ACKNOWLEDGEMENT

I feel immense awe and colossal gratitude in my heart to the Almighty God for making this dissertation have its present form.

I gladly acknowledges my husband Mr.M.Kannan B.E and my cousin Mr.M. Venkatesh Prabu B.E., M.B.A., Ph.D and my daughters K.Aishwarya and K.Lakshmi Harini for their encouragement and guidance in doing my dissertation work.

First of all I took this opportunity to express my gratitude to The Vice Chancellor, Tamil Nadu Dr. M.G.R. Medical University, Chennai and Special commissioner, Commissionerate of Indian Medicine and Homeopathy, Chennai for providing an opportunity to pursue this dissertation study.

I thank first and foremost Dr.I.Sornamariammal M.D(S), Joint Director of Indian Medicine and Homeopathy, Chennai.

I expresses my gratitude to Dr. M. Thinakaran M.D(S)., Principal an Dr.R. Devarajan M.D(S)., Vice Principal, Government Siddha Medical College, Palayamkottai.

I wish to express my heart full gratitude to The Head of the Department and Dr.S.Sulphin Nihar M.D(S)., Assistant lecturer, Post Graduate Department of Gunapadam, GSMC, Palayamkottai for their valuable guidance and encouragement.
I tender my sincere thanks to Thiru. M. Kalaivanan M.Sc., Lecturer and the staff of Department of Pharmacology, Post Graduate Centre, GSMC, Palayamkottai for their valuable guidance and their help in conducting Pharmacological studies associated with this dissertation.

I am thankful to Tmt.N.Naga Prema M.Sc., head of the Department and all staff members of the Department of Biochemistry, GSMC, Palayamkottai for their support in conducting biochemical analysis involved in this study.

I tender my gratitude to Thiru.E.Fulton Jose Newmann M.Sc., M.Phil., Lecturer, Department of botany, GSMC, Palayamkottai for his valuable advice in botanical aspect of this study.

I express my gratitude to Dr.V.S.Padma M.B.B.S., D.M.R.D., Radiologist, GSMC, Palayamkottai for her valuable help in clinical studies.

I express my thanks to the Librarian Tmt.T.Poonkodi M.A., MLIS, for her co-operation during the study.

I gladly acknowledges my husband Dr.M.P.Ramesh Babu M.D.(S) for his encouragement and guidance in doing my dissertation work.

I express my thanks to the staff, Lab - Technicians and all my friends of GSMC, Palayamkottai for their support in completing this work.

Above all I owes my indebtedness to the patients who undertook the clinical trials whole heartedly without who me this study is inconclusive and wishes them good health and well being.

Finally I express my thanks to Broad Band Net Café, Tirunelveli and its staff for their meticulous work in completing this dissertation.
INTRODUCTION

Medicine has become as indispensable part of human being since ancient period of all systems of medicine, siddha system is unique since it is the one which deals with both Internal ie, Man and External body ie, Nature.

Nature has provided many plaints which are indispensable to man for his life. Also, in our siddha system of medicine, as many plants contain small amounts of minerals in them, they are first used as medicine & then used metals as medicine.

It is known from the following lines,

”ஓய்வு பாது கதம்புங்கு பிக்கிறது கரும
ஞாயா ஞாயா புரைதிகள் குரும்போகை”

In this aspect, the author has selected a plant drug, Jatamansi, for the treatment of Eraippu Erumal as per our texts ie. Gunapadam – Mooligai (P.No - 416) (Mooligai No 266).

Jatamansi is used in siddha medicine for a long time. Spikenard or Indian nard is the common name of the plant. It’s botanical name is Nardostachys jatamansi. It belongs to family valerianaceae. It is a native of himalayan region and is found to far south as the Deccan plateau India.
Jatamansi has two varieties

1. Himalayan i.e. Indian variety - N. Jatamansi
2. North American variety - F. Valeianaceae
   Aralia racemosa
   Family : Araliaceae

Jatamansi is used in India as drug and also in perfumery.

In this dissertation study, **Sadamanjil ver Chooramam** is taken for the study for the treatment of Eraippu Erumal.
AIM AND OBJECTIVE

The aim of this dissertation is to establish that the drug Sadamanjil Verchoornam is an effective remedy for the disease Eraippu Erumal.

Eraippu Erumal (Bronchial Asthma) is as common in India as in any other country. It is probably one of the commonest of the major affections in our country. This forms the single biggest clinical group among the chest diseases that is treated in our college hospital. Millions of people suffer from it.

Bronchial Asthma is just an allergic manifestation in an over simplification of this difficult problem. In every case of Asthma there are a few known factors and many unknown factors, and so an aetiological classification of Asthma in any given case is difficult and other faculty.

The treatment of the disease is to be of successful has necessarily got to be individualized as no two cases of Asthma are alike either in their response to treatment or in maintaining the improvement. So the entire course of the disease is unpredictable and each case has got to be tackled by utilising all the resources both modern and Ancient.

Keeping this in mind the author selected “Sadamanjil Ver Choornam” which is not much used by the physicians.

The drug is easily available so the main aim of the study is to do a pharmacological and clinical study of Sadamanjil Ver Choornam on Eraippu Erumal.
The study is done in the following Aspects,

1. Botanical aspects.
2. Pharmacognostical aspects.
3. Phytochemistry.
4. Pharmacological Aspects (Review of update work on Jatamansi all over the world)
5. Gunapadam Aspects.
7. Pharmacological Analysis.
8. Clinical Assessment.
BOTANICAL ASPECT

Nardostachys jatamansi de candolle

According to the Bentham and Hooker (1876) classification, N. Jatamansi DC is classified as follows.

- **Kingdom**: Plant kingdom
- **Division**: Angiosperms
- **Class**: Dicotyledons
- **Sub-class**: Gamopetalae
- **Series**: Inferae
- **Order**: Rubiales
- **Family**: Valerianaceae
- **Genus**: Nardostachys
- **Species**: Jatamansi, decandolle.

**Vernacular Names**

- **Common names**: Indian nard, balchar, spikenard
- **English names**: Muskroot, Indian Spikenard
- **Sanskrit**: Jatamansi, Mamsi
- **Hindi**: Jatamansi, bal-chir, jatalasi
- **Kannada**: Jatavasi, Jatamamsi
- **Malayalam**: Jatamanci, Jatamamsi, manci
- **Telugu**: Jatamamsi, Jatamsi
Bengali : Jatamansi
Marathi : Jatamavshi
Gujarathy : Jatamansi, Kalichhad
Kashmiri : Bhutijatt, Kukilipot
Garhwal : Masi
Nepal : Haswa, Naswa, Jatamangsi
Bhutan : Pampe, Jatamansi
Tamil : Jatamashi, சாட்டந்தில் Sadamanjil

Geographic origin of the plant

Central Nepal.

Method of Growing

Wild.

Distribution and Habitat:

It is commonly distributed in an elevation range of 3500m to 4500m in the northern aspect of the sub-alpine and alpine pastureland of the Himalayas in Nepal. The plant is mostly found growing in steep areas with a 25° - 45° slope. It grows well on open, stony and grassy slopes and on the turf of glacial flats. Also found as far south as the Deccan plateau.
Varieties

1. Himalayan variety - N.jatamansi
   Family: Valerianaceae.
   The Indian variety is a Himalayan plant whose underground stem produce a perfume used in Eastern aromatic oils.

2. North American Variey - Aralia racemosa
   Family: Araliaceae.
   It has fragrant roots.

Habit and features

External Morphology

Root stock

Woody, long stout, covered with fibres from petioles of withered leaves.

Stem

10 – 60cm more or less pubescent upwards, often glabrate below, subscapose.

Leaves

Entire radical leaves elongate, spathulate cauline few, Sessile, few oblong or subovate. 15 – 20cm, longitudinally nerved, Glabrous or slightly pubescent narrowed into the petiole.

Flowers

Rosy, pale pink or blue. 1-30 in no. fine capitate, heads in cymes, bracts, 6mm oblong free or nearly so pubescent.

Calyx

5 lobed in fruit enlarged membranous veined.

Corolla

Tubular companulate, base sub equal, 5 lobes, spreading rosy, somewhat hairy.

Androecium

4 stamens, stamen on the corolla tube alternate with the corolla lobes.
**Gynoeicum:**

Infereior ovary 3 celled, 1 ovuled, style linear, Slender, Stigma capitate.

**Fruit:**

4mm long covered with ascending white hairs, crowned by the ovate, acute dentate calyx, obovate, compressed, 3 – celled, 1 seeded, the 2 barren cells smaller than the fertile.

**Seed** : obovate, compressed.

**Parts used** : Rhizome.

**Rhizome** : Long stout and woody. It has an agreeable odour with bitter aromatic taste.
GROWTH OF THE PLANT

The flowering takes place during June – July and fruiting in August -October. In the beginning of October, all leaves, turn yellow and become ready for pereniation. During the winter, the herb sheds all leaves, gets buried under the snow and remains dormant with the melting of the snow in the beginning of the summer, Jatamansi starts growing.

Regeneration

Natural regeneration takes place by rhizome and seeds. Jatamansi is a wild plant but is occasionally cultivated in India and China. The plant can be cultivated from the cuttings of underground parts or rhizomes as well as from seeds. The plants coming from the cuttings of rhizome grow faster than that from the seeds.

Harvesting

The appropriate time for harvesting jatamansi is October through December. Rhizomes harvested from the 2-3 year old plants give higher yield than young plants.
RHIZOME – JATAMANSI

Synonyms

Nard, Indian spikenard.

Biological name

Nardostachys jatamansi.

Biological source

Jatamansi consists of dried rhizomes of Nardostachys jatamansi DC family valerianaceae.

Geographical source

These plants are found in the alpine himalayas at an altitude of 3000 - 5000m. It is grown from punjab to sikkim and in Bhutan.

Cultivation and collection

Jatamansi is a perennial herb propagated by cuttings of the underground parts. The favourable altitude for the Luxurious growth of the plant is 3000 – 5000m.

The rhizomes are collected from the wild grown plants only. The plant is about 10 – 60cm in height and with stout and long woody root stocks.

- Pharmacognosy
  C.K.Kokate ,A.P.Purohit
  S.B.Gokhale
  Page No : 296.
  29th Edition
Macroscopic features

The drug is usually covered with red to brown fibres which are the accumulated remains of leaf bases. In the fibres remains of aerial shoots are also seen.

Rhizome is cylindrical and with brown to deep greyish fibres, is 1 – 5 cm long and 0.5 – 3cm in diameter. The internal colour of rhizome is red to brown.

If all the leaf bases, aerial shoots, and adventitious roots are removed the rhizome shows rough surface with transvers rings. These rings represent the scars of nodes, leaf bases and the adventitious roots.

Adventitious roots are thin, branched and red to brown in colour odour is slight and aromatic and Taste Aromatic and pungent.

- Pharmacognosy

J.S.Quadry

Page No : 137.

Commercialization:

The rhizome of jatamansi is used in the preparation of medicinal oils and in perfumery. The dried rhizomes are steam – distilled to yield between 1-2% of essential oil, commercially known as spikenard oil. It can be used in perfumes with an oriental basis, heavy florals, animal amber types etc., It blends well with cedar wood and Lavender.
PHARMACOGNOSTICAL ASPECT

Commercial sample of jatamansi comprises the rhizomes of Nardostachys jatamansi detailed pharmacognostic characters of the rhizome have been reported by Mehra & Garg (1962). The rhizomes occur with or without a bit of the tap root attached and covered all over with fibres which are the reminants of the leaf hases. A striking feature is the presence of Interxylary cork in the mature rhizome, in the form of continuous branching angular or fluted tubes occuring within each other. The fission of the rhizome into separate cards in the older regions is due to joining of the outermost.

Interxylary cork ring with innermost cortical cork ring in the primary medullary ray region. Schizogenous cavities are present in the inner cortex. Phloem and xylem parenchyma of the young rhizome. Minute droplets of oil are present in the cork cells. The aerial shoot is generally hollow with a ring of vascular bundles which are embedded in a thick continuous zone of fibrous tissue. The tap root resembles the rhizome in the formation of successive rings of cortical as well as interxylary cork, but does not split into cork.
Macroscopic characters

- Colour: Dark grey rhizomes are crowned with reddish brown tufted fibres
- Odour: Highly agreeable, aromatic
- Taste: Acríd, slightly bitter and aromatic
- Size: Rhizomes are 2.5 to 7.5 cm in length
- Shape: Elongated and cylindrical

The fibres present on the rhizomes are the remaining of leaf hases. Rhizomes break easily and internally they are reddish brown in colour.

Microscopic characters

Transverse section of the rhizome is characterised by the presence of outermost 2 – 5 layers of cork cells containing oil globules.

The cortex is marked by the presence of schizogeneous canals. Phloem is in the form of patches and xylem is characterized by vessels vessels have typical scalariform thickening. Cambium is continuous and well marked.

Pharmacognosy

C.K.Kokata
A.P.Purohit
S.B.Gokhale

Page No : 296.
Epidermis is absent in mature rhizome shows ring or rings of cortical cork broken at some places Between the successive cork rings cortical remains of cortical parenchyma with leaf traces are seen Inter Xylary and Medullary cork is the characteristic feature of this drug.

Interxylary cork occurs in the form of continuous, branched, angular or fluted tubes arranged in one another, outermost interxylary cork ring fuses with innermost cortical ring in the area of Medullary rays and thus in that part rhizome is broken in small cords in the order regions.

- Pharmacognosy by J.S.Qadry shah and Qadry’s.

Adulterant

Mukerjee wrongly described rhizome selinum vaginetum (umbelliferae) found also at higher attitude as jatamansi Morphologically it resembles jatamansi, but differs microscopically in that it contains vittae in young and old rhizomes and roots and fan – shaped crystals of calcium oxalate ; not found in jatamansi.

Further it doesnot contain interxylary and medullary cork and stele doesnot break in cords it contains volatile oil. Volatile oil is used as sedative and analgesic.

- Pharmacognosy by J.S.Qadry shah and qadry.
Pharmacognostic studies of the commercial samples of N. jatamansi revealed the presence of adulterant very similar to genuine N. jatamansi in external appearance. The adulterant was found to be the rhizome of selinium vaginetum. The rhizome is covered with a dense tuft of bristly fibres which represent the skeletal remains of leaf bases as in N. jatamansi.

