstructing the anterior spinal artery, and is a rare but important cause of permanent damage to the spinal cord if surgical treatment is delayed.

When there are several protrusions, the resulting compression may impair the circulation and variable effects of ischaemia of the spinal cord may result. There may be cavitation of the cord and loss of nerve cells in the severely affected areas, the condition being known as “Spondylotic myelopathy”. Nerve root compression is commoner than myelopathy.

Pathogenesis of Myelopathy and Radiculopathy:

The various factors that play a role are:

1. Congenital narrowing of the Cervical Spinal Canal:

This can be a major cause of myelopathy – canal narrowing is usually generalised but can occasionally be seen at one or two levels from C₂- C₇. Myelopathy is often seen when the canal sagittal diameter is 12 mm or less.

2. Acquired Narrowing of the Spinal Canal:

This can be due to:

I. Osteophytes:

The osteophytes can also give rise to irritational fibrosis of dural sleeve of the nerve root.

II. Ossified posterior longitudinal ligament (OPLL):

OPLL is characterized by heterotrophic new bone formation in ligamentous tissue and may be due to the activity of osteoblastic phenotype cells.

III. Facet joint Hypertrophy:

This leads to foraminal narrowing with resultant compression of the nerve root and the radicular artery.

IV. Hypertrophied Ligamentum Flavum:

During extension, the cord is compressed by the thickened ligament over the anterior osteophytic ridge and this may occur more frequently, a relatively more immobile area due to spondylotic changes.

V. Movement Disorders:

Chronic movement disorders like torticollis and athetosis can induce premature spondylotic changes in the cervical spine.

VI. Trauma:

Trauma, such as whiplash injury may cause structural changes that predispose towards premature degenerative disc disease.

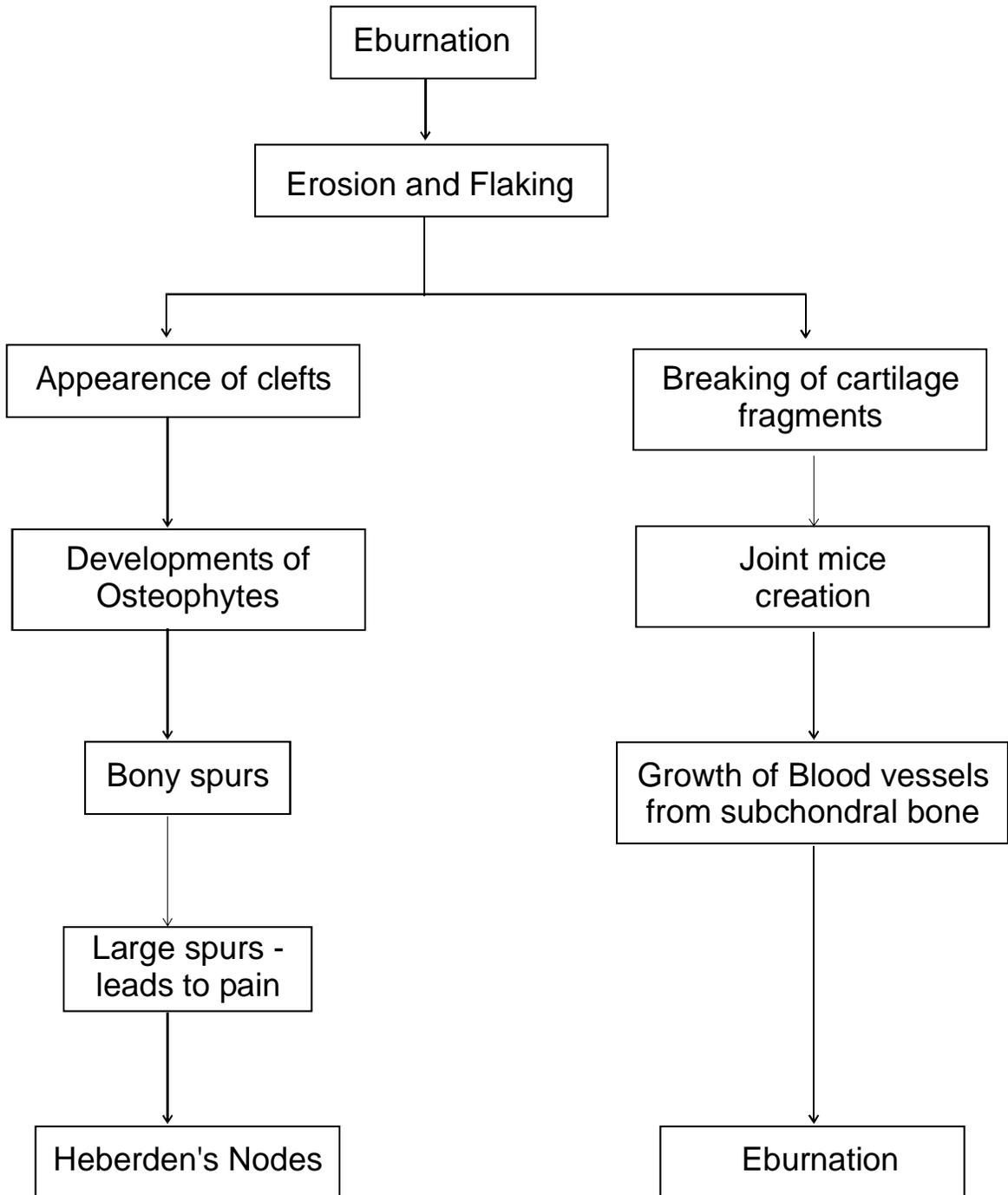
3. Dynamic Factors:

The spinal cord moves within the spinal canal and the cord and root becomes taut in flexion and lax in extension with an increase in the posterior contour by almost 5 cm and the anterior contour by upto 2 cm. Dural adhesions to the posterior longitudinal ligament and the root sleeves to the foramina make the cord more susceptible to injuries.

4. Vascular Factors:

Vascular compromise by compression of the anterior spinal and radicular arteries and veins. The anterior sulcal arteries can be compressed and flattened due to degenerative changes with a reduction in blood flow. Though, the anterior radicular arteries exist at every level, the main artery is between C 4 – C 6. As Cervical spondylosis occurs mainly at these levels, compression of the main radicular artery in the foramen may be responsible for the ischaemia of the cord.

The combined effects of the compressive tensile and shear forces produces recurrent sub acute changes of demyelination in the posterior columns and the lateral spino – thalamic tracts. There is a relative sparing of anterior white mater tracts and a varying degree of grey mater degenerative changes.



In cervical spondylosis, changes occur in the following structures.

- Intervertebral disc
- Uncovertebral joints
- Apophyseal joints
- Foramina

Intervertebral Disc

All the three parts of disc cartilage plate, nucleus and annulus are involved.

Cartilage Plate

First the cartilage plate thins out and cracks. Fissuring and erosion is common. The whole plate is replaced by fibrous tissue.

Nucleus

Nucleus becomes fibrous with degeneration. The process of dehydration occurs and concludes with reduction in water binding mucoprotein.

Annulus

Annulus undergoes some changes as in nucleus. Focal necrosis and calcification is common. They form hard ridge within the cervical canal. Osteophytes are formed as a result of instability producing stress on the periosteum.

Uncovertebral Joints

The uncovertebral joints are most affected as C5-C6 and C6-C7 level. Progressive decrease in disc height, the uncinat process approximates against the vertebral body undergoes erosion and formation of osteophytes.

Apophyseal Joints

They may remain unaffected for long time. When they are subjected to heavy weight pathological changes like erosion, degeneration, lipping, and osteophyte formation occurs.

Foramina

Foramina are narrowed by fibrous tissue. The posterior longitudinal is thickened.

MICROSCOPICAL CHANGES

1. Demyelination most prominent in lateral column at levels of osteophytic bars.
2. The medial portion of the long myelinated tracts is affected.
3. Loss of anterior horn cells.
4. Central Cavitation.
5. Arachnoiditis around nerve sleeve.
6. Demyelinated plaques, swelling of myelion, axons and glia is found in the white matter.

BIO - CHEMICAL CHANGES

The Biochemical changes in IVD, due to the cumulative effect of injury, ageing, load stress of chondrocytes diminishes the synthesis of proteoglycanase, cathepsin and leads to the alteration in collagen type II to type I. All causes cartilage's injury.

Cervical Spondylotic changes in the aged

Generally cervical spondylosis is more common at C5-C6 and C6-C7 levels. As age advances the range of motion at these levels decreases.

The upper levels of C3-C4 and C4-C5 have more mobility and vertebralolisthesis in extension (retrolisthesis) while narrowing of the intervertebral disc and osteophytes predominates at the lower disc levels of C5-C6 and C6-C7. These are related changes of the cervical spine influence the AP diameter of the canal in the aged. AP diameter is a good indicator of myelopathy.

Under the influence of these ageing changes in the cervical spine, disc protrusion, posterior osteophytes at C5-C6 or C6-C7 and retrolisthesis at C3-C4 or C4-C5 were important as the primary

etiological factor of myelopathy is the ageing patients. Also the atrophic type of morphological spinal cord changes on CT myelogram was seen with high incidence in the aged patients. It was never seen in the younger patients.

Clinical Features of Cervical Spondylosis

Symptoms

1. Pain in Cervical spine disease either local, referred or radicular.
2. Pain is commonly referred upwards to the occiput downwards to the interscapular region or laterally to the shoulder and upperarms. It is usually characterised as an “ache” and is not usually felt below the elbow.
3. True radicular pain is sharper than referred pain and its distribution follows a dermatomal pattern.
4. Neurological dysfunction may be sensory or sensory plus motor.
5. Radicular sensory/motor symptoms are rarely painless. Paresthesia is followed by numbness and clumsiness as proprioception becomes affected.
6. Cord compression may cause myelopathy which may in acute case (Eg. trauma, metastatic collapse) be initially flaccid but which rapidly becomes spastic.
7. Symptomatically the spasticity in chronic cases gives rise to “jumpy leg” usually at night, and leads to stiffness and clumsiness.
8. Lhermitte’s sign - Where flexion causes an electric shock like feeling to shoot into the arms and legs may be seen in spondylosis.
9. Acute cord compression in spinal injury is well known to cause priapism.
10. In extreme cases of degenerative disease, anterior osteophytes can cause dysphagia.