Microscopically, however the two can be easily distinguished (Mehra & Jolly, 1963) by the features described below.

**The distinguishing characters of N. jatamansi and S. Vaginetum.**

<table>
<thead>
<tr>
<th>N. Jatamansi</th>
<th>S. Vaginetum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence of Inerxylary &amp; Medullary cork which results in the splitting of the stele into 4-6 separate cords in the old rhizome.</td>
<td>Absence of Interxylary of Medullary cork. No splitting of the stele in old rhizome.</td>
</tr>
<tr>
<td>Schizogenous cavities in the young rhizome in the inner cortex and parenchyma of phloem and xylem but without any epithelial cells.</td>
<td>Secretary candles lined with epithelial cells present in the cortex, pith and secondary phloem in both the old and young rhizomes and in the root.</td>
</tr>
<tr>
<td>Fan shape crystals of calcium oxalate absent in the parenchyma cells oil globules cork cells present</td>
<td>Fan shaped crystals of calcium oxalate present in parenchyma cells.</td>
</tr>
<tr>
<td>Oil globules in cork cells present.</td>
<td>Oil globules in cork cells absent.</td>
</tr>
</tbody>
</table>
N.Jatamansi & S.Vaginetum can also be differentiated by the T.L.C pattern of the petroleum ether extracts of the two plants S.Vaginetum contain a number of coumarins viz. angelicin, oroselon, lomatia, selindin and vaginidin, and a flavinoid selenone which are absent in N.jatamansi (Seshadri, 1969).

**Chemical Test:**

On microchemical studies, N.jatamansi cortex cells appear blue and brown in colour, when the section is treated with strong Iodine. The xylem tissue turns into reddish violet colour and the cork tissue pink by the action of phloroglucinol and Hydrochloric acid (Sharma, 1972).

The 80% alcoholic extract of drug shows bluish - white fluorescence under ultraviolet light.

- Pharmacognosy
  
  C.K.Kokate
  
  A.P.Purohit
  
  S.B.Gokhale

Page No: 296.
In a preliminary chemical study, Nardostachys jatamansi was reported to yield 2% of volatile oil, containing an unidentified ester and alcohol, and two alkaloids. (Bose et al., 157 a).

The rhizomes of N. Jatamansi yielded ‘Jatamanshic acid’ (Chaudry et al., 1951) which was assigned a bicycle azulenic sesquiterpene structure.

The petroleum ether extract of the rhizomes gave a ketonic principle called ‘Jatamansone’ (Govindhachari et al., 1958) which was present also in the roots of Valeriana officinalis.

The hydrocarbon fraction of the petroleum ether extract N. Jatamansi rhizome yielded a known sesquiterpene Viz., Seychellene and a new hydrocarbon, seychelene. The hexane extract of the rhizomes of N. jatamansi yielded \( \beta \)-Sitosterol (Anjaneyulu et al., 1965).

The neutral fraction of the concrete of roots gave a number of compounds viz., Valeranone, Valeranal, Nardal, Calarenol, Nardostachone, N- hexacosanyl arachidate, n-hexacosanol, calarene, n-hexacosene, isovalerate and \( \beta \)-sitosterol.

The roots of extraction with light petrol yielded norseychelanone, seychellen, parchouli alcohol, and also \( \alpha \) - & \( \beta \) pachoulenes (Rucker et al., 1976). The isolation of a sesquiterpene ketone 1 (10) - aristolen – 2- one
along with \( \beta \)-sistosterol and three unidentified compounds \( \text{C}_6\text{H}_{24}\text{O}_3 \); \( \text{C}_{14}\text{H}_{24}\text{O} \); \( \text{C}_{15}\text{H}_{22}\text{O} \) from the petroleum ether extract of the roots has also been reported (Maheswari & Saxena, 1980).

The oil from the N.Jatamansi roots yielded terpenic coumarins, oroselol and a new one named as ‘Jatamansin’ (Shanbhag et al., 1964).

Nardostachnol, 9 – dehydroaristolene, 1(10) – dehydroaristolene, 2\( \beta \) - Maalenine, and 1,2,9,10 – Tetrahydroaristolene identified in essential oil. Aristolen - 2 – one, \( \beta \) – sitosterol and three unidentified compounds isolated from roots.

Compendn Indian medicinal plants
Vol.2, Rastogi & Mahrota

New sesquiterpene ketone – jatamansone – isolated from rhizomes, \( \beta \)-Maaliene and calarene from oil, a new terpenine coumarin – Jatamansin, oroselol, from roots; \( \alpha \) - pinene, \( \beta \) - Pinene, carene , \( \beta \) - eudesmol, elemol, a \( \text{C}_{30} \) hydrocarbon, \( \beta \) - sitosterol, Jatamansin, angelicin,
Jatamansinol from roots, Nardol from roots. A new diethenoid bicyclic ketone - nardostachrone from roots.

- Glossary of Ind. Med Plants
  Chopra, Nayar PID,
  New Delhi, 1956 P.173

β – Maaliene

Angelicin

Jatamansi contains volatile oil and volatile oil contains a ketone ‘Jatamansone’ which is same as valeranone mentioned in valerian possibly it contains ‘Jatamansic Acid’.

- Pharmacognosy
  by J.S.QadryPage  No: 137
Jatamansi contains 1-2% of pure yellow volatile oil, resin, sugar, starch and bitter principle, an alcohol and its isovaleric ester.

It also contains jatamansic acid and ketones jatamansone and nardostachone.

- Pharmacognosy
  C.K.Kokate
  A.P.Purohit
  S.B.Gokhale
  Page No: 296.
Various extracts (Light petroleum, benzene and ethanol) of Nardostachys jatamansi, root showed both sedative action in rats as revealed by physical inactivation and potentiation of phenobarbitol sodium sleeping time in rats, the hypotensive activity in cats. The ethanolic extract was found most active (Hamied et al., 1962).

The alcoholic extract potentiated hexobarbital narcosis in rat, reduced the rat brain serotonin content, markedly increased the reaction time of trained rat in escaping through the tunnel (in a columbia obstruction box), decrease the conditional avoidance performance in cats and also abolished the tonic extensor response in rats subjected to maximal electroshock seizures. The effect of extract was less than that of diphenyl hydantoin sodium and was associated with signs of neurological deficit (Gupt, 1966).

The ethanolic extract (50%) of N. jatamansi rhizomes had no effect on the CNS of Mice. (Bhakuni et al., 1969).

The essential oil from the rhizomes had a depressant action on the CNS of guinea pigs and rats (Chopra et al., 1954).

Jatamansone, the sesquiterpene from N. jatamansi was shown to exert tranquilising activity in Mice and Monkey, hypothermic activity in Mice and antiemetic effect in dog (Arora et al., 1962 a).
Further studies on the effect of jatamansone on the biosynthesis and metabolism of serotonin in rabbit brain revealed an impairment of biosynthesis of serotonin in the brain tissue, thus leading to a reduction in the brain levels of 5 hydroxytryptamine. The degradation of serotonin was unaffected (Arora et al., 1962).

Jatamansone was found to be more effective than diphenyl hydantoin sodium and essential oil of Jatamansi in maximal electro shock seizures. However these compounds were ineffective against metrazol seizures. The LD$_{50}$ of Jatamansone & essential oil of jatamansi by the I.P route in Mice were 350mg / 1kg and 900mg/ kg respectively. (Arora et al., 1958a).

A compound herbal preparation with N.jatamansi, Acorus calamus and valeriana wallichi as ingredients showed CNS – depressant activity in rabbits and also inhibited the post – isolation syndrome in Mice (Moghe et al., 1981).

In another study, aqueous, alcoholic, volatile oil and alkaloidal fraction of N.jatamansi rhizomes and roots were studied for sedative and CVS effects. The alkaloidal fraction showed a significant and sustained hypotensive action in dogs. The fraction also produced a marked relaxation of plain muscles and depression of CNS and mild degree of relaxation of the skeletal Muscle. (Bose et al., 1957b). The action of the aqueous and alcoholic extracts and the total alkaloidal fraction of the tissue respiration in rat brain, liver and heart was studied. The total alkaloids
produced maximum inhibitory effect on tissue respiration leading in higher
doses to complete cessation of respiratory activity in these tissues. A
sedative action was also observed in rats after parenteral injection of the
total alkaloids (Bose et al., 1975c).

The essential oil obtained from the rhizomes of N.jatamansi exerted
prolonged and pronounced hypotensive effect in dogs. It did not depress
the vasomotor centre but blocked the proprioceptive blood pressure
regulating reflexes. The oil had negative ionotropic and positive
chronotropic effect on the heart of the frog and dog. In moderate
hypotensive doses it didn’t lead to any ECG changes in dogs. It didn’t
block the ganglionic transmission but showed some adrenolytic action.
The oil didn’t depress the respiration but on the other hand caused some
initial stimulation. (Arora et al., 1958a).

The oil-free aqueous extract of N.jatamansi showed a transient
hypotensive effect and electrocardiographic changes in dog’s heart, apart
from contracting frog’s rectus muscle. The CVS effect of the extract was
similar to that of potassium. It could not be ascertained, however, whether
all the CVS effects of N.jatamansi extract could be explained by the
presence of potassium alone. The potassium content of the aqueous
extract was found to be 5-67 mg/ml of the extract (Sheth & Kekre, 1956).
Jatamansone showed a potent and prolonged hypotensive activity in normotensive and hypertensive rats, normotensive dogs and cats. The hypotensive action was evident in both anaesthetized and unanaesthetized animals (Arora, 1965a).

Anti arrhythmic activity of the volatile oil of N.jatamansi was first reported against acetyl – choline induced fibrillations in monged dogs (Arora and Madan, 1955). The volatile oil was compared with Quinidine in another study (Arora and Madan, 1956) and was found to be less active than quinidine as an antiarrhythmic agent against isolated rabbit auricular fibrillation, experimental auricular flutter in anaesthetized dogs, auricular fibrillation induced by aconitine and acetylcholine in dogs. The volatile oil had no effect on Digitalis induced ventricular arrhythmia in dogs. It showed on advantage over quinidine in causing a lesser degree of slowing as tested by the ECG changes in the cat. The acute I.V toxicity of the oil was also lower than that of Quinidine (Arora & Madan, 1956).

Jatamansone was found to be more effective than quinidine as well as the essential oil of N.jatamansi in suppressing ectopic ventricular activity in unanaesthetized dogs induced by the two stage coronary ligation. It was however less effective than quinidine against acetyl – choline induced auricular fibrillation in anaesthetized dogs (Arora et al., 1958 b).
A compound herbal preparation (khamira Abresham Arshadwala) having N.jatamansi as one of the ingredients lowered the blood pressure in hypertensive rats & also exerted and anti – arrhythmic action (Siddique, 1964).

The alkaloidal fraction of N. jatamansi showed a bronchodilatory effect on isolated tracheal chain of guinea pig. It also partially relieved histamine - induced bronchoconstriction (Bose et al., 1957a). Bronchodilator effect of powdered N. jatamansi fumes and aerosols against histamine induced bronchial Asthma in guinea pigs has been reported. In two different sets of experiments N.jatamansi fumes could not only relieved guinea pigs with acute dyspnoea induced by histamine aerosol, but also protect the animals (When pre treated with N. jatamansi alcoholic extract) against developing dyspnoea on exposure to histamine aerosol (Gupta et al 1961).

The alcoholic extract of N. jatamonsi inhibited the constrictor response induced by histamine, serotonin and acetylcholine in isolated smooth muscles (ie Trachea, Colon, Intestine & uterus).

The extract also showed a direct papaverine - like antispasmodic effect on the intestine (Gupta et al., 1962). There was also reduction in perfusion pressure through the isolated lungs of rats or guinea pig. The alkaloidal fraction of N. jatamansi also antagonized the perfusion outflow caused by histamine and serotonin (Gupta et al., 1963).
Anti bacterial activity in the alcoholic and aqueous extracts of N. jatamansi roots was reported against staph aureus and E.coli perhaps for the first time by George and pandalai (1949). In later studies, the alcoholic extract (20%) showed antibacterial activity against strep pyogenes, sal. posteurella multocida and ps. aeruginosa, although the antibacterial activity of the aqueous extract was not confirmed (Naung et al., 1962) Ethanolic extract (50%) of the rhizomes was reported by the CDRI, Lucknow, to be devoid of antibacterial activity against B.subtils, staph aureus, sal typhi, E.coli, A. tumefaciens and Mycobacterium tuberculosis H37 Rv (Bhakuni et al., 1969).

The essential oil of N.jatamansi didnot show any antituberculous activity against M.tuberculosis H37 RV (Ramaswamy & Susi, 1967). The oil showed weak antibacterial action against staph aureus, E.coli, Sal typhosum, Vib cholera, shigella flexneri (chopra et al., 1954) and against vibrio cholerae, salmonella faecalis, salmonella typhi, clostridium diptheriae and streptococcus pyogenes (Girgune et al., 1978 a).

The ethanolic extract of (50%) the rhizomes was devoid of antiprotozoal activity against Entamoeba histolitica (Bhakuni et al., 1969) whereas the oil had a weak action against p ccaudatum (Chopra et al., 1954).

The ethanolic extract (50%) of the rhizome showed antifungal activity against candida albicans, cryptococcus neoformans, Trichophyton mentagrophytes, Microsporum canis and Aspergillus niger (Bhakuni et al.,
1969), whereas the essential oil have been reported to reveal potent antifungal activity against Helminthosporium turcicum and Alternaria helianthi (Girgune et al., 1978b).

The essential oil of N. jatamansi showed anthelmintic activity against Taenia solium (Girgune et al., 1978C).

The aqueous extracts of N.jatamansi root exhibited diuretic action in rats which compared favourably with that of potassium acetate and was more potent than urea (Gujral et al., 1955).

The ethanolic extract (50%) of the rhizomes showed hypotensive effects in cat/dog and antispasmodic action on isolated guinea pig ileum but was devoid of any hypoglycemic, antiviral or anticancer activities. The LD_{50} of the extract in Mice was found to be > 1000mg./Kg IP (Bhakuni et al., 1969).

The semicarbazone derivative of Jatamansone revealed antioestrogenic activity in mice by inhibiting the increase in uterine weight caused by estrogen alone. When administered alone, the compound had no estrogenic activity but decreased the uterine weight, revealing an antiestrogenic activity (Agarwal et al, 1973).

- Glossary of Indian Medicinal plants
  R.N.Chopra, S.L.Nayar
  I.C.Chopra.

28
EFFECTS OF N.JATAMANSI ON BIOGENIC AMINES AND INHIBITORY AMINO ACIDS IN THE RAT BRAIN

The effect of acute and sub chronic administration of an alcoholic extract of the roots of N.jatamansi on nor epinephrine (NE), dopamine (DA), serotonin (5-HT), 5 – hydroxy indoleacetic acid (5 – HIAA), Gamma – amino butyric acid (GABA) and taurine were studied in male albino wistar rats. The acute oral administration of the extract did not change the level of NE and DA but resulted in a significant increase in the level of 5 – HT and 5 – HIAA. A significant increase in the level of GABA and Taurine were observed in the drug treated groups when compared to the controls. A 15 – day treatment resulted in a significant increase in the levels of NE, DA, 5 HT, 5 – HIAA, Jatamansi causes an overall increase in the levels of central monoamines and inhibitory amino acids.

Authors : Prabhu.v, Karanth K.S, Rao.A,
Dept. of Bio chemistry,
Kasthuribai Medical college,
Karnataka

Journal name : Plant med 1994 Apr ; 60 (2) 114 – 7.
HYPOLIPIDAEMIC EFFECTS OF CURCUMA LONGA AND NARDOSTACHYS JATAMANSI, DC IN TRITON – INDUCED HYPERLIPIDAEMIC RATS

50% ethanolic extract of curcuma longa (tuber) and N.jatamansi (whole plant) feeding elevates HDL - Cholesterol / Total cholesterol ratio. The extracts also caused a significant reduction in the ratio of total cholesterol / phospholipids curcuma longa exhibited better cholesterol and triglyceride lowering activity (Ch – 85%, Tg – 88%) as compared to N.jatamansi in triton - induced hyperlipidaemic rats. In view of the protective action of HDL against heart disease and atherogenicity, curcuma longa consumption is recommended.

PMID : 3215683, UI : 89108563.
Authors : Dixit VP, Jain P, Joshi SC.
              oct - Dec 32 (4) ; 299 – 304.
NARDOSTACHYS JATAMANSI Protects Against Liver Damage Induced by Thioacetamide in Rats

Ali S, Ansari KA, Jafry MA, Kabeer H, Diwakar G. (Department of Biochemistry, Faculty of Science, Hamdard University, New Delhi).

Nardostachys jatamansi is a medically important herb of Indian origin used for centuries in Ayurvedic and Unani systems of medicine for the treatment of various ailments. In the present paper, a 50% ethanolic extract of the rhizomes of N. Jatamansi is shown to possess hepatoprotective activity. Pretreatment of rats with the extract (800mg/kg body wt, orally) for three consecutive days significantly ameliorated the liver damage in rats exposed to the hepatotoxic compound thioacetamide. Elevated levels of serum transaminases (aminotransferases) and alkaline phosphatase, observed in thioacetaminde alone treated group of animals, were significantly lowered in N. Jatamansi pretreated rats. Pretreatment of the animals with the extract also resulted in an increase in survival in rats intoxicated with LD90 dose of the hepatotoxic drug.
ISOLATION AND PHARMACODYNAMIC ACTIVITY OF THE SESQUITERPENE VALERANONE FROM NARDOSTACHYS JATAMANSI DC

[Article in German] (Rucker G, Tautges J, Sieck A, Wenzl H, Graf E)

The known sesquiterpene valeranone (= yatamanson) was isolated from the tuberranean parts of Nardostachys yatamansi (DC). It was pharmacologically investigated in animal experiments of sedative, tranquilizing and antihypertensive properties. In some experiments, typical for tranquilizers, certain activities could be demonstrated such as the prolongation of barbiturate hyponosis, the impairment of rotarod performance, an anticonvulsive activity on electric shock and potentiation of the body – temperature lowering activity of reserpine. In three other pharmacological models an anti ulcer action was detected. In general the activity of valeranone was lower than those of the standard substances used. As regards the hypotensive property only a weak activity was demonstrated. In toxicological studies on rats and mice an oral LD$_{50}$ of greater than 3160 mg/kg was fond, which suggestes the possibility of a therapeutically useful dose ratio.
THERAPEUTIC USES

Jatamansi

Nardostachys jatamansi.

English Name

Musk Root, Indian Spikenard.

Family

Valerianaceae.

Part used

Rhizome, Rhizome oil.

Action

Aromatic Expectorant
Antispasmodic Anodyne
Carminative Antiseptic
Deobstruent Deodorant
Digestive Somniferous
Diuretic Antipyretic
Emmenagogue Tonic
Nerve Tonic Aphrodisiac

Uses

Convulsions
Digestive disease
Epilepsy
Flatulence
Gastric disorders
Tleart palpitations
Jaundice
kidney stones
Respiratory diseases
skin conditions
Typhoid
Seminal debility.

Therapeutic uses

Jatamansi has the power to promote awareness and calm the mind. It is very useful for palpitation, Tension, headaches, restlessness and is used for promoting awareness and strengthening the mind. It aids in balancing the body of all three ayurvedic doshas. The herb's sedative properties increases awareness as opposed to valerian that dulls the mind.

Jatamansi is a useful hair tonic and is commonly used in hair oil, promoting hair growth and lustre. It is also used in oils and pastes that improve complexion and general health of the skin.

No side effects have been noted so far.

It is very interesting to note that in condition of insomnia, and restlessness this drug was used by sushruta to produce tranquility and sedation. Infusion prepared from the fresh roots is employed in the treatment of spasmodic hysterical states, palpitations and tension headache. It is also said to be useful in menopausal disturbances.
Clinical trials were carried out with jatamansone in essential hypertension. Jatamansone has been used in febrile delirium and also in delirium tremens. In dysmenorrhoea, it is used for pain relief and a smooth menstrual flow. Nardostachys was recommended in the Ayurvedic tradition for nervous and spasmodic symptoms, such as heart palpitations, headache, shaking and convulsions. The active constituents of Nardostachys are similar to those found in valerian. In India, modern research with the herb has been aimed at examining new uses rather than the traditional ones; It is being examined for its liver protective effects, ability to increase nerve growth factor and lipid lowering effects.

The oil possess antiarhythmic and hypotensive activity. Jatamansone, an active principle of N. Jatamansi, brings forth a significant reduction in hyperactivity, restlessness and aggressiveness in hyperactive children.

**Cosmetic application**

Jatamansi is a useful hair tonic and is commonly used in hair oils, promoting hair growth and lustre. It promotes hair growth and imparts black colour to the hair. It is also used in oils and pastes that improve complexion and general healthy of skin.

In Germany and Japan, some interest in this herb as an alternative to valerian has been shown, in that preliminary experiments ( in Laboratory animals) show that it has an even lower toxicity than valerian ( which already has low toxicity).

- www.wikipedia.org
Jatamansi is useful in vitiated conditions of pitha and vadha, burning sensations, cough, Asthma, Bronchitis, Pectoralgia, Cephalgia, Inflammations, Somatalgia, Dyspepsia, colic, flatulence, Hepatopathy, Nephropathy, Strangury, Amenorrhoea, dysmenorrhoea, Lumbago, pharyngopathy, dermatopathy, Leprosy, erysipelas, epilepsy, hysteria, convulsions, neurosis, hypertension, Grey hair, falling of hair, Intermittent fever, General debility.

- Indian Medicinal plants

(A compendium of 500 species)

orient longman

Jatamansi roots should also be used fresh as an aromatic adjunct in the preparation of Medicinal oils & in perfumery. Jatamansi is a good substitute for the official valerian. Infusion prepared from fresh roots is employed in the treatment of spasmodic hysterical affections, especially palpitation of heart, Nervous headache, chorea, flatulence etc., in doses of 1-2 ounces 3 times daily.

It is said to be useful also in menopause disturbances, hystero -epilepsy & similar nervous and convulsive ailments.

Dose : 10 -20 grains in powder. It may be usually combined with a few grains of camphor & cinnamon.
Volatile oil from rhizome can be used in many diseases of digestive, respiratory organs and in jaundice, also in leprosy. It is also employed mixed with sesame oil, it is rubbed on the head as a nerve sedative. It also promotes growth & imparts blackness to hair.

- The Indian materia medica
  A.K. Nadkarni.

Spikenard oil possess antiarrhythmic activity in cases of auricular flutter, it is also effective than quinidine, but has the advantage of being less toxic.

Jatamansone is more potent than the oil & is also more active than quinidine ventricular Tachycardia resulting from acute MI in experimently induced arrhythmias, it is as effective as quinidine except in the Acetyl choline induced Auricular fibrillation in which it is considerably weaker.

Jatamansone possess Anticonvulsant action as well. The oil exerts a hypotensive effect & in moderate doses it has a distinct depressant action on the CNS. Lethal doses causes deep nacrosis & Ultimately death within few hours. The root extracts show sedative properties.

A tincture of rhizome is given in intestinal colic & flatulence. The rhizome is used as an aromatic adjunct in the preparation of Medicinal oils.

- Wealth of India Vol VII.
**Therapeutic Uses**

**In other system of Medicine**

**Ayurveda**

Roots are acid, bitter with a flavour tonic, cooling, antipyretic, cure ‘Tridosha’, ‘kapha’, Biliousness, diseases of blood, burning sensation. Erysipelas, leprosy, skin diseases, throat troubles, ulcers, improve the complexion.

They also have antispasmodic effect and are often employed in treatment of epilepsy, hysteria, convulsive affection, palpitation of heart, intestinal colic. It enters into the composition of a compound powder which is burnt and used for inhalation in bronchial affection.

The rhizome, in combination with other drug is prescribed in snake bite and scorpion sting.

- Charaka, Sushruta.

**Unani:-**

The roots have a bitter sharp taste, tonic stimulant, diuretic, emmenagogue, carminative, and stomachic, laxative.

If increases the lusture of the eyes.

If promotes growth, blackness of hair.

Also useful in gleets, cough, chest pain intestinal inflammation. Kidney and lumbar, troubles, dry wounds and increase the appetite.

- Indian Materna Medica

Therapeutics:

1. It is prescribed as nervine tonic and aromatic adjunct in the preparation of Medicinal oils and gritas.
2. In doses of 45gms, it is used as an expectorant in coughs and cold.
3. It is used in treatment of epilepsy, hysteria, and convulsive affections.
4. It is used in palpitation of the heart.
5. It is administered suspended in mucilage with cinnamon water and is given as a carminative in cases of flatulence and as reflex stimulant in vomiting palpitation.

- Pharmacopoeia India, K.C.Bose P.No. 122.
SPIKENARD OIL

Synonyms: Nardostachys jatamansi root oil

Nard root oil

Indian valerian root oil

Method of extraction

Jatamansi oil is obtained by steam distillation of dried rhizomes of N.Jatamansi DC.

Organoleptic properties

Appearance: Fluid to slightly viscous liquid.

colour: Varies from amber to deep blue or greenish blue.

Aroma: Heavy, Sweet - woody and spicy - animal odor.

Physio–chemical properties

Specific gravity: 0.9300- 0.9587 at 25°C.

Refractive index: 1.5055 – 1.5458 at 25°C.

Acid number: 1.5 – 8.

Ester number: 6 – 45.

Ester number after Acetylation: 40 – 65.

Solubility: Soluble in 0.4 – 1.5 vol of 90% alcohol.

40
Chemical constituents

Spikenard oil contains an alcohol \( \text{C}_{15}\text{H}_{24}\text{O} \) and its isovaleric ester, a saturated bicyclic sequiterpene ketone, jatamansone \( \text{C}_{15}\text{H}_{26}\text{O} \) with \( \text{bp} \ 108^\circ \) has been isolated from the rhizomes.

Actions

Stimulant
Antiseptic
Insect repellant

Spikenard oil – medicinal uses :

1. The oil possess antiarrhythmic activity with possible therapeutical usefulness in cases of auricular flutter. It is less effective than Quinidine but has the advantage of being less toxic.
2. The oil exerts a hypotensive effect and in moderate doses it has a distinct depressant action on the CNS.
3. It is also believed to be useful for leprosy.
4. It promote hair growth & helps in maintaining its color as well.
5. It can be used in many diseases of digestive, respiratory organs and in jaundice.
6. It is also employed mixed with sesame oil for rubbing on the head as a nerve sedative.
7. It is used in the treatment of stomachache, constipation and cholera.
GUNAPADAM ASPECT

°¼¡Áì³°¢ - Jatamansi

Nardostachys jatamansi

§ÀÙ | ÀÅ+, Û - Synonyms

❖ °¼¡Áì³°¢
❖ f¼¡Áì³°¢
❖ "À°¡°¢
❖ Á¡Á°°¢
❖ À¾S, °¢É¢
❖ °È"Ä

- ¡¾À¡¾0 ÅÄ°", ÀÎòò 60 À¾¿ò, 2002 À.±ñ:

311

" °¼¡Áì³°¢ §À¾° ÓSÁ 0ì¹Èš, Û
À¾À¢¢¾ì 0¾¡Áì³°¢ 0¡ò¾¢É¢ÔÁ¡Ì
¾¾¡Áí³°¢ À¢º¡º¢ýÈý ¢Ç¢ÉÂ¡¾¡
¾¡ì, ¡É 0¾¡À¾°¾¡, ç Ø¾¡Á¡Ìö
ò¾¡áí³°¢, çØ¾° $, °¢ÔÁ¡Íö
ò, È¡È §À°ÇÀ¡Í", Ô¡Ìö
¿¾¡Í³°¢Áø¾ À¢³¾° ÀÈÇÀ¡Ìö
¿¡ÀÉÅ± 0¾¡Áì³°¢ ¿¡Á¡SÁ".