Examination

Symptoms fall into 5 main groups.

1. Radiculopathy
2. Myelopathy
3. Neck pain
4. Head ache
5. Vertebro basilar insufficiency.

Radiculopathy

Results from nerve root compression and consists of shooting pain (pins and needles) radiating along the dermatomal distribution of particular nerve root usually into forearm or fingers.

There is also frequently referred pain and tenderness along the medial border of the scapula.

Myelopathy

Myelopathy can be classified in various ways and depends on the involvement of the lateral or medial cord or vascular involvement. The signs may be a mixture of upper motor neuron signs in the lower limbs and lower motor neuron signs in the upper limbs.

Generally myelopathy may be predicted by central disc herniation, but is more commonly the result of spondylytic changes superimposed on a congenitally narrow cannal. Motor weakness is rare. If they occurs there may be marked wasting of the museles.

Neck Pain

Pain is present in nape of the neck and its nature is aching or boring quality which radiates to the shoulder blades, top of the shoulder, upper arm and hands or back of the head. Clinically it is very difficult to decide, which disc is responsible to pain. Patients feel of crunching sounds with the movement of the neck or shoulder muscles.

Headache

Headache is a common symptom, its pathogenesis is not fully understood. It is more a pain than a headache usually located in occiput on bothsides. It spreads to the temple or eyes. It is described as a tight band round the head.

Vertebrobasilar insufficiency

VBI usually requires a combination of arterosclerosis and osteophytes intrusion into the foramen transversorium. The symptoms of this insufficiency are typically a brief attack of giddiness without loss of consciousness and generally brought by head movements.

Autonomic symptoms

Vertigo, flushing, tinnitus and visual blurring are the autonomic symptoms produced by cervical disc diseases. These may be mediated by sympathetic distribution to the sinuvertebral nerves from stellate ganglion.

Signs

Common

Atrophy of the hand musculature (Intrinsic muscle atrophy)

- Hyper reflexia
- Lhermitte's sign - positive
- Spurling test - positive
- Sensory abnormalities
- Loss of vibratory sense or proprioception in the extremities especially in the feet
- Superficial sensory loss.
- Rare signs
- Ankle clonus
- Babinski's sign
- Hoffmann's sign

Summary of the site of lesion

(Cervical spondylosis can produce cord compression (upper motor neuron signs) or root compressions (lower motor neuron signs))

C5	Motor	Raised elbows (axillary n.)
	Reflex	Biceps (musculocutaneous n.)
	Sensory	Upper, lateral arm, near / over deltoid (axillary n.)
	Pain	Upper, lateral arm, never below elbow
C6	Motor	Elbow supination (radial n.) / pronation (median n.)
	Reflex	Brachioradialis (radial n.)
	Sensory	Lateral forearm (musculocutaneous n.)
	Pain	Lower lateral arm, possibly into thumb
C7	Motor	Elbow extension (radial n.)
	Reflex	Triceps (radial n.)
	Sensory	Over triceps, mid-forearm, and middle finger
	Pain	Deep pain in triceps, front and back of forearm & into middle finger.
C8	Motor	Thumb index pinch (ant. Interosseus n. off median n. at the below)
	Reflex	
	Sensory	Medial forearm (ante brachial cutaneous n.)
	Pain	Medial forearm, into the 2 medial fingers.
T1	Motor	Finger abduction (ulnar n.)
	Reflex	
	Sensory	Medial arm (brachial cutaneous in)
	Pain	Deep pain in axilla and shoulder w/some radiation down inside of arm.

Classification of CSM

(Based on Nurick's Grade Description)

- Grade - 1 : Signs of spinal cord disease but no difficulty in walking.
- Grade - 2 : Slight difficulty in walking, employed full time.
- Grade - 3 : Difficulty in walking, affects ADL, still independent
- Grade - 4 : Assistance to walk
- Grade - 5 : Chairbound or bed ridden.

Stepwise physical examination

Examination divided into several categories, which were done for Ceganavatham in- patients.

Posture

- Have a smooth cervical lordosis with gentle transition into thoracic kyphosis.
- Compensatory increase in the lumbar and cervical lordosis.
- Cervical range of motion

(ROM) – Cervical

	Normal	Affected
Touch chin to chest with mouth cleared	Flexion 60°	Reduced
Looking straight up to the ceiling	Extension 70°	Reduced
Rotate chin to approach the shoulder	Rotation 80°	Reduced
Bend the ear toward the shoulder	Lateralbending 45°	Reduced

Palpation

Motor system examinations

- Weakness of shoulder abduction - C5 Radiculopathy
- Elbow flexion and wrist extension weakness - C6 Radiculopathy
- Weakness of elbow extension and wrist flexion - C7 Radiculopathy
- Weakness of thumb extension and ulnar deviation of the wrist } - C8 Radiculopathy

Sensory Examination

GALS locomotor screening

A (Appearance)	M (Movement)
G	G - Gait
A	A - Arms
L	L - Legs
S	S - Spine

Provocative Tests

Used to determine the differential diagnosis.

1) Spurling Test (Foraminal Compression Test)

Extends the neck and then rotates and laterally bends the head to the same side, while the examiner applies downward pressure to the top of the head. If this position, with or without pressure reproduces radicular symptoms into the upper limb, cervical spondylosis is suggested.

2) Lhermitte sign

Where flexion causes an electric shock like feeling to shoot into the arms and legs may be seen in spondylosis.

3) Phallen Wrist Flexion Test

Full passive flexion of the patient's wrist for 30-60 seconds and looking for reproduction or worsening of finger dysethesiasis.

4) Tinel's Sign

Elicited by tapping over the median nerve at the carpal tunnel.

5) The Elbow Flexion Test

Fully flex the elbow and observe for ulnar nerve distribution.

6) Adson's Test

Turns his head to the involved side raises the chin and holds a deep inspiration and while the ipsilateral radial pulse is palpated with the arm slightly abducted from the side. If pulse diminishes- test positive-suggest Thoracic outlet syndrome.

7) Roo's test

The patient is asked to abduct the shoulders 90°, flex the elbow 90° and open and close the hands slowly for 3 minutes.

- Hand pallor
 - Ulnar dysesthesias
 - Diminished pulse
- } Positive

Suggest thoracic outlet syndrome.

Pathologies that mimic cervical spondylotic myelopathy

Sign and symptoms of the few of the following diseases mimic cervical spondylosis.

- Amyotrophic lateral sclerosis
- Extrinsic neoplasia (metastatic tumours)
- Hereditary spastic paralysis
- Intrinsic neoplasia (Tumours of spinal cord parenchyma)
- Multiple sclerosis
- Hydro cephalus
- Thoracic outlet syndrome
- spinal cord infraction (syringomyelia)
- Vit B12 deficiency.

Investigation:

Mainly based on X-ray.

1) X-ray Cervical Spine

- Anteroposterior (AP) view
- Right oblique
- Lateral view
- Left oblique

AP odontoid views shows

- Disc space narrowing
- Osteophyte formation
- Degeneration in facet and Uncovertebral joints
- Foraminal stenosis (seen in oblique films)

2) Myelogram - May show compression of the spinal cord.

3) C.T. Scan (Computerised Tomography)

Confirm degenerative changes

May demonstrate posterior osteophytes and disc herniation

4) MRI (Magnetic Resonance Imaging)

Neural compression, Intrinsic cord changes, Disc degeneration

5) Examination of CSF

Very high protein

6) Other tests

Nerve conduction studies, Electromyography (EMG)

Differential Diagnosis:

In most cases of cervical spondylosis either radiculopathy or myelopathy is the presenting features. Clinical features of many diseases may mimic cervical radiculopathy and myelopathy.

Radiculopathy

The symptoms of lesion of the brachial plexus, such as neurofibroma, the thoracic outlet syndrome, and pancoast tumour are superficially similar to those of disc disease.

1. Pan Coast Tumour

Pan coast tumour results from local extension of a tumour growing in the apex of the lung with involvement of the eighth cervical, first and second thoracic nerves, with shoulder pain which radiates in the ulnar distribution of the arm, and often with radiologic destruction of the first and second ribs.

2. Referred Pain

Cardiac ischaemia causes left sided brachial neuralgia. In those patients, diagnosis depends on the history, examination and abnormal findings in E.C.G.

Sub – diaphragmatic lesions – cause right sided pain

Gall bladder lesions cause right sided. Brachial neuralgia. The diagnosis depends upon the history examination and investigations.

Myelopathy

New growth of the spinal cord at cervical level may mimic the features of cervical spondylosis. But it can be differentiated by radiological findings, examination of cerebrospinal fluids and myelography.

1. Tumours of the spinal canal

i.) Extra dural (or) epidural tumours

Commonest extra dural tumour is the spinal metastasis. The symptoms are local pain, radiating pain which is exacerbated by coughing, sneezing or straining. Pain and local tenderness often proceed other symptoms.

ii) Intradural tumours

a. Extra medullary tumours (Meningiomas neur ofibromas)

Local back pain, sensory loss below the level of the pain, weakness and bladder and bowel dysfunction.

b. Intra medullary tumours

Dissociated sensory loss in the segments of tumour origin and sparing of posterior column sensory function.

Later spino thalamic tracts may be involved. The sacral segments may be spared. Atrophy in the appropriate segments due to anterior horn cells involvement.

2. Epidural abscess

The condition can occur as a complication of operation or lumbar puncture. Spinal osteomyelitis acts as the nidus for abscess formation. Unexplained fever and mild spinal ache, later radicular pain occurs. As the abscess expands it causes cord compression with a transverse and usually complete transection syndrome.

3. Amyotrophic lateral sclerosis

Upper motor neuron signs in Lower limbs and lower motor neuron signs in upper limbs.

4. Other unusual compressive lesions

Cervical cord compression from destruction of the cervical apophyseal or atlanto axial joint's rheumatoid arthritis. It may present as a chronic compressive myelopathy similar to cervical spondylosis.

5. Syringomyelia

Dissociated sensory loss wasting of the small muscles of one of other hand, loss or one of more reflexes in the arms and hyperreflexia in the legs and extensor plantar responses are common Charcot joints in the shoulders elbows (or) knee are common in advanced cases.