À¡, , È¢±À° ç, ñí 1200 À¾¿ò §À'1992
À¾¿À¡, °cÁçÀ+: ±Š.±ý.ÐÀ¡Â°¾¢Áý, À.±ñ

- 206.

❖ Ð¾¡¡¢É¢
❖ °¼¡Áì³°¢
**Varieties**

**I.**
1. $\circ \text{eu} \cdot \text{Aii}$
2. $\text{i} \circ \text{dik} \cdot \text{Aii}$

**II.**
1. $\text{Aii} \cdot \text{Oi}$
2. $\text{i} \cdot \text{Oi}$
3. ¬, iÅ Áîò...¢ - Áî°Å ŋ¢ÈÓ"¬ÅÆ.
   "¬ÃÅ Å¢ù, dÄ¹ÅÈ, Ô¢È ÔûÇÈ ¬Îô.
   - «iÉ¢ sÅºÄ¢ý "Å, "Ô¢ë"¬ - 30
   ÂÌÅ¢
   ¬Å¢ÈdÅ; °cÄc+: ±š. ±y. pÄ; Ä°ôngäy
   ôço ÂìÅ¢ò - šō 1987Å. ±n:
   322.
   ÂìÅ¢ - ūôô : sÀ+
   í"Å : âî°¬Å¢ø -pÉ¢dô
   ,iōôå¢ý - ,i+ôô
   ñy"Å : |Ådàô
   â¢Â¢x : |i+ôô
   - Î¼1ñ¾ åå¢”, Åòdò Å. ±n: 311
   6ô Å¾¢dô, 2002
   °1¼1Ā½ Åîò...¢ : ,i+ôô, °ôô í"Å | ,íÅÆ
   í,ô° °¼1Åîò...¢ : ,°ôdïí"Å, îÜ”Åèçý”Åòô,
   õûÅkôô | ,ïèdïîô, êåäô” ”Å
   Âç+iîô, -ç£¢È”¬ °çÄå; iîô
  ¬, iÅ Åîò...¢ : îÜ”Åèçý”Å “¬ÅÆ.
   «iÉ¢sÅºÄ¢ý "Å, "Ô¢ë”¬ - åyè; ô ÅìÅ¢
   Å¾¢dÅ; °cÄc+: ±š. ±y. pÄ; Ä°ôngäy
   ôço ÂìÅ¢ò - šō 1987Å. ±n: 322
  | "ò" :-
  |åòåò¾i 1, ç
  p°cÅ, üè¢
  °çûçåö |åòi, ç
  44
§, "ΑΑ, άβε

| Αάδή":-

"ίςκο δάκαςάςος ή, ιάδά; ί ιάο
-σάκα, ιε θάνη, ηςκιο δεοάω - | ιδεάοκ  ๑๕๘๖๘๘
Άάθάς "ανά θάιο | αάις, ι "και καίο
ίοκ "ηνιαίος άι | ιω
- "όαςι+ ίιιά; ίο

(θ-υ) θυίι ίδαο, θάνκι ιιί, ά άα ίάο, -σύι, άιο,
,θιο, ι ηιο, θάο, ροάο, ραάο, ιόκας +ειιο.

"άιε θοιο αίιο - ουάεθαθ άιάο ίιιο: ήαιιο,
άα, άκικικ άαά ιίι, "και, "καιάεε-αο "κοο,
,ιακι, ιο "κοο - "καθ, άο, ράκακοκο άιοκ, όκο, άκο,
άκο...σα θάιιο.  

"άιε, έεά άαάθ, άοκο άιιί άγθε'
Άάδα+ άαά; ηκ ηκιο δό άεδε θά; ιοθ
Άαοδαι άαάη άκιοκ άοκοκι, ήκάιοο...κ
| άακαα+ ήκάεθη ήκάαηθ | άγθε+ | άα+σάι+κισα".

°κάιιο, άαο, άοκο, ιοκο, ηςκιο, "άκιοκ - ηιάιο, άκ
"ήο; ηκιο, "θά θάιιο. άάικιιο, έ άκηκ, ιί, "κιο; άο,
θάο, ηςκιο βαν "καθ θα+ιίο. έπαν θακι, έ άκαιοο...είιο
θιιθ, ζθ -ιο +υ.,

- άκιο+δκ άθοιι άιοκ
46

À.±ñ: 181-182.

°;äÁ½ °;äÍi...¢ - äëô¾;ø §;äÝüø ëýáí,"çóø,
,ï¨ø°äôø, çí°ø° §;äíiõø.

í,öäÁiø...¢ - ìý §;ä"i,ü, äüç;ø §;äÝüø ëýáø, ,çã,
§;ä",ä, pääç åçóøø, ,ï¨ø°, çíì ç,çÀÀú"êó §;äíiõø.

-,iÁiø...¢ - åêí,ò, åçíøø, çäçÈçÈåøç
°çóçòóøì°øçù Æø"ô, «ì,ç, ç"á õçáçÀìë"ê ¿;äíiõø.

«ìéçà°çù õé",çòçì¬ - 3õ åéïç
áçïø;°çùçë: ±ë.±ý
pä;å°çùçù
õø åçóø °,שø 1987À.±ñ: 322.

முறை:

செய் முறைக்கும் படுத்து வேட்டை 10 - 20 குறுக்கு தன் கிளையில் குறுக்கு வேட்டைகளைத் தந்துரையிட்டு, சுருக்கு பல்தருவைப் பாதுகாப்பு நடுவுடன், தமிழ் வேறுபாடு.

மூலக்கட்டுத் தலைக்குப் பாதுகாப்பு காட்சிகள் செய்யவும் விளக்கும் வழியும் வேறுபாடு புதியேறிக் குறுக்கு வேட்டைகளையும் இரண்டு குறுக்கு வேட்டைகளையும் செய்யவும் தவறாவதிலும் கூறுக்கு வேட்டைகளையும் இரண்டு நேரத்தில் பதிவு செய்யவும்.

தினத்தில் தன் முன்னாளியியில் வாய்ந்த தன்னாவை செய்யவும் தாக்குதலை வைக்கவும் தவறாவை இல்லாது வேட்டையை வைக்கவும் கூறுக்கு வேட்டையை வைக்கவும்.

- தருணமான சூறைகள் மறந்து ப.416.

60 செப்டம்பர், 2002
சார்பாளகியில் வெளியே நேர்ந்து காணப்படும் கொண்டீர் தரந்தனிற்கு அதிகு முடிக்கு 1-2 குறிக்கு குற்ற திட்டிய போர்வல்.பார்க்கவும் சுருக்கப்படும்.

தமிழில் இல்லாமல் மாதம்

தினங்கு குறக்கு நிவேதனங்கள், காரண்க் கோளி, குதிக்கு, கம்பகவசம், பாதுகாப்பியில், காண்கிறேன், பாதுகாப்பு நிகழ்வு, வேள் கம்பவ, குச்சர் நிகழ்வு தொடர்புமதனாக பார்க்கப்படும்.

- கிருத்த காந்தியின் பாருந்த தொல்லியல். 

ஆண்டு, 1998 ம.304.

சார்பாளகியில் இனம் பயணம்: ½ பால் இனம் நேர்ந்து நிலைகியின், ½ பால் 

தினத்தில் ¼ பால்மை வழங்குவது கருப்பியின் நிலைக்குக் குறைக்கு விளையாட்டு, பில்லையின் 

கம்பவண் கருத்து நேர்ந்து நிலைக்குத் தொடர்வேறு.

- ஆண்டு கோல் புரூபம் ம.384

இலாப்பட்டீ, ஆண் 1999

சார்பாளகியில் வெளியே நேர்ந்து காணப்படும் நேர்ந்து நிலைக்கு ¼ முதலில் 

தீர்மானம் கான்களால் அடைக்கவேண்டும்.

(அனைத்து)

2 முதலில் சார்பாளகியில் நேர்ந்து நேர்ந்து நிலைக்கு ¼ பா சந்த 

குறிக்கு 1/8 பால்மை காண்சு கருப்பியின் நிலைக்கு 1-2 அண்டுகள் வழியா 

கம்பவண் தொடர்வேறு நிலைக்குத்

தினம் தொடர்வேறு

பால்மை

2 கோல் புரூபம் வழியா

தீர்மானம்.
திருச்சந்து இரண்டாம் கல்விக்கான திமலை மதியூறக் காலமை, மாதிக், பாங்காடு வேகு இரண்டாம் கிளமு கிளா
தீர்வுகளாக காப்பு பிரித்தானியச் செயல்பாடுகளைக் கொண்டு, நாமக்கைகள்,

<table>
<thead>
<tr>
<th>க்கள்</th>
<th>மாதிக் எண்</th>
</tr>
</thead>
<tbody>
<tr>
<td>ககைப்போட்டை</td>
<td>4 மாதிக்</td>
</tr>
<tr>
<td>சாம்பல்</td>
<td>1 மாதிக்</td>
</tr>
<tr>
<td>மாதிக் தாள்</td>
<td>1 மாதிக்</td>
</tr>
<tr>
<td>குரள்</td>
<td>1 மாதிக்</td>
</tr>
<tr>
<td>கொமா</td>
<td>1 மாதிக்</td>
</tr>
</tbody>
</table>

இந்து கருணையின் 2 மாதிக் தொடக்கம் காப்பு பிரித்தானியச் செயல்பாடு ½ - 1½
மாதிக் நிலவு இல்லை கல்விக்கான பாதுகாக்க வார, மாதிக் பிரித்தானியச் , மாதிக் தாள்,
சாம்பல் பாதுகாக்க நம்பிக்கை.


சம்மாண்களில் இவ்வுடன் தருமறிகைகான் மறுகைகள்:

1. கதனைக்கிரி சுருக்கம்

இல்லை வீட்டு திரிகாய் பிள்ளை தொகுதிகள் 5 - 5, மமம் - 4 சுருக்கம்.

- அரண்மண் வாதையும் பிள்ளை தொகுதிகள் 5 - 5, பிள்ளைப் பாதுகாக்க 1999
  - சென்னைப் ப.எ.102.

2. சதுரகாண்ட சீர்கள்

2 மாதிக் நிலவு இல்லை வீட்டு தொகுதிகள், ககை, குரள், கொமா - 5, 
சாம்பல் - 5, கல்விக், பிரித்தானியச் செயல்பாடு.
3. புராணநவான சீரியம்

கரடம், கம்பம் கொண்டமாக.

- ஆது தம. சின ரகியம் (ப.ந. 383).

4. பிராமகுப்தரின் சுருக்கம்

கரடிகள் கொண்டமாக.

- ஆது. தம. சின ரகியம் (ப.ந. 391).

5. கருத்தினை துவக்கம்

துவவம், சம்பம் நுழை.

- ஆது. தம. சின ரகியம் (ப.ந. 401).

6. கான்மாண்டளகின் துவக்கம்

துவவம், சம்பம் நுழை.

- ஆது. தம. சின ரகியம் (ப.ந. 401).

7. காமரின் உரைக்கம்

- ஆது. தம. சின ரகியம் (ப.ந. 365).

8. காமரின் உரைக்கம்

- ஆது. தம. சின ரகியம் (ப.ந. 365).

9. காமரின் தமிழகாகம்

காமரி பிள்ளை தம் கம்ப, கரடம், பிள்ளை நுழை.

- பராமரியா தமிழகாசல் பதிப்பு அகத்தாப்பட்டியில் 1985 (ப.ந.38).

10. காமரின் தமிழகாகம்

3 காரணங்கள் காமரின் தமிழகாசல் இருப்பதாகவே.

- பராமரியா தமிழகாசல் (ப.ந.38).
11. மீதுமாற்ற செய்யப்பட்டுள்ளது

பொழுதுமை கருத்தரசம் திரும்பும்தோன்றாது உண்மையில் செய்யப்பட்டு, திரும்பவும், தண்டனை தொண்டுவது.

- காலநிலை விளக்கங்கள் (ப.ச. 62, 63).

12. எதிரானது முற்பராதியானது

- இரண்டு பதிவுகளும் வெற்றிகரமான நூற்றாண்டுப்பிரிவு 2000 (ப.ச. 20).

13. இறாரத்தல் செய்யப்பட்டுள்ளது

அரசியல் கொள்கை பிரிவாக்கத்தில் இறாரத்தல் முற்பராதியான நூற்றாண்டு, நூற்றாண்டு, நூற்றாண்டுக்கான வருடங்கள்.

- காலநிலை விளக்கங்கள் (ப.ச. 195).

14. ஏனையக்கல்வி குறுக்கு நூற்றாண்டு

1-2 நூற்றாண்டுகள் விளம்பு நூற்றாண்டு 3-4 நூற்றாண்டு குறுக்குக் காலநிலை, குறுக்கு நூற்றாண்டு, தொட்டியாக.

- காலநிலை விளக்கங்கள் (ப.ச. 86).

15. சூழல்பாராய்ச்சியிற்கு குறுக்கு

பதிவுக்கான திட்டமும் குறுக்கும் கருத்து.

- காலநிலை விளக்கங்கள் (ப.ச. 121).

16. மாமல்குறுங்கு செய்யப்பட்டு

உயர்வூட்ட ஓர்சீ பல்கலைக் கழகம், 42 கல்லூரியாக பிறந்தும், அரசியலில் விளக்கங்களைக் கொண்டு.

- குடியரசுக் குழு 2ம் பாராட்டி குறுங்கு குறுங்கு நூற்றாண்டு (ப.ச. 178).
17. அறக்கடை கலனம்

மாதம் 1 போன்ற வாழ்வில் போலவே போலவே, கம்பக்கலம், புராணத் சீட்டின், நான்கின்ற குறுத்.

- கிளிக்கருக்கும் துறுது திருவாரை பாடலுக்கு
  ஆனது கிளிக்கருக் (ப.ஷ.193).

18. நேலன்மரத்தி கலனம்

மாதம் குறும் துருவைந்து மா, அதை கட்டுவேறும், கூறுவெட்டு குறுவெட்டு.

- கிளிக்கருக்கும் பாடலுக்கு ஆனது கிளிக்கருக் (ப.ஷ.198).

19. தென்பார்கை கலனம்

நேலன்மரத்தில் ½ நேலன்மரத்திலுள்ள 20 வருட திருக்கால திட்டம், திட்டப்படுத்தப்படும்.