Syringobulbia

Dissociated sensory loss on the face, palatal palsy, Horner's syndrome and nystagmus kyphoscoliosis pes cavus and spina bifida are often found.

6. Tabes dorsalis

Fleeting and repetitive shooting pains occurring mostly in the legs. Loss of reflexes in the legs, impaired position and vibration sense gives severe ataxic gait. Romberg's test is positive. Argyll Robertson pupils constitute a typical tabetic facies.

Diagnosis:

The clinical diagnosis is arrived from the features of cervical radiculopathy and myelopathy. That diagnosis may be confirmed by the radiography, myelography, tomography and magnetic resonance imaging.

Complication:

1. Pseudo arthrosis
2. Graft displacement
3. Neurological injury
4. Spastic gait and
5. Injury to other structures
 - Recurrent laryngeal nerve
 - Superior laryngeal nerve
 - Carotid artery
 - Oesophagus

MANAGEMENT**1. Non – Operative:**

- Analgesics
- Local modalities
- Exercise programme and cervical traction.

2. Operative:

Operative treatment should be considered.

- In the presence of intractable pain.
- Where there is evidence of radiculopathy or myelopathy.
- Where osteophytes are producing vertebro basilar insufficiency.

Cervical Radiculopathy:

Conservative treatment with analgesics and a cervical collar results in resolution of symptoms in the great majority of patients. In chronic complicated cases foraminectomy or disc excision to be recommended.

Cervical Myelopathy:

Surgical procedures, including laminectomy and anterior excision of disc may arrest progression in disability but do not usually result in neurological improvement and carry a significant risk particularly in the elderly, the judgements as to where surgery should be undertaken may be difficult. Manipulation of the cervical spine is no proven benefit and may precipitate acute neurological deterioration.

Physiotherapy:

In acute exacerbation of disease affecting the cervical spine, rest may be the initial treatment.

Cervical Collar:

Cervical collar are advised to wear temporary collar. (Which is often made from Plastazote) for day time to restrict movement, and a soft collar for support at night. A patient who is given a collar should be advised that the restriction in neck movement will alter other proprioception, for example he will need to take care in the dark or on entering darkened rooms when he may lose his balance. A patient wearing a collar should not drive because judgement of relative distances will be impaired. In the cases of vertebro basilar insufficiency (VBI) cervical collar may be advised to the sufferers according to the severity.

Cervical Traction:

Vertebral traction should be the first choice of pain relief for patients suffering nerve root pain. Intermittent sustained traction is carried out after careful positioning has localized the involved segment in such cases the treatment atleast once a day is essential, prolonged pain relief will take several days to obtain.

Cervical traction provides positive patient response and can relieve the pain associated with certain neck disorders. It applies a stretch to muscles, ligaments and tissue components of the cervical spine. It

provides relief by promoting separation of the intervertebral joint space, which contains the disc and may reduce a “bulge” or impingement of structures within the foramen. It is not indicated for use in condition of instability such as with “Whiplash” injury. It is most commonly used when the patient is in the supine position (lying on the back with knees bent at a 45° angle) with the neck placed at 20° - 30° of flexion (forward tilt). Using traction in this position helps stretch the posterior neck muscles and facilitate intervertebral separation, which relieves pressure that may be pinching nerves, therefore, promoting muscle relaxation and intervertebral separation.

Exercise for Cervical Spondylosis:

To start with, exercises should be done sitting and the feet must rest on the floor or stool. Exercises should be done in front of a mirror, in order to get correct movements.

1. Static Head & Neck Exercise: (no movement take place, muscles are strengthened)

- Place your hand on your forehead, with the hand stop forehead from bending forwards – 3 times increase to 5.
- Place the hand behind the head, with yours hand stop the head from bending backwards -3 times increases to 5.
- Place right hand on right cheek and ear, stop the head from bending on right side – 3 times increases to 5.
- Place the left hand on left cheek and left ear, stop the head from bending on left side – 3 times increase to 5.
- Place right hand on right lower jaw stop the head from turning to right side -3 times increase 5.
- Place left hand on left lower jaw, stop the head from turning to the left side 3 times increase to 5.

In order words give resistance with your hands to work the muscles as much as possible. Continue the above static exercises. If these suit, otherwise discontinue the static exercises.

2. Exercise for Shoulder:

- Arms lift forwards, up and down – 5 times increase to 7-10 times.
- Arms lift sideways, up and down – 5 times, increase to 7 -10 times.
- Arms lift forwards, part and together – 5 times increase to 7 -10 times.
- Fingers on the shoulder with elbows bent:
- Elbows circling forwards, upwards, backwards & downwards – 5 times increased to 7 – 10 times.
- Elbows circling backwards, upwards, forwards & downwards – 5 times increase 7 -10 times.
- Shoulders bracing – 5 times, increase to 7 – 10 times.
- Right hand meeting left hand at the back (Right hand to be carried above the right shoulder, left hand carried from left side at the back and try to touch the right hand) Repeat the left hand carried above the left shoulder and the right hand turned in, carried from the side of trunk -3 times each side, increase to 5 - 7 times.

Instructions:

- Do not getting look down to read (or do any other work). Bring the reading materials to the eye level.
- All neck movements can be performed with practice, by using trunk movements.
- Use a low level pillow supporting the head and neck; pillow line upto the shoulders level. Otherwise not to be encouraged.

- While lying on sides, head should be in neutral position. Use one pillow and your hand to adjust the head, or in addition, one small pillow to adjust the head. Place one pillow in front to support the right arm if you are lying on right side, place a pillow to support your left arm.

Prevention:

1. Avoid sitting in cramped position.
2. Sleep without pillows.
3. Use a soft fabric collar or towel to support the neck.
4. Avoid injury.
5. Wear protective headgear for contact sports.
6. Use seat belts in vehicles and.
7. Keep head rests at proper height.

Prognosis:

The assessment of prognosis is attained by studying the pathological condition of the spinal cord and nerve roots. Improvement can be felt with some of the reversible changes with drug treatment. In complicated cases improvement is not possible. The signs and symptoms due to myelopathy are unmanageable. Long history of suffering multiple disc lesions and in severe compression of spinal cord may adversely affect the prognosis.

COMPARATIVE STUDY OF CEGANA VATHAM WITH CERVICAL SPONDYLOSIS

The author had followed YUGI-CHINTHAMANI -800 to evaluate the disease Ceganavatham.

“úLõ úU Lĩ j ¾u ĵ ZûWdá úUí e
 ùL¼Vô] LWÁWi å ÁLúY ùSókç
 Yôõ úU N-WùUpXôm L] j ¾ì dám
 YôÄTodá U] eLi æ UVdLUôám
 Hõ úU ÂWi å Li æ ùUÄfNí i Pò
 úUt\Uôn NXkRô Áñ_d Lôæ k
 úRõ úU ùLôh¼] ç úTôtLádám
 NL] Yô Rj ¾É P ŞodLkR Rôú] ”

- Û, °kRôU½ 800

“úLõ úU Lĩ j ¾u ĵ ZûWdá úUí m”

The above line said pain over the lower half of the cervical vertebrae. In human body have seven cervical vertebrae are present, of which lower half cervical vertebrae are (C4, C5, C6, C7) more commonly affected. Yugi stresses this matter in the above lines. In TV Sambasivam Pillai Ceganam referes to Cervical Vertebrae. In Yoogi Ceganam refers to Cervical, Thoracic and Lumbar Vertebrae.

“ùL¼Vô] LWÁWi å ÁLúY ùSókç”

These lines explain the radiating pain towards both upper limbs. There are eight pairs of cervical nerves having both dorsal and ventral nerve roots. These nerve roots comes through the intervertebral foramen. In cervical spondylosis, there is a narrowing of inter vertebral foramen due to abnormal osteophytes and ligament calcification. These pathological changes compress the nerve root resulting in neurological dysfunction and radiating pain in the distribution of nerve plexus.

“Yôõ úU N-WùUpXôm L] j ¾ì dám”

Because of the neural sheath compression and neurological dysfunction there is gradual sensory loss in the form of numbness. Neurological examination of these cervical spondylosis patients commonly shows paresthesia in the affected dermatomes. This is explained by the above line.

C5 - Paresthesia is perceived down the lateral aspect of the arm.

C6 - Paresthesia and hyperesthesia of thumb and some of index finger.

C7 - Paresthesia and hyperesthesia of index and middle fingers.

C8 - Paresthesia and hyperesthesia of inner forearm and little finger.

"YôÄTî dá U] eLi æ UVdLUôám."

When the cervical vertebral artery is compressed by the osteophytes of cervical vertebrae, the blood supply to the brain is decreased. Vertebro-basilar insufficiency and cervical instability causes giddiness in Cegana Vatham.

"Hõ úU ÂWi â Li æ ùUÃfNí i Pôm"

Tharpagam situated in head and cools the eyes. kabam also gets along with uyirthathus there is derangement of course of disease. In Cegana Vatham the derangement of Tharpagam, burning sensation of eyes is present.

"Ht\Uôn UXkRôò m Cñ ,d Lôæ m"

In Cegana Vatham Abana Vayu is affected. Abana vayu is centered in the lower abdomen. It governs all downward discharge of feces, Urine, semen, menstrual fluid and fetus. Due to derangement of abanan, constipation is present or improper excretion takes place.

"úRĎ úU ùLôh¼] ç úTôtLådám"

Patient is unable to move his neck. There is muscular spasm in the early stage resulting in pain and neck rigidity. Ligamental calcification also results in neck stiffness. Because of the spasm and neck stiffness, there is pain in the neck region which resembles scorpion bite.

MATERIALS AND METHODS

The Clinical study on Sagana Vadham was carried out in the post graduate department of Sirappu Maruthuvam, Govt Siddha Medical College, Palayamkottai. In this study 20 patients were treated as in patients and the other 20 as outpatients. After discharge the patients were also followed as out patients.

Selection of the Patients:

The Patients were selected on the basis of the following clinical findings.