20. காண்பாறை ராணைகள்:

இப்புரிமையுடன் பாதுகாப்பு போன்ற சீட்டினரிடம் புதுதுங்களை காட்டினின்
திருமணம் இல்லாமல் எந்தக் காப்பு திருமணத்திற்கு முன்னர் எந்தக் காப்பு
புறையின் அளவு.


21. திரும்பங்கள் போல

கி.லை. நேலன்மரத்தில் சீட்டினரிடம் புதுதுங்கள் வரும் காட்டின்
சுயைமுனை நேலன்மரத்தில், காட்டி, திட்டம் குறுத்த.

- கிளிக்கருக்கும் பாடலுக்கு பதிப்பு (ப.ஷ.116).
MATERIALS AND METHODS

(Sadamanjil Ver Choornam)

Collection of the Drug

Rhizomes of the plant were collected from Gopalan Asan raw drug store, Nagercoil after identification.

Purification of the raw Drug

After collection it was cleaned thoroughly with fresh water and cut into small pieces (app. 1-2 inches), allowed to dry completely under sun shade for about 6-7 days till the moisture was completely lost.

Preparation of the Test Drug

The dried purified sadamanjil ver pieces were made into a fine powder (chooranam) and filtered by a white cloth (Vashthirakayam)

Purification of the Test Drug (Chooranathooimai)

Sadamanjil ver chooranam was moistured with cowmilk. An earthen pot was taken and half filled with a mixture of cow milk and water. The mouth of the pot was covered with a cotton cloth and tied around its neck. The chooranam was placed on the cloth and another earthen pot was placed over the mouth of the pot completely covering the chooranam and the edges of the pots were covered with a moistured cloth. Then the
contents were boiled till the chooranam was fully cooked (pittaviyal). Then it was taken and dried in sunlight.

**Route of Administration**

Enteral.

**Dose**

One gram thrice a day with hot water after food. The prepared Sadamanjil ver chooranam used for the treatment of Eraippu Erumal was analysed by the following methods.

1. Bio – chemical analysis
2. Pharmacological analysis and
BIO-CHEMICAL ANALYSIS

BIO-CHEMICAL ANALYSIS OF SADAMANJIL VER CHOORANAM

PREPARATION OF THE EXTRACT

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

QUALITATIVE ANALYSIS

<table>
<thead>
<tr>
<th>S.NO</th>
<th>EXPERIMENT</th>
<th>OBSERVATION</th>
<th>INERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>TEST FOR CALCIUM</strong></td>
<td>2ml of the above prepared extract is taken in a clean test tube. 2 ml of 4% Ammonium oxalate solution is added to it.</td>
<td>No White precipitate is formed.</td>
</tr>
<tr>
<td>2.</td>
<td><strong>TEST FOR SULPHATE:</strong></td>
<td>2ml of the extract is added to 5% barium chloride solution.</td>
<td>No white precipitate is formed.</td>
</tr>
<tr>
<td>3.</td>
<td><strong>TEST FOR CHLORIDE</strong></td>
<td>The extract is treated with silver nitrate solution.</td>
<td>No white precipitate is formed.</td>
</tr>
<tr>
<td></td>
<td><strong>TEST FOR CARBONATE</strong></td>
<td><strong>TEST FOR STARCH</strong></td>
<td><strong>TEST FOR IRON-FERRIC</strong></td>
</tr>
<tr>
<td>---</td>
<td>-------------------------</td>
<td>----------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>4.</td>
<td>The substance is treated with concentrated HCL.</td>
<td>No brisk effervescence is formed.</td>
<td>Absence Of Carbonate.</td>
</tr>
<tr>
<td>5.</td>
<td><strong>TEST FOR STARCH</strong></td>
<td>Blue colour is formed.</td>
<td>Indicate the presence of starch.</td>
</tr>
<tr>
<td></td>
<td>The extract is added with weak iodine solution.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td><strong>TEST FOR IRON-FERRIC</strong></td>
<td>No blue colour is formed.</td>
<td>Absence of ferric iron.</td>
</tr>
<tr>
<td></td>
<td>The extract is treated with concentrated Glacial acetic acid and potassium ferro cyanide.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td><strong>TEST OF IRON FERROUS:</strong></td>
<td>No Blood red colour is formed.</td>
<td>Absence of ferrous iron.</td>
</tr>
<tr>
<td></td>
<td>The extract is treated with concentrated Nitric acid and ammonium thio cyanate.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td><strong>TEST FOR PHOSPHATE</strong></td>
<td>No yellow precipitate is formed.</td>
<td>Absence of phosphate.</td>
</tr>
<tr>
<td></td>
<td>The extract is treated with ammonium Molybdate and concentrated nitric acid.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td><strong>TEST FOR ALBUMIN</strong></td>
<td>No yellow precipitate is formed.</td>
<td>Absence of Albumin.</td>
</tr>
<tr>
<td></td>
<td>The extract is treated with Esbach’s reagent.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td><strong>TEST FOR TANNIC ACID</strong></td>
<td>No blue black precipitate is formed.</td>
<td>Absence of Tannic acid.</td>
</tr>
<tr>
<td></td>
<td>The extract is treated with ferric chloride.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11. **TEST FOR UNSATURATION**
   Potassium permanganate solution is added to the extract. It gets decolourised. Indicates the presence of unsaturated compound.

12. **TEST FOR THE REDUCING SUGAR**
   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. No colour change occurs. Absence of Reducing Sugar.

13. **TEST FOR AMINO ACID:**
   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. No Violet colour is formed. Indicates the presence of Amino acid.

**INFERENCe**

The given sample of Sadamanjil Ver Chooranam contains Starch, Amino acid and unsaturated compounds.
ANTISPARSOMODIC EFFECTS OF SADAMANJIL VER
CHOORNAM ON ISOLATED RABBIT ILEUM

Aim

To find out the anti-spasmodic effects of Sadamanjil Ver Choornam on isolated rabbit ileum.

Preparation of the test drug

1gram of the Sadamanjil Ver Choornam was dissolved in 10ml of water and boiled for 15minutes. The filtrate was used for the experiment.

Solution required

Aceteyl – choline – 1mg/ml. Atropine 0.5mg/ml.

Test drug (Sadamanjil ver choornam) 100mg/ml.

Nutrient solution

Tyrode – 1 to 2 litres.

Tissue used

Rabbit ileum.

Apparatus Required

Student’s organ bath, sherrington rotating drum.
Procedure

A rabbit was starved for 48 hours and was allowed water ad-libturn. It was sacrificed by a blow on the head and by carotid bleeding. The abdomen was quickly opened and the ileo-caecal junction was found out. A small piece of ileal portion was cut, removed and placed in a dish containing warm aerated Tyrode Solution. The lumen of the ileum was gently rinsed out by pushing Tyrode Solution into it, 3cms length segment was cut from this part of ileum and was tied with thread on both ends without closing the lumen and the tissue was mounted in the organ both containing Tyrode Solution maintained at 37°C bubbled with air by an oxygen tube.

First the drum was allowed to run for 1 minute from the baseline. Drugs are given to study the inhibiting effect of Acety-choline 0.2ml (1mg/ml) of Acetyl-choline was added and allowed to run the drum for 30 seconds. Thus the tissue was standardised and then the drum was stopped and the Acetyl – choline was washed out.

Again the Tyrode Solution was added to the organ bath till the lever comes to the baseline. The drum was allowed to run for 1 minute.

To the organ bath 1ml of test drug and 0.2ml (1mg/ml) Acetyl-choline was simultaneously added and the drum was allowed to run for 30 seconds. The response was recorded. Then the drum was stopped and the Acetyl-choline solution and test drug solutions were washed out. Then the
above experiment was done for 0.2ml dose of Acetyl-choline. The drum was allowed to run for 30 seconds. The response was recorded.

Then 0.2ml of Atroprine and 0.2ml of Acetyl-choline was added and the drum was allowed to run for 30 seconds. There is no elevation in the graph and it seems to be baseline. Then 0.2ml of Acetyl-choline was added to standardise the tissue. Then the tracing was labelled and fixed.

**Inference**

From the graph it is inferred that the test drug antagonise the effect of Acetyl-choline when added together. So the drug has got **significant anti-spasmodic activity**.
ANTI – HISTAMINE STUDY OF SADAMANJII VER
CHOORANAM ON ISOLATED GUINEA PIG ILEUM

Aim

To study the anti-histamine effect of sadamanjii ver chooranam on isolated Guinea pig ileum.

Preparation of the Test drug

1 gm of Sadamanjil ver choornam was dissolved in 10ml of water and boiled for 15 minutes. The filtrate was used for the experiments.

Solutions required

Histamine – 1 in 1,00,000 strength.

Anti histamine (pheniramine maleate 22.75mg/ml).

Test drug (Sadamanjil Ver Choornam) 100mg/ml.

Nutrient Solution

Tyrode – 1 to 2 litres.

Tissue Used

Guinea Pig ileum.

Apparatus Required

Student’s organ bath.

Sherrington rotating drum.

Procedure

An overnight fasted Guinea pig weighing about 400 gms was sacrificed by a blow on the head and by carotid bleeding. The abdomen
was suddenly opened and ileo caecal junction was found out. A Small piece of ileal portion was cut and placed in a dish containing warm aerated Tyrode Solution. The lumen of the ileum was gently rinsed out by pushing Tyrode Solution into it, 3cm length segment was cut from this part of ileum, and was tied with thread on both ends without closing the Lumen and the tissue was mounted in the organ bath containing Tyrode Solution maintained at 37°C and bubbled with air by an oxygen tube.

First the drum was allowed to run for 1 minute from the baseline. Drugs were given to study the inhibiting effect of Histamine. 0.2ml (10mg/ml) of Histamine was added and allowed to run the drum for 30 seconds. Thus the tissue was standardised and then the drum was stopped and the Histamine was washed out.

Again the Tyrode Solution was added to the organ bath till the lever comes to the baseline. The drum was allowed to run for 1 minute.

To the organ bath 1ml of test drug and 0.2ml (10mg / ml) Histamine was simultaneously added and the drum was allowed to run for 30 seconds. The response was recorded. Then the drum was stopped and the histamine solution and test drug solutions were washed out. Then the above experiment was done for 0.2ml dose of histamine. The drum was allowed to run for 30 seconds. The response was recorded.

Then 0.2ml of Anti-Histamine and 0.2ml of Histamine was added and the drum was allowed to run for 30 seconds. There is no elevation in the
graph and it seems to be baseline. Then 0.2ml of Histamine was added to standardise the tissue. Then the tracing was labelled and fixed.

**Inference**

From the graph it is inferred that the test drug antagonise the effect of Histamine when added together. So the drug has got **significant Anti-Histamine activity**.
CLINICAL ASSESSMENT

A clinical trial was done on 30 cases of different age and of both sexes. They were clinically diagnosed as Eraippu Erumal, according to the Siddha literatures. Among them 20 patients were treated in the out – patient department and 10 patients were treated in the In-patient department.

Patients were thoroughly examined, enquired and all the clinical features, complete history, hygienic conditions, surroundings, occupation were noted. personal habits, previous illness, dietary details and allergy to specific things, if any were recorded.

They were of different severity of signs and symptoms like difficulty in breathing, cough with expectoration, wheezing, sneezing, tightness of chest and sometimes having other upper respiratory tract diseases. The duration of illness was also variable.

The routine blood and urine investigations were done in each case. Mantoux, sputum for AFB, and radiological investigations were carried out to rule out other causes and diseases.

The cases were screened as per the following criterias and selected from the outpatient and In- patient departments of the Government siddha medical college hospital, Palayamkottai.
During the course of clinical study, other ailments, if any occurred, were treated with conventional siddha medicines.

**Including criteria in the case of Eraippu Erumal**

2. Difficulty in breathing
3. Expectoration
4. Sputum colour and quantity – without gross abnormalities such as blood stained sputum, abnormally large quantities of sputum etc.,
5. History of Allergy
6. Sneezing
7. Allergic rhinitis
8. Differential count, especially Eosinophilia
9. Respiratory system examination – added sounds – Rhonchi
10. Radiological investigation – Normal study, Bronchitis, chronic bronchitis.

**Excluding criteria in the case of Eraippu Erumal**

1. Facial puffiness
2. Abdominal distension
3. Pedal oedema
4. Hepatomegaly
5. Haemoptysis
6. Haematemesis
7. Orthopnoea
8. Cyanosis
9. Evening rise of temperature
10. Sputum for AFB – positive
11. Mantoux – positive
12. clubbing
13. Albuminuria
14. Increased blood urea and serum creatinine
15. Status Asthmaticus.
16. High fever.

**Line of treatment**

The drug sadamanil ver chooranam was administered internally in a dose of 1gm three times a day with hot water after food to each patient. The duration of treatment varied from patient to patient.

**Diet and medical advice for Eraippu Erumal**

1. Intake of hot water and hot foods were advised.
2. Advised to avoid chill water.
3. Advised to avoid factors which cause digestive disturbances.
4. Advised to avoid allergic factors.
5. Advised to avoid smoking and snuff.
6. Advised to take bath strictly in hot water.
7. Advised to take dinner before 8 p.m.
8. Advised to avoid stress.

**Observation**

The results were assessed on the basis of symptomatic relief obtained by the patient and clinically by daily examination in the In-patient department and subsequent visits in out-patient department.

Out of 30 cases 17 were males and the remaining cases were female patients, 9 patients had evidence of this particular disease in their family, 21 cases had history of allergy.

Almost all the patients were labourers and farmers of poor socio-economic status. Among the male patients most of them were chronic smokers.

The clinical improvements were recorded for every 5 days for the Out-patients. The clinical investigations were done for the patient before and after the treatment and the prognosis was noted.

No adverse effects were encountered during the study and there were no known contra-indications.

**Result:**

Among 30 cases 24 cases 80% showed good response, 6 cases 16.5% showed fair response and 1 case (3.5%) showed poor response.
TABLE ILLUSTRATING THE IMPROVEMENT AND THEIR PERCENTAGES

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Result</th>
<th>No.of. Patients</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Good</td>
<td>23</td>
<td>80%</td>
</tr>
<tr>
<td>2</td>
<td>Fair</td>
<td>6</td>
<td>16.5%</td>
</tr>
<tr>
<td>3</td>
<td>Poor</td>
<td>1</td>
<td>3.5%</td>
</tr>
<tr>
<td>4</td>
<td>Total</td>
<td>30</td>
<td>100</td>
</tr>
</tbody>
</table>
DISCUSSION

Humeral pathology ascribes Eraippu Eximal to the morbid condition of the kapha humour.

"ÅìÂ²" "ÉÁÝÈ¢î , i ²Á¡ "ô , i½;ô"

- §¼Âý §°, ÅðÀ¡

"½¡ÉÔÚÇ §°ôÀ Áð¾¡É¢Ç, ôô | Åðô
----------------------------------------------

Thus the affected Kapha humour manifests as clinical symptoms like difficulty in breathing, cough with expectoration, wheezing, sneezing, chest tightness etc.,

The drug Sadamanjil Ver Chooranam selected for this study possesses bitter taste (kaippu) and hot property (veppa veeriyam). It also has expectorant and anti-spasmodic actions. Kaippu has the tendency to mitigate the harmful effects of the vitiated Kapha humour.
All these factors seem to neutralise the vitiated kapha humour. This explanation is arrived on the basis of the analysis of the Gunapadam aspect of the drug which correlates with that of the pharmacological analysis and the clinical assessment.

Bio chemical analysis shows the presence of starch, amino acid and unsaturated compound. Their presence augments the therapeutic value of this drug by providing indispensable nutrition.

Pharmacological analysis shows that this drug has got significant Anti spasmodic and Anti – histaminic activity.

In the clinical assessment of the 30 cases selected, 80% cases showed good response, 16.5% cases showed fair response, 3.5% cases showed poor response.

The improvement was proved by the alleviation of the signs and symptoms present before the treatment. During the clinical trail, the patients showed no adverse reactions and had no contra indications.

**SUMMARY**
The drug sadamanjil ver chooranam has been taken to establish the efficacy in treating Eraippu Erumal. The dose of sadamanjil ver chooranam is 1 gram thrice daily with hot water after food.

A brief description pertaining to its botanical aspect, phyto chemical constituents and Gunapadam aspect has been done.

A review of literatures about the drug and its significance in medicine since ancient period has been done.

Collected information from various literatures has been referred.

Bio chemical analysis shows the presence of starch, Amino acids & unsaturated compounds.

Pharmacological analysis shows that the drug has got significant anti- spasmodic activity and anti – histamine activity.

From the clinical assessment, it is inferred that sadamanjil ver chooranam posses remarkable efficacy in treating Eraippu Erunal and the drug has no contra- indications and has no adverse reactions.
CONCLUSION

It is concluded that the drug sadamanjil ver chooranam is an effective drug in relieving the severity of the symptoms in Eraippu Erumal and it has no adverse reactions.
INTRODUCTION

The siddha system of medicine constitutes one of the ancient Medical Practices. Siddhars have classified the source of materials for drugs as vegetable i.e. plant section, metal and mineral section and Animal section.

The drug Amaiodu (Turtle shell) is used for medicinal purposes in siddha system from the period of Bohar. Much references can be seen in his manuscripts especially in Bohar.

Amaiodu is used for perunkazhichal, seethakazhichal (dysentery), Girhani (sprue), Moolam(piles), manthram (Infants diarrhoea)

In this dissertation study, the author has taken Amaiodu Purpum for the treatment of Eraippu Erumal.
AIM AND OBJECTIVE

The main aim and objective of this dissertation work is to do a scientific review of Amaiodu parpam and its efficacy in treating Eraippu Erumal.

Eraippu erumal is one of the common respiratory disorders affecting millions of people all over the world. Amaiodu parpam has been suggested as an effective drug for Eraippu Erumal in ANUBOGA VAIDYA NAVANEETHAM PART III (PAGE NO:115). This study is aimed at the specific target of exploring the medicinal aspects of the Amaiodu parpam. So far no scientific analysis has been done in this regard. The modern science is growing every day by leaps and bounds. It is imperative to use this knowledge to bring out the efficacy of this drug.

The author has in depth dealt with

1. Zoological aspect
2. Gunapadam aspect
3. Bio-chemical analysis
4. Pharmacological analysis
REVIEW OF LITERATURES

ZOOGLOGICAL ASPECT

Mik (TURTLE)

Zoological Name : Chelonia Turtle

Tamil name : மிக

English name : Turtle

Hindi : Kachakru

Gujarathi : Kachoo

Malayalam : Lisk, Kurakura, Kulifpaun.

- Indian Materia Medica A.K. Nadkarni Vol III Print 1993

Scientific Classification

Kingdom : Animalia

Phylum : Chordata

Class : Sauropsida

Order : Testudines Linnaeus, 1758

Suborders : Cryptodira pleurodira

Family : Chelonidae

- Outlines of zoology

J.Athur thomson M.A., L.L.B P.No : 686- 690

8th Edition October 1929
TURTLE

Zoological Aspect

Introduction

Turtles are found throughout the world on all continents and in all oceans except Antarctica. There are 247 species of turtles far lower than Snakes and Lizards, which belong to 75 genera in 13 families.

Turtles appeared in the fossil record over 200 million years ago, and were on earth long before mammals and other forms of present day reptiles. They occur in terrestrial, freshwater aquatic, semi aquatic and marine environments. They range in size from 11cm to 185cm and one species can weigh close to a ton, making (The leather back sea turtle) it the world’s largest reptile.

Turtles are reptiles of the order Testudines (all living turtles belong to the crown group chelonia), most of whose body is shielded by a special bony or cartilagenous shell developed from their ribs.

The order Testudines includes both extant and extinct species, the earliest turtles being known from the early Triassic period, making turtles one of the oldest reptile groups, and a much more ancient group than the lizards and Snacks. About 300 species are alive today.
Classification of Chelonia:

1. Athecae

Vertebra and ribs free from carapace. Skull without descending processes from parietals.

Sphargidae, Leathery – skinned Turtles, with flexible carapace. Spargis coriacea, the only living species, the largest modern Chelonian, sometimes measuring 6ft in length. It is a widely, but now sparsely distributed in intertropical seas, and is said to be herbivorous.

2. Thecophora

Dorsal vertebrae and ribs fused in the carapace. Parietals prolonged downwards, including the following and other families.

Chelonidae, marine turtles, with fin like feet, and partially ossified carapace. They occur in intertropical seas and bury their soft- shelled eggs on sandy shores. The green turtle is much esteemed as food; the hawk’s bill turtle furnishes much of the commercial tortoise shell.

Testudinae, land tortoises, with convex perfectly ossified carapace, and feet adapted for walking. They are found in the warmer regions of both the old and the new world, but not in Australia. In diet they are vegetarian. The common tortoise and the nearly estimated giant tortoises of the mascarene and Galapogas islands are good representatives. The latter may reach the age of the 150 years.

- Outlines of Zoology
  8th Edition October 1929
Physical Description

Turtles vary widely in size, although marine turtles tend to be relatively big animals. The largest chelonian is a marine turtle, the great leather back sea turtle, which can reach a shell length of 200m and can reach a weight of over 900kg.

Fresh water turtles are smaller, with the largest species being the Asian soft shell turtle, Pelochelys Cantorii which has been reported to measure up to 200cm or 80 inch (Das 1991). This dwarfs even the better known alligator snapping turtle, the largest chelonian in North America, which attains a shell length of up to 80cm and a weight of about 76kg.

Giant tortoises of the genera Geochelone, Meiolania and others were relatively widely distributed around the world into prehistoric times and are known to have existed in North and South America, Australia and Africa.

They became extinct at the same time as the appearance of Man, and it is assumed that humans hunted them for food. The only surviving giant tortoises are on the Seychelles and Galapagos Islands and can grow to over 130cm in length, and weight about 300kg.

The largest ever chelonian was Archelon ischyros, a late Cretaceous sea turtle known to have been up to 4.6m long.

The smallest turtle is the speckled padloper tortoise of South Africa. It measures no more than 8cm in length and weighs about 140gm. Two other species of small turtles are the American mud turtles and musk
turtles that live in an area that ranges from Canada to South America. The shell length of many species in this group is less than 13cm in length.

**Neck Folding:**

Turtles are broken down into two groups according to how they evolved a solution to the problem of withdrawing their neck into their shell

1. The Cryptodira which can draw their neck in while folding it under their spine.

2. The Pleurodira – which fold their neck to the side.

**Head:**

Most turtles and tortoises have eyes placed on the upper sides of their heads. Species of turtles that spend most of their life on land have their eyes looking down at objects in front of them.

Some aquatic turtles, such as snapping turtles and soft shelled turtles, have eyes closer to the top of the head. These species of turtles can hide form predators in shallow water where they lie entirely submerged except for their eyes and nostrils. Sea turtles posses glands near their eyes that produce salty tears that rids their body of excess salt taken in from the water they drink.

Turtles are thought to have exceptional night vision due to the unusually large amount of rod cells in their retinas. Normal daytime vision is marginal at best due to their colour blindness and poor visual acuity. In addition to daytime vision problems, turtles have very poor pursuit movement abilities, which is most likely due to the fact that pursuit
movement abilities are normally reserved for predators that hunt quick moving pray.

Turtles have a rigid beak. Turtles use their jaws to cut and chew food. Instead of teeth, the upper and lower jaws of the turtle are covered by horny ridges. Carnivorous turtles are covered by horny ridges. Carnivorous turtles usually have knife-sharp for slicing through their prey. Herbivorous turtles have serrated edged ridges that help them cut through tough plants. Turtles use their tongues to swallow food, but they can’t unlike most reptiles, stick out their tongues to catch food.

Shell

The upper shell of the turtles is called the carapace. The lower shell that encases the belly is called the plastron. The carapace and plastron are joined together on the turtles sides by bony structures called bridges. The inner layer of a turtle’s shell is made up of about 60 bones that included portions of the backbone and the ribs, meaning the turtles cannot crawl out of its shell.

In most turtles, the outer layer of the shell is covered by horny scales called scutes that are part of its outer skin or epidermis. Scutes are made up of a fibrous protein called keratin that also makes up the scales of other reptiles. These scutes overlap the seams between the shell bones and add strength to the shell. Some turtles do not have horny scutes.

The shape of the shell gives helpful clues to how the turtle lives. Most tortoises have a large dome, shaped shell that makes it difficult for
predators to crush the shell between their jaws. One of the few exceptions is the African pancake tortoise which has a flat, flexible shell that allows it to hide in rock crevices. Most aquatic turtles have flat, streamlined shells which aid in swimming and diving. American snapping turtles and Musk turtles have small, cross–shaped plastrons that give them more efficient leg movement for walking along the bottom of ponds and streams.

Tortoises have rather heavy shells in contrast to aquatic and soft shelled turtles which have lighter shells that help them avoid sinking in water and swim faster with more agility. These lighter shells have larger spaces called fontanelles between the shell bones. The shell of a leatherback turtle is extremely light because they lack scutes and contain many fontanelles.

The colour of a turtle’s shell may vary; shells are commonly coloured brown, black or olive green. In some species shells may have red, orange, yellow or grey marking and these marking are often spots, lines or irregular blotches. One of the most colourful turtles is the eastern painted turtle which included a yellow plastron and a black or olive shell with red markings around the rim.

**Skin and Moulting**

The outer layer of the shell is part of the skin, each scute (or plate) on the shell corresponding to a single modified scale. The remainder of the skin is composed of skin with much smaller scales, similar to the skin of other reptiles.
Turtles and terrapins do not moult their skins all in one go, as snakes do, but continuously, in small pieces. When kept in aquaria, small sheets of dead skin can be seen in the water (often appearing to be thin piece of plastic) when it has been sloughed off, often when the animal deliberately runs itself against a piece of wood or stone. Tortoises also shed skin, but a lot of dead skin is allowed to accumulate into thick knobs and plates that provide protections to parts of the body outside the shell.

This scutes on the shell are never moulted and as they accumulate over time, the shell becomes thicker. By counting the rings formed by a stack of smaller, older scutes on top of the larger, newer ones, it is possible to estimate the age of a turtles, if you know how many scutes are produced in a year.

**Limbs**

Terrestrial tortoises have short, sturdy feet. Tortoises are famous for moving slowly, in part because of their heavy shell but also because of their relatively inefficient sprawling gait that they have, with the legs being bent, as with lizards rather than being straight and directly under the body as is the case with mammals.

The amphibious turtles normally have limbs similar to those of tortoises except that the feet are webbed and often have long claws. These turtles swim using all four feet. Large turtles tend to swim less than smaller ones, and the very big species, such as aligator snapping turtles, hardly swim at all, preferring to simply walk the bottom of the river or lake. Male
turtles tend to have particularly long claws, and these appear to be used to stimulate the female while matting.

Sea turtles are almost entirely aquatic and instead of feet they have flippers. Compared with fresh water turtles, sea turtles have very limited mobility on land, and apart from the dash from the nest to the sea as hatchlings, male sea turtles normally never leave the sea. Females must come back onto land to lay eggs. The back flippers are used to dig the burrow and then fill it back with sand once the eggs have been deposited.

**Anatomy**

**Parts of shell**

There are two parts to the shell of a turtle; the upper portion is called the carapace and the bottom half is called the plastron. Both shells are actually made of many fused bones. The carapace is the fusion of about 50 bones the ribs and vertebrae. The plastron is the fusion of bones including the clavicles (or collar bones), bones between the clavicles and portions of the ribs. A bony bridge joins the carapace and the plastron along the side of the turtle. Some turtles have a movable joint usually in the plastron, which acts as a “hinge” and allows the turtle to pull the carapace and plastron together tightly, while the turtle retracts its body into the shell. Shells have a blood and nerve supply, so bleeding and pain can result if the shell is injured.
Scutes

The shells are covered with a layer of keratin (same type of material that makes up our fingernails or horse’s hooves). The keratin is arranged in patches called scutes or shields. The carapace usually has 38 scutes, and the plastron, twelve to fourteen. The names and numbers of the scutes roughly correspond to the adjacent bones and body portions. The scutes, however, do not precisely overlap the bones. Instead, they are staggered which helps give the shell more rigidity. Some aquatic turtles such as soft-shelled sea turtles may have fewer bones in their carapaces and the scutes are replaced by leathery skin.