1. Pain, Stiffness and restricted movements in the neck
2. Radiating pain in the upper limbs
3. Tingling sensation and numbness in the upper limbs
4. Feeling of heaviness in the body and weakness of the limbs
5. Giddiness
6. Constipation
7. Mental depression
8. Burning sensation of eyes

The detailed history was taken from the patient about:

1. Occupation
2. Social economic status
3. Psychological condition
4. Diet and other habits
5. Trauma
6. Exposure to cold.

Diagnosis:

The diagnosis was made by following siddha diagnostic methods. Nilam, Kaalam, Poriyalaridhal, Pulanalarithal, Vinaadhal, Mukkutra Nilaigal, Udal Thathukal Nilai and Envagai Thervugal, and the diagnosis of Cegana Vadham was obtained which correlates with modern term cervical Spondylosis by the X-Ray findings.

Investigation:

The following investigations were done in all selected patients in the laboratory of Govt.Siddha Medical College, Palayamkottai.

Blood:

- Total WBC Count
- Differential WBC count
- Erythrocyte Sedimentation Rate
- Haemoglobin estimation
- Estimation of Sugar
- Estimation of Urea
- Estimation of Cholesterol.

Urine:

- Albumin
- Sugar
- Deposits

Radiological Investigations:

- X – Ray cervical spine
- AP – View
- Lateral View
- Oblique View

Treatment

Nilavagai Choornam 5gm at bedtime with hot water was given on the first day of treatment.

All the patients were treated with the following medicines

1. Kadukkai Choornam

1gm twice daily with butter milk or honey.

2. Yearanda Thylam

As external application

All the patients were advised to dietary regimen (or) Pathiyam to avoid tamarind and salt

Pranayamam and simple Yogasana were advised for a supportive therapy.

The Bio - Chemical analysis was done in the department of Bio Chemistry and Pharmacological analysis was done in the pharmacological laboratory of Govt. Siddha Medical College, Palayamkottai.

RESULTS AND OBSERVATION

Results of the study were observed with respect to the following criteria

1. Sex Distribution
2. Age Distribution
3. Paruva Kaalam (Seasonal Changes)
4. Gunam (Quality & characters)
5. Thinai (5 land types)
6. Duration of illness
7. Number of days treated
8. Socio economic status
9. Precipitating factors
10. Predisposing factors
11. Occupational status
12. Clinical Features
13. Provocative test
14. Mode of onset
15. Derangement of Thriodosha
16. State of Udal kattugal
17. Envagai Thervugal
18. Neikuri
19. Radiological findings.
20. Assessment of curative effect of the trail drug.

Distribution Based on Sex

Sex	No. of cases	Percentage
Male	7	35 %
Female	13	65%

The incidence of this disease Cegana vatham among 20 In patients cases fifteen cases female (75%) and five cases are male 25%

Distribution According to Age

S. No.	Age in years	Total of Number Cases	Percentage
1	31-40	1	5
2	41-50	7	35
3	51-60	6	30
4	61-70	6	30
5	71-80	-	-

Among the cases for analysis the highest incidence was in the age between 41 to 50 (35%).

Distribution According to Predisposing Factors

S. No.	Predisposing factors	No. of Cases	Percentage
1.	Diabetes mellitus	2	10%
2	Hyper tension	1	5%
3	Tuberculosis	-	-
4	Radiotherapy	-	-

Some authors suggest that the history or past history of few disorders were predisposing factors for Cegana vatham. Hence Diabetes,

Hypertension, Tuberculosis, Radiotherapy were noted in all 20 cases. Among them 2 patients (10%) were diabetic 1 patients (5%) were hypertensive.

Distribution according to the duration of illness

S. No.	Duration of illness (Months)	No. of Cases	Percentage
1.	< - 1	-	-
2	1-3	2	10%
3	3-6	2	10%
4	6-12	6	30%
5	12-24	6	30%
6	>24	4	20%

According to Gunam (Quality of Characters)

S. No.	Gunam	No. of Cases	Percentage
1.	Sathuvagunam	2	10
2	Rajogunam	13	65
3	Thamogunam	5	25

Patients with Rajogunam (65%) were highly affected by Cegana vatham, 25% of them with Thamogunam.

Distribution based on Etiological factors.

Ageing was the common etiological factors for all 19 out of 20 cases. Apart from that other precipitating factors for all these twenty

cases were analysed and noted 20 cases (100%) had positive occupational history.

Incidence based on occupation

To find out and give clear data about the occupational hazards in cegana vatham patients, the nature of all the twenty patient's occupations were thoroughly investigated and was given in the table. Among them 35% (7 patients) of them were Beedi rolling workers.

S. No.	Occupation (Type)	No. of Cases	Percentage
1.	Beedi rolling workers	7	35
2	Tailoring	2	10
3	Agricultural labour	4	20
5	Tea masters and Hotel workers	2	10
6	Weight bearing workers	2	10
7	Home marker	2	10

Distribution according to living lands.

S. No.	Thinai	No. of Cases	Percentage
1.	Kurinji (Hill area)	-	-
2	Mullai(Forest area)	-	-
3	Marutham (Fertile area)	19	95
4	Neithal (Coastal area)	1	5
5	Paalai (Desert area)	-	-

All the cases (95%) were reported from Marutha Nilam, Neithal (5%).

Distribution according to socio Economic Status

S.No	Socio Economic status	No. of Cases	Percentage
1.	Above the poverty line	4	20
2	Below the poverty line	16	80

Out of the twenty cases, 16 from below the poverty line (80%) only 20% them above poverty line.

Seasonal Incidence

S. No.	Paruvakalam	Months	No. of Cases	Percentage
1	Kaarkaalam	15 th Aug - 14 th Oct.	3	15
2	Koothirkaalam	15 th Oct - 14 th Dec	3	15
3	Munpanikaalam	15 th Dec - 14 th Feb	-	-
4	Pinpanikaalam	15 th Feb - 14 th Apr	-	-
5	Ilavenilkaalam	15 th Apr - 14 th Jun	3	15
6	Muthuvenilkaalam	15 th Jun - 14 th Aug	11	55

Out of the 20 cases taken for analysis majority of them belongs to Muthuvenilkaalam (55%)

Analysis based on Mukkutram

Derangement in Vatham

S. No.	Vayu	No. of Cases	Percentage
1	Pranan	-	-
2	Abanan	10	50%
3	Viyaanan	20	100%
4	Udhanan	-	-
5	Samaanan	20	100%
6	Naagan	3	15%
7	Koorman	3	15%
8	Kiruharan	-	-
9	Thevathathan	8	40%
10	Thananjayan	-	-

In all the 20 cases Viyanan and Samaanan were affected (100%).
Abanan was deranged in 10 cases (50%) as they had constipation.

Naagan and Koorman altered in 15% cases due to old age
Thevathathan was deranged in 8 cases (40%) indicating lethargy and
disturbed sleep

Derangement of Pitham

S. No.	Pitham	No. of Cases	Percentage
1	Anarpithan	7	35%
2	Ranjagapitham	5	25%
3	Alosaganitham	3	15%
4	Prasagapitham	-	-
5	Saathagapitham	20	100%

The five types of pitham were analysed in all the cases Saathaga pitham was altered in all cases (100%) evidenced as difficulty in handling their regular duties because of pain and stiffness in neck and upperclimb Anarpitham was affected in 7 cases (35%) indicating anorexia. Ranjagapitham was affected in 25% patients denoting low haemoglobin count.

Derangement of Kabam

S. No.	Kabam	No. of Cases	Percentage
1	Avalambagam	20	100%
2	Kilethagam	-	-
3	Pothagam	-	-
4	Tharpagam	3	15%
5	Santhigam	20	100%

The five types of Kabam were analysed in all 20 cases Deranged santhigam was found in all cases (100%) and altered tharpagam was noted in 3 cases (15%)

Derangement in Udal Thathugal

S. No.	Basic Elements	No. of Cases	Percentage
1	Saaram (lymph)	20	100%
2	Senneer (Blood)	11	55%
3	Oon (Muscle)	2	10%
4	Kozhuppu	12	60%
5	Enbu (Bone)	20	100%
6	Moolai	Normal	
7	Sukkilam	Normal	

Saaram and Enbu were affected in all 20 cases (100%) Seeneer affected in 11 cases (55%).

Distribution according to clinical presentation

Clinical Features	No. of Cases	Percentage
Pain in the nape of Neck	20	100
Diffuse tenderness	20	100
Stiffness in the Neck	12	60
Pain radiating to upper limb	18	90
Head ache	16	80
Giddiness	10	50
Tingling sensation	4	20
Numbness in upper limb	5	25
Muscle wasting	2	10
Feeling of heaviness of body	3	15
Burning sensation of the eye	3	15
Weakness of upperlimb	10	20
Mental depression	2	10
Constipation	10	50

The signs and symptoms noted in Ceganavatham patients are given in the above table. Pain in the nape of the neck almost present in all the twenty cases.

Distribution Based on Provocative Tests.

S. No.	Provocative Test	Positive in No. ofCases	Percentage
1.	Spurling Test	20	100
2	Lhermitte sign	20	100
3.	Phallen wrist flexion Test	10	50
4.	Elbow flexion Test	10	50
5.	Tinel's sign	Negative	-
6	Adson's Test	Negative	-
7	Roo's Test	Negative	-

Based on modern aspect, for the diagnostic purpose and to determine the differential diagnosis few provocative tests were done and noted in all 20 cases. Spurling test, Lhermitte sign were positive in all cases (100%) Phallen wrist flexion test and Elbow flexion test were positive only in 10 cases (50%) Tinel's sign, Adson's test and Roo's test were Negative in all cases.

Distribution According to the Total No. of days for Treatment

S. No.	No. of Days	No. of Cases	Percentage
1	1-15	2	10
2	16-20	7	35
3	20-30	7	25
4	>30	4	20

Among the 20 cases, 80 % even treated for 16 to 30 days.

Observation of other Clinical Laboratory Examination

At the time of admission and discharge routine laboratory examination were done and values were recorded.

Haematological Studies

Among the 20 patients 11 of them were anaemic. Blood sugar increased in 2 cases (10%). Cholesterol increased in 7 cases.

WBC Count

Total Count is between 7,800 to 10,200. In few cases the lymphocyte and neutrophil were little higher.

Erythrocyte Sedimentation rate

At the time of admission in few cases increased ESR was during discharge it was reduced.

Urine Analysis

Urine Sugar reported in 2 cases as they were known diabetic. They were treated with Mathumega Chooranam in addition to trial drug.

Assessment of Radiological Findings

S. No.	Findings	No. of Cases	Percentage
1.	Interverterbral Disc space Narrowing	11	55
2.	Presence of Degenerative Changes	18	90
3	Presence of Osteolytic and Sclerotic changes	3	15
4	Presence of Osteophytes	16	80
5	Ligaments (Calcified or not)	-	-
6	Preand Para vertebral space	-	-
7	Alignmental alterations	2	10
8	Loss of lordosis	8	40

Curative Effects:

Clinical Cure:

- No longer clinical manifestations
- Patient could work and live normally
- No recurrence after 6 Months

Marked effect

- Marked reduction of manifestation
- Slight pain after movement.
- Without recurrence in 6 months

Improvement

- Slight reduction of clinical manifestation.
- With relapse

No effects

- No change in symptoms
- Need not continue the treatment

a) Curative Effect (Based on Number of cases treated)

S. No.	No. of Cases	Result	Percentage
1	Clinical cure	5	25
2	Marked effect	7	35
3	Improvement	8	40

b) Curative Effect (Based on duration of illness)

S. No.	Duration of Illness (Months)	Clinical		Marked		Improvement	
		No. of cases	%	No. of cases	%	No. of cases	%
1	0-1	-	-	-	-	-	-
2	1-3	1	5%	1	5%	-	-
3	3-6	1	5%	1	5%	-	-
4	6-12	3	15%	2	10%	3	15%
5	12-24	-	-	3	15%	3	15%
6	24-36	-	-	-	-	2	10%

DISCUSSION

This retrospective review of the disease Cegana vatham begins from the correlation of cegana vatham with the signs and symptoms of the disease cervical spondylosis which is given clearly in the comparative study by the author. and then initial sorting of information among the data extracted for the analysis include age, sex, duration of presenting symptoms, pre disposing or precipitating factors that provoked pain and their radiological findings.

The drugs used for this clinical trial are KADUKKAI CHOORNAM internally and YEARNDA THYLAM externally. The detailed discussion of this dissertation topic by the author is based on the results and observations.

Age distribution

This study shows highest incidence of Cegana vatham is above 50 years of age which was already explained by modern science that degeneration due to ageing is the important cause of Cervical spondylosis.

This information is bestowed by our Siddhars as the wordings,

“úYi Pô I mTRôm YVÇ Ru É p ÅûWkÇ
Àì j ÅÃp Al é úUî m TôúW”

The target sites affected in Cervical spondylosis are generally bones, muscles, nerves, hair, blood, urine, fat which are the components of appu and prithivi bhoothas (appu+prithivi=kabham-responsible for destruction). Hence these began to undergo degeneration above 50, years.

Apart from the view of degeneration, the age above 50 is the period of overwhelming mental and physical grief and despair due to many factors. This was reported in majority of the 20 cases.

Sex Distribution

Majority affected sex is female (75%) . Common cause for this may be entrapping of calcium from body above fifty years of age and from history, their occupation may be one of the reasons for female dominance.

Living Lands (Thinai)

The incidence of Cegana vatham is highest in people from Marutha Nilam (100%).

Generally in marutha Nilam, all the three doshas are in physiological ratio. But for these 20 Patients, the occupation and age delimit the physiological ratio and hence responsible for the higher incidence of Cegana vatham.

Quality and Character (Gunam) Distribution

Most of the patients (75%) under this analysis bear rajo gunam which was confessed by interrogation.

Socio Economic Status

70% of the people reported the signs and symptoms of Cegana vatham were under the povertyline and this under poverty may indirectly responsible for the higher data through their occupation.

Seasonal Distribution

Muthuvenir Kaalam (16th June-15th Agu.) shows the highest incidence of 55% and next 15% cases are reported during Elavenir Kaalam (16th Apr-15th June) Koodhir Kaalam (16th Oct-15th Dec.). This may be caused by changes in our digestive power with the varying seasons.

Precipitating Factors

Already the author has explained that the ageing is the common cause for Cegana vatham. Apart from that, occupation is the major (100%) precipitating factor.

Occupational References

The major occupation among 20 cases is Beedi rolling workers which is estimated as 35%.(7 cases), followed by agricultural labour which accounts 20%(4 cases).Only one patient (5%) had a history of clerical work,who reported the signs and symptoms of Cegana vatham.Constant posterior stretching by these three types of occupation is responsible for the symptoms.

Agricultural labourers and weight bearers are the victims of Cegana vatham. Saint Yugi muni remarked this as “TôWûUnRp” which is one of the causes of vatha disease. This is repeatedly remarked by the modern text book of Orthopaedics (author- Gulgarni) as Cervical spondylosis.That is common to workers who carry approximately 100 kg weight on their shoulders.

Clinical Manifestations

Pain in the nape of the neck and in upper limbs present in all 20 cases (100%). 50% of cases had constipation.

Derangement in Vatham

Viyanan, Samanan were affected in all the 20 cases (100%).

Derangement in Pitham

Sathagapitham was affected in all the 20 cases (100%).

Derangement in Kabham

Santhigam was affected in all 20 cases (100%).

Eight Parameters in our System (Envagai thervugal):

By sparisam, 100% of cases showed diffuse tenderness. Burning sensation of eyes was found in 3 cases (15%).At the time of admission 10 patients (50%) were reported to have constipation. It was treated by laxative medicine.

In urine examination by neerkuri and neikuri, in 6 patients(30%) oil spreads like snake and in 5 cases (25%) spreads like ring and in 9 patients (45%) spread like pearl.

Pulse Reading (Naadi)

It was noted in all 20 cases. Vatha pitham was observed in 60% of cases.

Laboratory Investigation

Urine (Albumin, Sugar, Deposit) and Blood (Total Count, Differential Count, ESR, Haemoglobin, Sugar, Urea, Serum Cholesterol) were done for all 20 cases.

Anaemia was found in 11 cases.(55%cases) . ESR was raised in 11 cases and after treatment it was reduced.

Out of the 20 In-Patients treated, 2 cases were found to have diabetes mellitus and 1 cases were found to be hypertensive.

These patients continued their oral anti- diabetic drugs Madhumeaga chooranam-1gm and Thribala chooranam -1gm thrice a day with luke warm water and anti- hypertensive drugs. Asai Chooranam and Venthamarai chooranam each 1gm thrice a day with luke warm water as they were taking along with the trial drugs. Their blood sugar levels were monitered and blood pressure recordings were noted and kept control during the treatment.

Radiographic Studies

These studies shows narrowed inter vertebral space, presence of degenerative changes, osteophytes, osteolytic and sclerotic changes, osteoporotic changes and mal -alignment.

The trial drugs showed improvement in prognosis of the disease clinically rather in radiographic changes.

Treatment

The treatment was aimed to correct the deranged doshas and providing relief from symptoms. Before treatment, the patients were advised to take 10 ml of Vellai ennai with luke warm water during early morning in empty stomach for purgation. The patient was asked to take rest from internal medicine and other activities on that day.

The author treated the patients with trial drugs Kadukkai Chooranam 1 gram internally twice a day with butter milk or honey and Yearanda Thylam externally. During treatment, the patients were advised to follow diet restrictions. (Avoid tamarind, tubers etc) and advised to avoid pillows.

Sirappu Maruthuvam techniques applied in Cegana Vatham Patients:

a) Thokkanam(Massage)

Among the 20 cases, 10 cases were treated additionally by thokkanam with Yearanda Thylam once in three days regularly. The procedural photographic illustrations of the patients are given by the author . These 10 patients showed a positive quick response in all signs and symptoms when compared with other 10 cases.

b) Yogasanas

Few asana procedures were explained by the author for all the cases during their later days of treatment and advised to follow up regularly and asked to visit after a month. Few patients consulted the author and gave positive response for Asana therapy.

c) Exercises

Among 20 cases, 10 patients were selected and asked to do simple exercises. Among the 10 cases, 6 patients showed quick relief of pain when compared with patients, who were not advised for exercises.

d) Pranayama

The author advised all the 20 patients to do pranayama regularly in future.

Curative effect

On the basis of assessment of curative effect of the trial drugs, improvement was recorded in majority of cases(40%). Among that 15% had 6-12 months illness, 15% had 12-24 months illness, 10% had >24 months illness.

Clinical cure was observed in 25% of cases. Among them 5% had 1-3 months of illness, 5% had 3-6 months illness, 15% had >6 months illness.

Marked effect was assessed in 35% of patients consisting of 5% with 1-3 months duration of illness, 5% with 3-6 months illness and 10% with 6-12 months illness, 15% with >12months.

Bio Chemical Analysis

Bio chemical analysis of the trial drug was done in the Department of Bio chemistry, Government Siddha Medical College, Palayamkottai.

Kadukkai Choornam

1. Ferrousiron
2. Tannic acid
3. Unsaturated compound
4. Reducing Sugar.

No toxic or side effects were clinically observed in any cases.

Pharmacological Analysis

Pharmacological studies done in Pharmacology Department of Government Siddha Medical College, Palayamkottai. The results were reported as follows,

Internal Medicine

Kadukkai Chooranam

Significant Acute Anti Inflammatory effect.

Significant Chronic Anti Inflammatory effect.

Moderate Analgesic effect.

External Medicine

Yearanda Thylam has Significant Anti-inflammatory effect.

SUMMARY

Twenty cases with Cegana vatham were diagnosed clinically based on the saint Yugi 800 and admitted in the In Patient ward of Post Graduate Department of Sirappu Maruthuvam, Government Siddha Medical College and Hospital, Palayamkottai and treated with the trial medicine.

- Before starting the treatment, careful detailed history was carried out and recorded for the 20 selected cases.
- The various Siddha aspects of examination of the disease were carried out and data were recorded in the proforma.
- Laboratory diagnosis of Cegana vatham was done by modern methods of investigation.
- The trial medicine chosen for both internal and external treatment were Kadukkai chooranam 1gram twice a day for fifteen days as per the severity of the disease and Yearanda Thylam external application.
- During the period of treatment all the patients were put under pathiyam(A special dietary regimen)
- A periodical laboratory investigation was made for all the cases along with the radiological investigation.
- The observations made during the clinical study shows that the main internal drug Kadukkai chooranam is clinically effective.