Scute patterns

Different species of turtles have scutes of different patterns and designs, and there are often individual differences among members of the same species.

Shell shape

The shell shapes of turtles differ with each species, and are often related to habitat. Most aquatic turtles are generally flatter, allowing them to move faster through the water. Tortoises, on the other hand, have carapaces that are dome-shaped.

Shell growth

As a shell grows, the number of scutes generally does not change, but their size does. In some turtles, old scutes are shed and replaced by larger, new ones. In other species, including box turtles, tortoises, and
wood turtles, scutes enlarge in diameter as new keratin is laid down. The growth rings in scutes have been used by some experts to help determine the age of a turtle. Age estimation based on growth layers, however, can be erroneous for several reasons:

- Some turtles produce multiple growth zones per year.
- Growth is determined by changes in the environment (season) so age determination by examination of growth rings would be more accurate in wild turtles, than those kept in environments which do not change significantly.
- Growth layers may wear with age, so older turtles may be estimated to be younger than they really are.

**Anatomy and Physiology**

The following facts apply to most species of turtles kept in captivity.

- Both the pelvic and pectoral girdles are contained entirely within the rib cage which is fused to the protective shell. The shell is a vascular bony structure which should be included when calculating drug dosages from the animal's weight.
- Sexual dimorphism exists in many species. Male tortoises have a concave plastron and male aquatic turtles usually have very long toenails on their front feet. The tail is relatively larger in males than in females but this does not always hold true.
- Turtles lack teeth but most possess a sharp beak called a tomium.
Turtles can live a long time and tortoises generally live longer than aquatic species. The documented record is 152 years by a Seychelles island tortoise. Some species can be aged by growth rings on the scutes. This does not hold true for many aquatic species which periodically shed their scutes.

Turtles lack a diaphragm and since they are housed in a shell most have little or no abdominal breathing component. Most pressure changes allowing for lung expansion are accomplished by muscles in the pockets surrounding the fore and hind limbs. Aquatic species can also respire through their skin and the mucus membranes of the throat and cloaca.

Turtles have paired kidneys and a cloacal opening for the urogenital and gastrointestinal tracts.

Like most other reptiles, the heart has three chambers.

All turtles lay eggs and most bury them in the earth. Some species may lay several clutches per year and females of certain species can store sperm for several years.

The gastrointestinal tract is standard in that it includes a simple S-shaped stomach, liver, gall bladder, pancreas, spleen, small and large intestine.

Sea turtles possess special salt glands in their head behind each eye which allow them to drink seawater.
Chemical Constituents:

- Calcium compounds make up about half of the tortoise plastron and turtle carapace.
- Collagen, a fibrous protein makes up about 7% of the tortoise plastron,
- There are also small amounts of fats, magnesium, trace minerals, such as zinc and vitamins, including vitamin D in the tortoise shells. As with other natural calcium sources, there are small amounts of lead but not enough to be of concern.

Medicinal uses of Turtle shell (in China)

The calcium content of the plastron, when used in the dosages recommended by the Chinese texts, contributes a significant amount several hundreds mgs- compared to the currently recommended nutrition levels of about 1gm of calcium.

According to the report in pao zhi, the raw tortoise shell is mainly used for treating vertigo, tinnitus, deafness, headache and convulsions, whereas processed i.e. vinegar treated tortoise shell is appropriate for treating Night sweating, weakness of back and legs, Insomnia, Heart palpitations and other disorders due to deficiency of liver and kidney.

Tortoise shell gelatin is especially used for treating Impotence, Low back pain, and Uterine breading. Turtle shell gelatin is made as a medicinal product and is also used to treat uterine bleeding; it is also used for
hemoptysis associated with Tuberculosis, but is not indicated for the kidney deficiency symptoms of back pain and impotence.

Tortoise shell is also essential in the treatment of late stage Rheumatois arthritis. It is possible that gelatin polypeptides (fragments with partial digestion) contribute to inhibition of bleeding. So useful in treatment of uterine breeding associated with uterine fibroids.

The bone disease – rickets, which is due to impaired deposition of bone calcium in children, has been treated in china with shell formulas,

Recently interest has developed in the ability of ingested collagen to inhibit Arthritis, and for its ability to inhibit angiogenesis as a means of inhibiting tumor growth.

**In Parkinson’s disease**

The treatment of difficult and recalcitrant diseases with Chinese herbs, formulas for treating parkinson’s disease, frequently include tortoise shells and other gelatins.

**In Aplastic Anaemia**

Gelatins from tortoise, turtle, antler or donkey skin are prescribed in some formulas for the treatment of Aplastic Anaemia.

Another example is the use of Buxue Tang (blood nourishing decoction) plus Buxue san (blood nourishing powder) used in a study of treatment for Aplastic Anaemia. The decoction includes Turtle and Tortoise shell.
In thrombocytopenia

The treatment of difficult and recalcitrant diseases with Chinese herbs, formulas listed for treating this disorder i.e. Thrombocytopenia include ciyhus Cangxue fang, which is comprised of Tortoise shell, oyster cell, and herbs to clear heat (Phellodendron, Lycium, Gardenia), stop bleeding and tonify deficiency (Lycium, Eucommics)

- From www.wikipedia.org

Vaccine from Tortoise

This is a cure recommended for consumption. The report of the commission appointed in Germany to examine the efficacy of Dr. Friedman’s vaccine for treatment of Tuberculosis says;"The vaccine is valuable in the antituberculosis struggle as having given surprising results after 1 or 2 injections”. The vaccine is composed of the pure cultures of the tubercle bacilli of the tortoise.

Indian Materia Medica – A.K.Nadkarni

Vol III P; no : 154, Print 1993
REVIEW OF LITERATURES
GUNAPADAM ASPECT

1. 11
2. 25
3. 64
4. 120.

This review has been conducted on 220 documents and articles related to the "gunpadam" aspect. The review is divided into four sections:

1. Section 1
2. Section 2
3. Section 3
4. Section 4

Each section covers a specific aspect related to the "gunpadam" phenomenon.
2. பாதுகாப்புக் காப்பாக்கல்

"கல்லாலிலோர் கேழுபாதுகாப்புக் காப்பாக்கல் வேலைவாய்வு செய்தலே

-----------------------------------------------------------------------

-----------------------------------------------------------------------

-----------------------------------------------------------------------

-----------------------------------------------------------------------

-----------------------------------------------------------------------

2.வழிசெல்ல களமுறை கருவையுற்று செல்வது

-----------------------------------------------------------------------

- வழி செல்லும் கருவையுற்று செல்வது.
CHELONIA TURTLE, TORTOISE

- T.V. Kambalathil Ullakottai Pathukkam

Akkarathy Velappanatty P.O: 367.

References:

- K. Kambalathil Ullakottai Pathukkam P.O: 434.

Published: 1992

- K. Kambalathil Ullakottai Pathukkam


Published: 2001
"அல்லவும் நீர்மாறங்கல் அளவுகளைக்
அதிகாரங்கள் மாற்றம் நிறுவ பாதுகாப்புக்கு
நவக்குருகு கனிமக்கள் நூற்றனை காலம்
ஒருவர் பாதுகாப்பு பாதுகாப்புகள்
பாதுகாப்பு பண்டையர் காலவளம்பாளர் காலை
பாதுகாப்பு காலவளம் குறிப்பிட்டு
பாதுகாப்பு தத்துவம் தீர்மானம் புதுப்பிறங்காலை
புதுப்பிறங்காலை தத்துவம் அல்லவும் புதுப்பிறங்காலை".

- பாது மூலம் கிராண்ட் - 1200
  பாதுப்பைக்கின்றன் : தடுப்பினர்பாப்புகளுக்கு
  ப.ள : 17.
  புதுப்பு நூற்றாண் 1992

* ஆங்கிலாகியிலிருந்து
* இந்தியாவிலிருந்து
* சைனாவிலிருந்து
* ஜெபாங்காலை
* அமெரிக்கா
* ஜெபாங்காலை
* பாரரும் காலவளம்பாளர்
* காலம்
* காலவளம்
* மாரம் போர் புதுமை புதுமை.
1. கோட்டைக் குடும்பம் - Land Tortoise - Testudinidae
2. கோட்டைக் குடும்பம் - Water Tortoise - Emididae
3. கோட்டைக் குடும்பம் - Sea Tortoise - Trionycidae

Marine turtle
4. பார்பி குடும்பம் - Black Tortoise - Batagurellitti

- T.V.சாம்பலீஸ்வரு ஆலாசை

மதுரை அலைநாய் - பத்தோர் பாகம்

பக: 367.

நூற்றாண்டு குஞ்சு குடும்பம்

கோட்டைக் குடும்பம் தீப்பலையிட்டு கோட்டைக் குடும்பத்தின் பாதிப்புகள். இது அவைக்குச் செல்லுமிக்கும் கல்லாரியல், மாண்டு தொடரும் செயல்கையிடும் குடும்பத்தின் கோட்டைக் குடும்பானது கொண்டுள்ளது.

கல்லாரியல் சிற்பமும் பிற்பகுதியின் கோட்டைக் குடும்பத்தின் பாதிப்புகள் குறிப்பிடுகிறது.

சிற்றுயரச்

“கோட்டைக் குடும்பத்தை கோட்டைக் குடும்ப நிகழ்வுகளைக் கோட்டைக் குடும்பத்தை வகுத்த பாய்ந்தே கோட்டைக் குடும்பத்தை வகுத்த பாய்ந்தே வகுத்த பாய்ந்தே”.

சாம்பலீஸ்வரு சிற்பமும் பாகத்தில் இருந்து வருகின்றது.

- சாம்பலீஸ்வரு சாம்பலீஸ்வரு பாகம் 434

திருவண்ணந்தரம் பதிப்பு 1992
புதிய தொகுப்பு

தினக

புராநம்

விளக்கக்குறிகள்

அல்லது தொகுப்பு

பதிக்கல்வை

"சாகவை குறுக்குவத்துக்கு ஏற்றுக்கொள்வோம் தோண்டு போன்றிடம்
தொன்றோலொல் பொறுப்பணி இடுக்குத்துரிந்து பாடல் - கலப்புமுறை
தொன்றோலொல் பொறுப்பணி இடுக்குத்துரிந்து
அல்லது தொகுப்பு வாங்கியதோ செய்து.

குறிப்பி: (இ - த)

அல்லது பார்வை கூறுவதற்கு மன்னனால், குறுக்கு தொன்றோலொல் கலைகள், பார்வை கூறுவதற்கு பார்வைகளும், குறுக்கு, போன்ற விளக்குகள், இவற்றின் புதிய தொகுப்புகள் குறிப்பிட்டவும்.

கைந்த பராமரிகள்

2. குறுக்கு கூறுவதற்கு

குடும்பக்கிருதா

பெரியகிருதா

குறுக்குக்கிருதா

- குறுக்கு கூறுவதற்கு பதிக்கான தொகுப்புகள்

குறுக்குக்கு பதிக்கான

புதுக்கான: 193. பதிப்பு 1997
உலகில் சுமார் 3000 கால்வாய்வுகள் பெறுகின்றன. எனினும் அது எவ்வளவு கால்வாய்வுகள் தந்தைக்கு குறிப்பிட்டது என்றாலும், உலகில் இருந்து கூடும் கால்வாய்வுகள் கொண்டு வருகின்றன. உலகிலே லாச்வேக்ஸ் குழுமம் உலகில் கால்வாய்வுகள் மற்றும் பெயராட்டுகளைக் கண்டு பின்னர் கூறுகின்றது.

பெண்களின் தன்னாட்சியானது

அது போல் குற்றுமண்டலங்கள் சேர்த்து நிலையாதும், குற்றுமண்டலங்கள் எண்ணக்கற்றுமும், நிலையில்லாதும், பெயராட்டுகளும் குற்றுமண்டலங்களைக் குற்றுமண்டலங்களும் எங்கு வந்து வந்து வருகின்றது. பெண்கள் நாட்டும் சுமார் 100 ஆண்கள் சேர்த்து நிலையாதும், சேர்த்து நிலையாதும், நிலையில்லாதும், பெயராட்டுகளும் குற்றுமண்டலங்களைக் குற்றுமண்டலங்களும் எங்கு வந்து வந்து வருகின்றது.

உலகில் சுமார் 3000 கால்வாய்வுகள் பெறுகின்றன. எனினும் அது எவ்வளவு கால்வாய்வுகள் தந்தைக்கு குறிப்பிட்டது என்றாலும், உலகில் இருந்து கூடும் கால்வாய்வுகள் கொண்டு வருகின்றன. உலகிலே லாச்வேக்ஸ் குழுமம் உலகில் கால்வாய்வுகள் மற்றும் பெயராட்டுகளைக் கண்டு பின்னர் கூறுகின்றது.
2. அட்டைப்பொறிக் கருத்து

520பிள்ளை மாணவர், தொல்லியல் வாசு, கல்வி மற்றும் இன்றைய தொழில்வாசு, மாணவர், ஆவணிதையும், பொதுவானவை, கைவிழாவில் கூறப்படும்.

3. சூழ்பட்டு படப்படை

65பிள்ளை - 130பிள்ளை மாணவர், கல்வி மற்றும் இன்றைய தொழில் வாசு, மாணவர்களையும் மாணவர், என்ற மாணவர்களின் கூறு.

4. சூழ்பட்டு மாற்றியை

- மாணலாய மாற்றியை - 65பிள்ளை புதிய வாசு, மாணவர், இன்றைய தொழில்வாசு, மாணவர்களையும் கூறு, கல்விய வாசு, மாணவர்களையும் பொதுவானவை கூறு.