- Though there was appreciable clinical improvement, there was not much remarkable radiographic changes.
- Along with medication ,the patients were advised over their dietary habits and to practice yoga and simple exercises.
- The advantage of the selected drugs were listed as,
- The drugs were found to be free from adverse effects.
- The raw materials were available in almost all season.
- And finally it is economic.

These merits were essential in promoting this drug in future globally.

CONCLUSION

All the twenty patients were treated for this dissertation work with Kadukkai Chooranam 1 gram twice a day with butter milk or honey and Yearanda Thylam externally.

The results were observed as,

Improvement effect	-	40%
Clinical cure	-	25%
Marked effect	-	35%

This result of the clinical trial illustrates the fruitful effect of the drugs. Hence these drugs and methodology of the treatment will become one of the milestones in treating Cegana Vatha patients in future.

ANNEXURE - I

PREPARATION OF TRIAL DRUGS

கடுக்காய் சூரணம்

ஆதாரம்: சரபேந்திர வைத்திய முறை

(வாத ரோக சிகிச்சை) பக்கம் - 12

சேரும் சரக்குகள்:

கடுக்காய் தோல்	- 80 கிராம்
சீரகம்	- 20 கிராம்
சுக்கு	- 10 கிராம்
திப்பிலி	- 60 கிராம்
இந்துப்பு	- 10 கிராம்

செய்முறை:

சரக்குகளை தனித்தனியே சுத்தித்து சூரணித்து எடுத்துக் கொண்டேன். சூரணத்தை வஸ்திர காயம் செய்து எடுத்துக் கொண்டேன்.

அளவு: ஒரு கிராம் மூன்று வேளை உணவிற்குப்பின்

அனுபானம் : பசுவின் மோர் அல்லது தேன்

தீரும் நோய்கள்: வாத நோய்கள் சகனவாதம்

ஏரண்டத் தைலம்

ஆதாரம்: சரபேந்திர வைத்திய முறை பக்கம் - 62

சேரும் சரக்குகள்:

ஆமணக்கு எண்ணெய் 1 லிட்டர்

மிளகு - 17.5 கிராம்

மஞ்சள் - 17.5 கிராம்

கடுகு - 17.5 கிராம்

பூண்டு - 17.5 கிராம்

செய்முறை:

மெழுகு பதத்தில் தைலத்தை காய்த்து இறக்கி வடித்தல்.

தீரும்நோய்கள்:

வாத நோய்கள் சுகனவாதம்

PHYTO CHEMSITRY OF TRIAL DRUGS

INTERNAL DRUG

Internal drug Kadukkai Choornam consists of following constituents which bears few phyto chemicals as follows.

கடுக்காய்

Synonyms : Amutham, Aruthake, Vanathurke.

Botanical Name : Terminalia Chebula.

Part Used : Fruit

Family : Combrataceae

Organoleptic Characters:

Taste - Tuvvarppu

Enippu

Pulippu

Kaippu

Karppu

Potence - Veppam

Pirivu - Karppu

Therapeutic effect

“பழமலத்தைப் பேரக்கும் பகரிலுடலுக
கழகு கரும் புத்தி யளிக்கும் - பழகி
மருங்கடுத்த வாத பித்த வன்கபத்தைத் தீர்க்கும்
கருங்கடுக்கா யென்ற ளத்தற் காண்”.

- அகத்தியர் குண வாகடம்

Constituents

Tannin 45%, Fructose, Sucrose

Gallic acid, Eighteen Typical amino acid

Chebulinic acid, Phosphoric acid

Action

- Purgative - நீர்மலம் போக்கி
Laxative - மலமிளக்கி
Stomachic - பசித்தீத் தூண்டி

சீரகம்

- Synonyms : Asai, Posanakudori, Prathi-viga.
Botanical Name : Cuminum cyminum.
Part Used : Seed
Family : Apiaceae

Organoleptic Characters:

- Taste - Karppu, Enippu
Potence - Thatppam
Pirivu - Enippu

Therapeutic effect:

“பித்தமெனு மந்திரியைப் பின்னப் படுத்தியவன்
சத்துருவை யுந்துறந்து சாதித்து மத்தெனனும்
ராசனையு மீவென்று நண்பைப் பலப்படுத்தி
போசனகு டாரசெயும் போள்”.

- தேரன் வெண்பா

Constituents:

- Fatty oil
Resin
Protein
Essential oil
Cumic aldehyde – 56%

Action

- Carminative - அகட்டுவாய்வகற்றி
Stomachic - பசித்தீத்தூண்டி
Stimulant - வெப்பமுண்டாக்கி

சுக்கு

Synonyms	-	Arukan, Sonti, Sunti
Botanical Name	-	Zingiber officinale.
Part Used	-	Under ground Stem (Rhizome)
Family	-	Zingiberaceae

Organoleptic Characters:

Taste	-	Karppu
Potence	-	Veppam
Pirivu	-	Karppu

Therapeutic effect

“சூலைமந்தம் நெஞ்செரிப்பு தோடமேப் பம்மழலை
மூலம் இரைப்பிருமல் மூக்குநீர் - வாலகப
தோடமதி சாரந் தொடர்வாத குன்மநீர்த்
தோடம்ஆ மம் போக்குஞ் சுக்கு”.

- அகத்தியர் குணவாகடம்

Constituents:

Zingiberine

Resin

Starch

K – oxalate

Action

Carminative	-	அகட்டுவாய்வகற்றி
Stomachic	-	பசித்தீத்தூண்டி
Stimulant	-	வெப்பமுண்டாக்கி
Digestive	-	செரிப்புண்டாக்கி

திப்பிலி

Synonyms	-	Koliaruke, Athe, Ulavainase
Botanical Name	-	Piper Langum
Part Used	-	Fruit
Family	-	Piperaceae

Organoleptic Characters:

Taste	-	Karppu
Potence	-	Veppam
Pirivu	-	Enippu

Therapeutic effect:

“இருமல் குன்மம் இரைப்பு கயப்பிணி

.....

வாதம் ஆதி முத்தோடம் சுரங்குளிர்

பெரு மாவைப்புரி மேகப் பிடகமும்

பேருஞ் திப்பிலிப் பேரங் குரைக்கவே”

- குணபாடம் - மூலிகை வகுப்பு

Constituents:

Resin

Volatile Oil

Starch

Gum

Fatty Oil

Action

Carminative	-	அகட்டுவாய்வகற்றி
Stimulant	-	வெப்பமுண்டாக்கி
Tonic	-	உடல்தேற்றி

இந்துப்பு

ROCK SALT

Sodium Chloride Impura

Synonyms - Mathikurmai, Sainthavum

Taste - Uppu

Therapeutic effect

“அட்டகுன்ம மந்தம் அசிக்கரஞ்சூர் சீதபித்தந்
துட்டவையம் நாடிப்புண் டோடங்கள் - கெட்டமலக்
கட்டுவிட விந்தையக் காமியநோய் வன்கரப்பான்
விட்டுவிட விந்துப்பை விள்”.

செய்கை: மலகாரிச் செய்கை, (டார்ட்டாரிக் எமடிக் கைக் காட்டிலும் சிறந்தது).

EXTERNAL DRUG

ஆமணக்கு

Synonyms - Yearandam, Chithiram, Thalarubam

Botanical Name - Ricinus Communis

Part used - Seed

Family - Euphorbiaceae

Organoleptic characters:

Taste - Kaippu

Potence - Veppam

Pirivu - karppu

Therapeutic effect

“ஆமணக்கு நெய்யால் நலமுண்டாம் யாவர்க்கும்
பூமணக்கு மேனி புரிகுழலே வாய்மணக்கக்
கொள்ளில் வயிறுவிடுங் கோரமுள்ள வாயுவறும்
உள்ளில்வரு குன்மம்போ மோது”.

- அகத்தியர் குணவாகடம்

“ஆமணக் கெண்ணெய் தன்னை யணிநில மறியக் கேண்மின்
பூமணச் சந்துதேறும் பொருந்திய வாதம் போக்கும்
தீமந்தந் தானும் போக்குந் திகழ்வுடன் விரைவு முண்டாம்
தீமனக் குடலில் வாதஞ் சேர்குட வேற்றும் போமே”.

Constituents:

Ricinoleate
Triricinolein
Dihydroxystearic acid
Glycerids

Action

Purgative - நீர்மலம்போக்கி
Antivata - வாதமடக்கி
Galactagogue - பாற்பெருக்கி

மிளகு

Synonyms - Miriyal, Kurumilaku, Thirangal
Botanical Name - Piper nigrum
Part used - Seed
Family - Piperaceae

Organoleptic characters:

Taste - Kaippu, Karppu
Potence - Veppam
Pirivu - Karppu

Therapeutic effect

“கோணுகின்ற பக்கவலி குய்யவுரோ கம்வராத
சோணிதங்க முத்திற்குள் தேரன்றுநோய் கரணரிய
காதுநோய் மாதர்குன்மங் காமாலை மந்த மென்றில்
ஏதுநோய் காயிருக்கில் ஈங்கு.”

- தேரையர் குணவாகடம்

Constituents

Piperidine
Pipirine
Volatile oil
Starch

Action

Carminative	-	அகட்டுவாய்கற்றி
Stimulant	-	வெப்பமுண்டாக்கி

மஞ்சள்

Synonyms	-	Arisanam, Peetham, Nesi
Botanical Name	-	Curcuma Longa
Part used	-	Rhizome
Family	-	Zingiberaceae

Organoleptic characters:

Taste	-	Karppu, Kaippu
Potence	-	Veppam
Pirivu	-	Karppu

Therapeutic effect

“பெண்ணிறமாமம் மேனி புலனாற்ற மும் போகும்
மன்னு புருட வசியமாம் பின்னியெழும்
வாந்திபித்த தேடமையம் வாதம்போந் தீபனமாங்
கூர்ந்தமஞ்சள் என் கிழங்குக்கு.”

- அகத்தியர் குணவாகடம்

Constituents:

Resin
Alkaloid
Curcumin
Turmeric Oil

Action

Stimulant	-	வெப்பமுண்டாக்கி
Carminative	-	அகட்டுவாய்வகற்றி
Anti Rheumatic	-	வாதமடக்கி

கடுகு

Synonyms	-	Iyave
Botanical Name	-	Brassica Juncea
Part Used	-	Seed
Family	-	Cruciferae

Organoleptic characters:

Taste	-	Karppu
Pottence	-	Veppam
Pirivu	-	Karppu

Therapeutic effect

“மந்தமயக் கம்வாதம் வாய்நீர்ச் சுழற்றலறு
முந்து சுகப்பிரச வங்கருண்டா மிந்துருதன்
மானே கிராணிகுன்ம மாறுமுத் தேடமும் பேரம்
தானே கடுகிற்குத் தான்.”

- அகத்தியர் குணவாகடம்

Constituents:

Essential Oil

Action

Tonic	-	உடல்தேற்றி
Stimulant	-	வெப்பமுண்டாக்கி
Digestive	-	செரிப்புண்டாக்கி

பூண்டு

Synonyms	-	Lesunam, Kayam, Ulli
Botanical Name	-	Allium Sativum
Part Used	-	Bulb
Family	-	Alliaceae

Organoleptic characters:

Taste	-	Karppu
Potence	-	Veppam
Pirivu	-	Karppu

Therapeutic effect

"சன்னியொடு வாதந் தலைநோவு தளவலி
மன்னிவரு நீர்க்கோவை வன்சிடம் - அன்னமே
உள்ளுள்ளி கண்பாய் உளைமூல ரோகமும் போம்
வெள்ளுள்ளி தன்னால் வெருண்டு."

- அகத்தியர் குணவாகடம்

Constituents:

Volatile Oil
Starch
Sugar

Action

Stimulant	-	வெப்பமுண்டாக்கி
Carminative	-	அகட்டுவாய்வகற்றி
Antirhuematic	-	வாதமடக்கி

ANNEXURE - II

BIO – CHEMICAL ANALYSIS

BIO – CHEMICAL ANALYSIS OF KADUKKAICHOORANAM

PREPARATION OF THE EXTRACT

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

Qualitative Analysis

S. No.	Experiment	Observation	Inference
1.	<u>Test for calcium</u> 2ml of the above prepared extract is taken in a clean test tube. To this add 2 ml of 4% ammonium oxalate solution.	No white precipitate is formed.	Absence of calcium.
2.	<u>Test for sulphate:</u> 2ml of the extract is added to 5% barium chloride solution.	No white precipitate is formed.	Absence of sulphate.
3.	<u>Test for chloride</u> The extract is treated with silver nitrate solution.	No white precipitate is formed.	Indicates the Absence of chloride.
4.	<u>Test for carbonate</u> The substance is treated with concentrated Hcl.	No brisk effervescence is formed.	Absence of carbonate.
5.	<u>Test for Starch</u> The extract is added with weak iodine solution.	No blue colour is formed	Absence of starch.

6.	<u>Test for Iron Ferric</u> The extract is treated with concentrated glacial acetic acid and potassium ferro cyanide.	No blue colour is formed.	Absence of ferric iron.
7.	<u>Test of Iron Ferrous:</u> The extract is treated with concentrated Nitric acid and ammonium thyo cynate.	Blood red colour is formed.	Indicates the presence of ferrous iron.
8.	<u>Test for phosphate</u> The extract is treated with ammonium molybdate and concentrated nitric acid.	No yellow precipitate is formed.	Absence of phosphate.
9.	<u>Test for albumin</u> The extract is treated with Esbach's reagent.	No yellow precipitate is formed.	Absence of albumin.
10.	<u>Test for Tannic acid</u> The extract is treated with ferric chloride reagent.	Blue black precipitate is formed.	Indicates the presence of Tannic acid.
11.	<u>Test for unsaturation</u> Potassium permanganate solution is added to the extract.	It gets decolourised.	Indicates the Presence of unsaturated compound.
12.	<u>Test for the reducing sugar</u> 5ml of benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts and added 8-10 drops of the extract and again boil it for 2 mts.	Colour change occurs.	Indicates the presence of reducing sugar.

13.	<p><u>Test for amino acid:</u></p> <p>One or two drops of the extract is placed on a filter paper and dried it well. After drying, 1% ninhydrin is sprayed over the same and dried it well.</p>	No violet colour is formed.	Absence of amino acid.
-----	--	-----------------------------	------------------------

Inference

The given sample of “**KADUKKAICHOORANAM**” contains, Tannic acid, ferrous iron and unsaturated compound.

ANNEXURE - III

PHARMACOLOGICAL ANALYSIS

ANALGESIC ACTION OF KADUKKAI CHOORANAM

Introduction

According to Siddha medicine, the Kadukkai Chooranam is indicated for Vatha diseases. From this indication the drug might possess analgesic activity.

Aim

To study the analgesic effect of Kadukkai Chooranam on albino rats by Tail flick method.

Materials and Methods

Preparation of the test Drug

1 gram of Kadukkai Chooranam was suspended in 10ml of Hot water as suspending agent. This 1 ml contained 100mg of the test drug.

Equipment

Hot water bath

Procedure

Six Male Healthy albino rats (weighing 80-100gms) were used in three groups. The animals were allowed to free access to food and water until they brought for the experiment. The animals which showed the positive response to the stimulus within a given time were selected for the study.

After the selection of animals which were responding to stimulus within 2 seconds, they were divided into three groups, each group consisting of two rats.

The hot water was maintained at 55°C. The tip of the tail was immersed into the water bath and the time was noted when the rat flicked the tail. First group was given 1ml of water and kept as control.

Second group was administered with paracetamol at a dose of 20mg/100g of body weight. Third group as given the dose of 20mg/100g body weight of the animal .After the drug administration, the reaction time of each rat after half an hour and one hour were noted in each group (when a rat fails to flick the tail, it should not be continued beyond 8 seconds to avoid injury) and the average was calculated

The results of control group, standard group and drug treated group were tabulated and compared

S. No.	Name of Drugs/Groups	Dose / 100 gram body weight	Initial reading	After drug administration			Mean difference	Ramarks
				½ hr Average	1 hr Average	1 ½ hr Average		
1	Control (Water)	2ml	2.5	2.5	2.5	2.5	2.5	-
2	Standard (Paracetamol)	20mg	2.5	3.5	5.0	6.5	6.5	-
3	Kadukkai Chooranam	100mg	2.8	3.0	4.0	5.7	5.7	-

Inference

From the above tabulation it is noted that “**Kadukkai Chooranam**” has moderate analgesic action.

ACUTE ANTI - INFLAMMATORY STUDIES ON KADUKKAI CHOORANAM

Aim

To evaluate the acute anti - inflammatory effect of “**KADUKKAI CHOORANAM**” by carragenin induced hindpaw oedema method in Albino rats.

Materials and Methods

Drug Preparation

1 gm of **KADUKKAI CHOORANAM** was suspended in 100ml of distilled water with gum acacia as suspending agent Carragenin Induced Hind Paw Method.

Six healthy albino rats of either sex weighing between 80 to 100gm were selected. The volume of each hind paw was measured by using the mercury - plethysmograph.

After the measurement of hind paw of all the rats they were divided into three groups containing two rats.

First group was kept as control by giving distilled water 1ml / 100gm by body weight. The second group was given Ibuprofen 20mg/100gm body weight and kept as standard. Third group was given test drug **KADUKKAI CHOORANAM** 20mg / 100gm body weight.

The drugs were administered orally. One hour after drug administration 0.1ml 1% (W/v) of carragenin suspension in water was injected in the plantar surface of Hindpaw of all rats.

All the animals thus given carragenin injection subcutaneously.

Three hour after carragenin injection, the hind paw volume was measured once again. From the differences in the initial and final hind paw volume, the degree of the inflammation was calculated by taking the volume in untreated control group as 100%.The percentage of inflammation of the other group was calculated.

Results

The details of the experimental results shown in the table Effect of **KADUKKAI CHOORANAM**

Group	Drugs	Dose/100gm of body weight	Initial Value	Final Value	Mean Difference	% Inflammation	% Inhibition Remarks
Control	Water	2ml	0.55	1.4	0.85	100	-
Standard	Ibuprofen	20mg	0.55	0.85	0.3	35.2	64.8
Test drug	Kadukkai Chooranam	100 mg	1.0	1.25	0.25	29.4	70.6

Inference

The test drug “**KADUKKAI CHOORANAM**” has got significant acute anti - inflammatory effect when compared with the standard drug.

CHRONIC ANTI - INFLAMMATORY EFFECT OF KADUKKAI CHOORANAM

Aim

To evaluate the Chronic anti - inflammatory effect of **KADUKKAI CHOORANAM** in rats by cotton pellets granuloma method.

Materials and Method

Drug Preparation

1 gm of **KADUKKAI CHOORANAM** was suspended in 10ml of distilled water with gum acacia as suspending agent.

Cotton pellet Granuloma method

Procedure

Six healthy albino rats of either sex weighing between 80-100 gm were selected and divided into 3 groups each containing two rats.

In this procedure the drugs were given daily for 7 days. Before giving the drug cotton pellets each weighing 10mg were prepared and sterilized in an autoclave for about one hour under 15 pounds atmospheric pressure.

On the day of experiment, each rat was anesthetised with ether to implant 10mg of sterilized cotton pellet subcutaneously in the lower abdomen two on each side after making suitable incision and sutured carefully.

First group was kept as control group giving distilled water of 1ml/100gm of body weight. To the second group the standard drug Ibuprofen in a dose of 20mg/100gm body weight was given.

The third group of animals was given tested drug **KADUKKAI CHOORANAM** in a dose of 20mg/100gm of body weight.

On the 8th day of the experiment, all the rats were sacrificed and cotton pellets found to be surrounded by granulation tissue were removed and dried in hot air oven 55°C to 60°C

Results

The details of the experimental results shown in the table.

Effect on **KADUKKAI CHOORANAM**

Group	Drugs	Dose/100g m of body weight	Pellet Weight	Pellet weight of the Granuloma of Drugs	% Inflam- mation	% inhibition	Remarks
Control	Water	1ml	10mg	250mg	100	-	-
Standard	Ibuprofen	20mg	10mg	55mg	22	78	-
Test drug	Kadukkai Chooranam	100mg	10mg	101 mg	40	60	-

Inference

The test drug **KADUKKAI CHOORANAM** has got Moderate chronic anti - inflammatory effect when compared with the standard drug.

ANTI - INFLAMMATORY STUDIES ON YEARANDA THYLAM (External drug)

Procedure

Anti - inflammatory activity of **Yearanda thylam** was studied in healthy albino rats, weighing between 100 - 150 grams. For studying acute inflammation, rat hind - paw technique was used.

Six albino rats were selected and divided into two groups each containing three rats. To the first group distilled water was given and kept as control. Before the application of the drug, the hind - paw volume of all rats were measured. This was done by dipping the hind paw upto the tibio - dorsal junction in mercury plethysmography.

Subcutaneous injection of 0.1% of carragenin (W/v) in water was made into plantar surface of both the hind - paw of each rat. To the test group, **Yearanda thylam** was topically applied frequently over the inflamed surface in a thin layer. To the control group, no drug was applied over the inflamed surface. One and half hours after injection the hind paw volume was measured once again. The difference between the initial and final volumes would show the amount of inflammation

Taking the volume in the control group as 100% of inflammation, the inflammation or anti - inflammatory effect of the group is calculated

Tabulation of the results observed

Group	Drugs	Dose/100gm of body weight	Initial Value	Final Value	Mean Difference	% Inflam- mation	% Inhibition Remarks
Control	Water	2ml	0.55	1.4	0.85	100	-
Standard	Ibuprofen	20mg	0.55	0.85	0.3	35.2	64.8
Test drug	Yearanda thyam	-	1.0	1.3	0.3	35.2	64.8

Inference

It is observed that Yearanda thyam has significant anti-inflammatory action.

CASE SUMMARY OF OUT PATITENTS

S. No.	OP. No.	Name	Age	Sex	Complaints	Result
1	39040	Shymala	40	F	Pain Present in nape of the neck	Improvement
2	40549	Rasul Beevi	40	F	Pain Present in nape of the neck radiating to arm	Improvement
3	32498	Sheikeeram	50	M	Pain Present in nape of the neck. Constipation	Marked effect
4	29393	Ganesan	41	M	Pain Present in nape of the neck. Head ache present	Clinical cure
5	28972	Ulagammal	45	F	Pain Present in nape of the neck. Pain radiating to arm	Improvement
6	27962	Muhamad Mydheen	35	M	Pain Present in nape of the neck. Constipation present headache present	Clinical Cure
7	33245	Velammal	50	F	Pain Present in nape of the neck. Headache	Improvement.
8	30840	Maliga	52	F	Pain Present in nape of the neck. Burning sensation of the eyes.	Improvement
9	39200	Meenakshi	68	F	Pain Present in nape of the neck. Constipation present	Marked effect
10	33714	Chelammal	50	F	Pain Present in nape of the neck. Headache present	Marked effect
11	37405	Avadaiammal	55	F	Pain Present in nape of the neck. Burning sensation of the eyes	Marked effect
12	42028	Sujatha	47	F	Pain Present in nape of the neck. Constipation present	Improvement
13	36003	Mani	50	M	Pain Present in the nape of the neck. Headache	Marked effect
14	36919	Subbulakshmi	40	F	Pain Present in the nape of the neck. Constipation present	Improvement
15	37286	Shanmugavel	48	M	Pain Present in the nape of the neck. Burning sensation of the eyes.	Clinical Cure
16	32710	Vadivu	45	F	Pain Present in the nape of the neck. Constipation present	Clinical Cure
17	38822	Thangalakshmi	60	F	Pain Present in the nape of the neck. Headache present	Marked effect
18	35107	Mani	29	M	Pain Present in the nape of the neck. Headache present	Clinical cure
19	38819	Balakrishan	65	M	Pain Present in the nape of the neck. Burning sensation of the eyes	Marked effect
20	31393	Glory	50	F	Pain Present in the nape of the neck. Headache , constipation present	Improvement

CASE SUMMARY OF IN PATITENTS

S. No.	IP. No.	Name	Age	Sex	Complaints	Result
1	1274	Abdul Rahuman	50	M	Pain Present in nape of the neck	Clinical Cure
2	1339	Subbaiya Thevar	70	M	Pain Present in nape of the neck radiating to arm	Marked effect
3	1317	Gomu	50	F	Pain Present in nape of the neck. Constipation	Marked effect
4	1370	Kasthoori	50	F	Pain Present in nape of the neck. Head ache present	Clinical cure
5	1513	Saraswathi	70	F	Pain Present in nape of the neck. Pain radiating to arm	Clinical Cure
6	1418	Muthu	65	M	Pain Present in nape of the neck. Constipation present headache present	Clinical Cure
7	1577	Essakiyammal	50	F	Pain Present in nape of the neck. Headache	Improvement.
8	1458	Peramu	65	F	Pain Present in nape of the neck. Burning sensation of the eyes.	Improvement
9	1664	Savithiri	55	F	Pain Present in nape of the neck. Constipation present	Marked effect
10	1627	Xavier	45	M	Pain Present in nape of the neck. Headache present	Improvement
11	1950	Saraswathi	57	F	Pain Present in nape of the neck. Burning sensation of the eyes	Marked effect
12	1743	Glory	63	F	Pain Present in nape of the neck. Constipation present	Improvement
13	1958	George	40	M	Pain Present in the nape of the neck. Headache	Marked effect
14	1843	Muthammal	52	F	Pain Present in the nape of the neck. Constipation present	Improvement
15	1992	Sami	67	M	Pain Present in the nape of the neck. Burning sensation of the eyes.	Marked effect
16	2157	Murugaiya	50	M	Pain Present in the nape of the neck. Constipation present	Improvement
17	1882	Velthangam	42	F	Pain Present in the nape of the neck. Headache present	Improvement
18	2460	Grace	60	F	Pain Present in the nape of the neck. Headache present	Improvement
19	2601	Jebi	55	F	Pain Present in the nape of the neck. Burning sensation of the eyes	Marked effect
20	2711	Panchavarnam	55	F	Pain Present in the nape of the neck. Headache , constipation present	Clinical Cure

Table Shows Laboratory investigation report of 20 IP Cases

HAEMATOLOGICAL ANALYSIS																							
BLOOD INVESTIGATION																	URINE ANALYSIS						
Sl.No	IP Number	Name	Age	Sex	Before Treatment						After Treatment						Before Treatment			After Treatment			
					DC				ESR		TC	DC				ESR		Alb	Sug	Dep	Alb	Sug	Dep
					TC	P%	L%	E%	1/2hr	1/hr		P%	L%	E%	1/2 hr	1/hr							
1	1274	Abdul Rahman	50	M	9,100	48	48	4	50	104	9,200	50	50	2	25	50	Nil	Nil	1-2 pus	Nil	Nil	NAD	
2	1339	Subbaih Devar	70	M	8,100	60	36	4	4	8	8,200	60	34	2	2	4	Nil	Nil	FPC	Nil	Nil	NAD	
3	1317	Gomu	50	F	7,200	55	40	5	12	24	7,300	56	40	3	6	12	Nil	Nil	NAD	Nil	Nil	NAD	
4	1370	Kasthuri	50	F	8,700	67	27	6	12	26	8,800	65	28	5	6	12	Nil	Nil	1-2 pus cells	Nil	Nil	NAD	
5	1513	Saraswathi	70	F	10,100	73	22	5	7	15	10,000	73	25	3	5	10	Nil	Nil	NAD	Nil	Nil	NAD	
6	1418	Muthu	65	M	9,200	69	30	1	6	12	9,300	70	30	1	4	8	Nil	Nil	NAD	Nil	Nil	NAD	
7	1577	Essakiammal	50	F	8,700	67	27	6	12	26	9,000	70	28	3	8	12	Nil	Nil	1-2pus cells	Nil	Nil	NAD	
8	1458	Peramu	65	F	8,700	58	38	4	5	10	8,900	60	40	3	3	5	Nil	Nil	NAD	Nil	Nil	NAD	
9	1664	Savithri	55	F	8,200	60	36	4	7	15	8,500	60	38	3	5	10	Nil	Nil	NAD	Nil	Nil	NAD	
10	1627	Xavier	45	M	8,900	58	48	2	8	18	9,000	60	50	2	4	8	Nil	Nil	NAD	Nil	Nil	NAD	
11	1950	Saraswathi	57	F	9,000	55	40	5	10	22	9,100	55	42	3	5	15	Trace	Nil	FEC	Nil	Nil	NAD	
12	1743	Glory	63	F	9,300	57	40	3	7	14	9,500	60	40	2	5	10	Nil	Nil	1-2 epi cels.	Nil	Nil	NAD	
13	1958	George	40	M	8,100	68	28	4	3	6	8,300	70	30	3	3	5	Nil	Nil	NAD	Nil	Nil	NAD	
14	1843	Muthammal	52	F	8,900	55	40	5	6	12	9,000	60	40	3	5	10	Nil	Nil	FPC	Nil	Nil	NAD	
15	1992	Sami	67	M	9,200	70	30	2	4	8	9,300	70	30	1	2	4	Nil	Nil	NAD	Nil	Nil	NAD	
16	2157	Murugaiah	50	M	8,800	55	38	4	2	4	9,000	58	40	3	2	4	Nil	Nil	NAD	Nil	Nil	NAD	
17	1882	Vel Thangam	42	F	9,000	55	40	5	5	10	9,100	60	40	3	5	10	Nil	Nil	1-2pus cells	Nil	Nil	NAD	
18	2460	Grace	60	F	7,200	48	48	4	7	14	7,500	50	50	2	5	10	Nil	Nil	OEC	Nil	Nil	NAD	
19	2601	Jebi	55	F	8,400	63	34	3	3	7	8,500	65	35	2	3	5	Nil	Nil	FEC	Nil	Nil	NAD	
20	2711	Panjavarnam	59	F	7,800	30	65	5	5	10	8,000	65	30	2	5	10	Nil	Nil	1-2epicells.	Nil	Nil	NAD	