- கல்விய காரணத்திற்கு வழங்கப் ( ப.எ: 435 - 436)

- தலைப்பாகம் பொதுப்புரை 1992

5. சூழ்பட்டு கல்விய

ஆணை தொழில்வாசு மாணவர்களை கல்விய வாழ்நிலைகளை பார்வாயில் கூறிகளில் என்ற பொதுவான

- டிடி.எம்.பொன்னிகேசுகா

மார்க்கவை புகழ்பெயர் பாடல்

ப.எ: 367
1. கும்பச்சாலை பால்கற்கை

 கும்பச்சாலை 1 பால்கற்கை (கல்லால் பால்கற்கை) விள்ளை, கறுப்பு, கல்லால் தொட்டி, பலுத்தல், காரிந்தியம், கோட்டைகள், குரோகோட்டைகள், சுட்சந்திகள், குருற்றுருக்கள் ஆகியவை ஒன்றும் அமைவிட்டு, காலத்திற்குள் அரசியல் செய்யப்பட்டுள்ளன.

 - காலத்திற்குள் பால்கற்கை அமைதியில் புதுமை 148

2. கும்பச்சாலை குழாய் கீழ்ப்பானம்

 கும்பச்சாலை 1-2 வருடங்களுக்கு அடுத்து 3 வருடங்கள் முதல் 4 வருடங்கள் கல்லால் தொட்டி, கல்லறிவு ஆகியவை ஒன்றும் அமையும். கறுப்பு, காரிந்தியம், கோட்டைகள், குரோகோட்டைகள் ஆகியவை ஒன்றும் அமையும்.

 - காலத்திற்குள் பால்கற்கை அமைதியில் புதுமை 86

3. கும்பல்லத்தில் பால்கற்கை

 1-2 வருடங்களுக்கு (130 - 260 பிள்ளை) விள்ளை, பலுத்தல் தொட்டி, கறுப்பு, காரிந்தியம், கோட்டைகள், குரோகோட்டைகள், குருற்றுருக்கள் முதல் 2 வருடங்கள் மத்தியில் முடிப்பட்டு, இறுதியே முடிப்பட்டும்.

 - கீழ்ப்பானத்தில் தொட்டியும் காலத்திற்குள் புதுமை 227

பதிப்பு 1991

4. கும்பல்லத்தில் பால்கற்கை

 ½ - 1 வருடங்களுக்கு (65 - 130்பிள்ளை) விள்ளை, கறுப்பு, காரிந்தியம், கோட்டைகள், குரோகோட்டைகள் முதல்.

 - கீழ்ப்பானத்தில் தொட்டியும் காலத்திற்குள் புதுமை 216

பதிப்பு 1991
5. ஏனைய சாத்தியம்

பாகு (அ) 2 சாத்தியம் சாத்தியம் சுருக்கம், பிற்கரியக்கும் (அ) பாகு சிம்மாசூக்கிய சிறந்த கூறு குறுத்தது சிறந்த கூறு வழியில் குறுத்தது கப்பலைக் குறுத்தல், கப்பல், பாகு சாத்தியம் சுருக்கம்.

- கல்லற்ற பக்தி பாகுப்படி சாத்தியம் பக்தி.130.

6. ஏனைய சாத்தியம்

பாகு பாகு சாத்தியம் கருப்பாரின் காவலை குறுத்தது கூறு குறுத்தல் வழியில் குறுத்தல். நிறுவன கப்பல், நிழுவு, கப்பல், பாகு சுருக்கம்.

- கப்பல் சாத்தியம் கருப்பாரின் கூறு குறுத்தல்

(காரை - என் பாகும்) பாதம்: 194.

பதிப்பு 1998

7. கல்லற்ற பக்தி பாகுப்படி

50 - 100 பிற் தற்காலத்தான 5 கல்லற்ற பாகு சுருக்கம் 5 கல்லற்ற பாகு சுருக்கம் 5 கல்லற்ற பாகு சுருக்கம், கப்பல், கப்பல், காவலை குறுத்தல்.

- கப்பல் சாத்தியம் குறுத்தல்

"திறந்துபிந்து" A.P.சேகர்பானுடன்

2ம் பதிப்பு ஆண்டு 2001
அலம்பில் பின் ரூபாவதில் மேற்கும் முறை

1) அலம்பில்

குறுக்கு

"அலம்ப் கருப்புரிகள் தம்பூரிகள் நீர்வளையுள்ளது

செய்த கருப்புரிகள் காணே - காண்பகயம்

பின்னர் கருப்புரிகள் தம்பூரிகள் நட்சத்திரமாக

நீர் பல்வேளாக் கருப்புரிகள் காண்க"

பகுதிகள்

அலம்பில் , அருள்மிகு, அருட், பிற்பகுதி, பிற்பகுதி, சுமை, காப்பகுதி , திருத்தக்கிராசார்யா , முக்கியத்துவமிகு திருத்தக்கிராசார்யா

பகுதிகள், பிற்பகுதியின் காரணமாக இன்றும்

சுத்தகிராசார்யா காண்பகயம் பிற்பகுதிகள்

திறவனை,

"சுத்தகிராசார்யா காண்பகயம் பிற்பகுதிகள்

மாதிகளுணருணையான மாதைகள் - காண்பகயம்

அப்பதிகளின் உயர்பாதையான பாதைக்கிளையான பாதை

சுத்தகிராசார்யா காண்பகயம்"

சுத்தத் வினாவைநிறுவும் தொடர்பு காண்பகயம் விளைவுப்பகுதியே சுத்தகிராசார்யா.

- காண்பகயம் இலை குறுக்கு பகுதிய 437.

சுத்தகிராசார்யா பிறிப் 1992
அறிமுகத்திற்கு அடிப்படையான, குழுவாக்கங்கள், பிரிவு சார்ந்த, உயர்ந்த, 
உட்புறச்செயலாளர் ( குறிப்பிட்டு வந்து), மதிப்பு கொட்டை தொன்றி
பரிசயம், அது திறக்கவும் அளவாக்கும்.

- சுருக்க சுருக்க கல்வியியல் நூற்றாண்டு பட. 102.

நூற்றாண்டு பதிப்பு அகதம் 2001

அதீர்ந்துநோக்கம்

1. வேறுபாடு

❖ மற்றொருநாள்

❖ கருப்பு பாகம்

❖ கருப்பு பாலம்குறுந்.

இந்தனர் உலகச்சிற்றுறப்பு, முடிவே (4 மீல்) புறந்து இளவூர் ( 4 மீல்) வைத்தியாலில் அந்தப் பதிலைக் கொண்டு, கேரளா மாநிலம், மாநிலம், வெளிப்புறச்செயலாளர் பாரம்பரிய  
பல்சித்திய நிறுவன.

இத்தருணம் திற்குதலின் நிறுவன் தலைக்குரிய " ஆராய்ச்சியை தொடர்ந்து "  
கல்வி ஆய்வாள் தலைவர்.

அதீர்ந்துநோக்கம்:

பல்சித்தியாளர் செயல்துறையின் பல்கலைக்கழகத்துக்கு, குறிப்பிட்டு பிரிவுப் படையிட்டு
நோக்கு காலம்பூர்த்திகை.

இதன், 

"அறிமுகச் சிறுகற்றும் காலா பக்தம் நேரடை
புலன் பூசர் உச்சக்காரன் - மகாய
பிரிவின் கருக்காரன் பல்சித்தியாளர் மாநில
cுருசெய்இன் புருணையர் தலைவர".
நேர்த் தொடர்புபட்டார் கருத்தூராக.

முக்தியியல் சிற்பக் கல்விக் கட்டு விளக்கியுள்ளது.

நூற்றாண்டு வருடம் பிராஞ்ஜ பிரதேச நியூயோர்க் புகழ் பிள்ளை படை

குறிப்பிட்டுக்கொள்ளார்.

அடுத்து பார்க்கை

பள்ளியற பிராஞ்ஜ குறிப்பிட்டு குறிப்பிட்டு கூற்றக்கள், மறை

முனையில் பிரதேச நியூயோர்க் பிள்ளை படை.

அடுத்து - பிள்ளை

திருக்காளியின் போன்ற இந்திய இணைப்பு,

வெளிப்படுத்தப்பட்டு, விளக்காக்கும் இயல், இயற்கையான மறை

முனையில் கூற்றக்கள் கூற்றக்களைக் காட்சி கொண்டவர்.

அடுத்து - காட்சிகள்

உதவியான அருங்காட்சிகளால் புனித சமூகப் பிள்ளைகள் குறிப்பிட்டு.

இந்த

சுருக்கும் சில முக்தியியல் சிற்பக் கல்விக் கருத்தூராக.

- கருத்தூராக குறிப்பிட்டு

- புகழ் பிள்ளை 1992 பக்க எண் 437
MATERIALS AND METHODS

(Amaiodu parpam)

Collection of the drug

Amaiodu was collected from Gopalan Asan raw drug store, Nagercoil after identification.

Purification of the raw drug

Equal amount of pooneeru and karchunnam were taken in a mudpot. They are mixed with water at the ratio of 1:8. Then the cut pieces of Amaiodu were put in that mixture & boiled well till the impurities of the drug are removed. After that the drug (Amaiodu) becomes soft and white. The drug taken out then and washed out in clean water & dried in sunlight.

Preparation of Amaiodu Parpam

Drugs required

Amaiodu (purified) – 87.5gm. (2.5 palam)
Rubbed Adathoda leaves – 700gm. (20 palam)

Method of preparation

Adathoda leaves were rubbed in a kalvam to make a karkam.

Then the purified cut pieces of Amaiodu were buried in the Adathoda leaves karkam. Two mud seelai were made on that karkam. Then it was dried well. After that it was subjected to pudam with 1600gms, Of varatti (8 veesai). Parpam obtained was made into a fine powder by grinding in the kalvam.
Dose:-

250mg two times a day with honey after meals.

Route of administration:-

Enteral.

The prepared Amiodu Parpam was used for the treatment of Eraippu Erumal was analysed by the following methods.

2. Pharmacological analysis
3. Clinical Study.
BIO – CHEMICAL ANALYSIS

BIO – CHEMICAL ANALYSIS OF AMAIODU PARPAM

PREPARATION OF THE EXTRACT

100mgs of parpam is weighed accurately & placed into a clean beaker and added a few drops of concentrated hydrochloric acid and evaporated it well. After evaporation cooled the content and added a few drops of conc. Nitric acid and evaporated it well. After cooling the content add 20ml of distilled water and dissolved it well. Then it is transferred to 100ml volumetric flask and made up to 100ml with distilled water. Mix well filter it. Then it is taken for analysis.

Qualitative Analysis

<table>
<thead>
<tr>
<th>S.no</th>
<th>Experiment</th>
<th>Observation</th>
<th>Inference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Test for calcium</strong></td>
<td>A white precipitate is formed.</td>
<td>Indicates the presence of calcium.</td>
</tr>
<tr>
<td></td>
<td>2ml of the above prepared extract is taken in a clean test tube. To this add 2 ml of 4% ammonium oxalate solution.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td><strong>Test for sulphate:</strong></td>
<td>A white precipitate is formed.</td>
<td>Indicates the presence of sulphate.</td>
</tr>
<tr>
<td></td>
<td>2ml of the extract is added to 5% barium chloride solution.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Test for chloride</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The extract is treated with silver nitrate solution.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A white precipitate is formed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indicates the presence of chloride.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Test for carbonate</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The substance is treated with concentrated HCl.</td>
</tr>
<tr>
<td></td>
<td>A brisk effervescence is formed.</td>
</tr>
<tr>
<td></td>
<td>Indicates the presence of carbonate.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Test for zinc</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The extract is added with potassium ferro cyanide.</td>
</tr>
<tr>
<td></td>
<td>A white precipitate is formed.</td>
</tr>
<tr>
<td></td>
<td>Indicates the presence of zinc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Test for iron</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Ferric</strong></td>
</tr>
<tr>
<td></td>
<td>The extract is treated with concentrated glacial acetic acid and potassium ferro cyanide.</td>
</tr>
<tr>
<td></td>
<td>No blue colour is formed.</td>
</tr>
<tr>
<td></td>
<td>Absence of ferric iron.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Test of iron :</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Ferrous:</strong></td>
</tr>
<tr>
<td></td>
<td>The extract is treated with concentrated Nitric acid and ammonium thio cyanate.</td>
</tr>
<tr>
<td></td>
<td>Blood red colour is formed.</td>
</tr>
<tr>
<td></td>
<td>Indicates trace of ferrous is present.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Test for phosphate</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The extract is treated with ammonium molybdate and concentrated nitric acid.</td>
</tr>
<tr>
<td></td>
<td>Yellow precipitate is formed.</td>
</tr>
<tr>
<td></td>
<td>Indicates the presence of phosphate.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Test for albumin</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The extract is treated with Esbach’s reagent.</td>
</tr>
<tr>
<td></td>
<td>No yellow precipitate is formed.</td>
</tr>
<tr>
<td></td>
<td>Absence of albumin.</td>
</tr>
</tbody>
</table>
10. **Test for Tannic acid**
   The extract is treated with ferric chloride.
   No blue black precipitate is formed. Absence of Tannic acid.

11. **Test for unsaturation**
    Potassium permanganate solution is added to the extract.
    It does not get decolourised. Absence of unsaturated compound.

12. **Test for the reducing sugar**
    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.
    No colour change occurs. Absence of reducing sugar.

13. **Test for amino acid:**
    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.
    No violet colour is formed. Absence of amino acid.

**Inference**

The given sample of Amiaiodu Parpam contains calcium, Sulphate, Chloride, Carbonate, Zinc, Phosphate and Trace of ferrous iron.
PHARMACOLOGICAL ANALYSIS

ANTI SPASMODIC EFFECT OF AMAIODU PARPAM ON ISOLATED RABBIT ILEUM

Aim

To find out the anti – spasmodic effect of Amaiodu parpam on isolated rabbit ileum.

Preparation of the Test drug

100 mg of the Amaiodu parpam was dissolved in 10 ml of water and boiled for 15 minutes. The filtrate was used for the experiments.

Solutions required

Acetylcholine – 1mg/ml. Atropine – 0.5mg/ml

Test drug (Amaiodu parpam) – 10mg/ml.

Nutrient Solutions

Tyrode – 1 to 2 liters.

Tissue used

Rabbit ileum.

Apparatus Required

Student’s organ bath, sherrington rotating drum.

Procedure

A Rabbit was starved for 48 hours and was allowed water ad – libtum. It was sacrificed by a blow on the head and by carotid bleeding. The abdomen was quickly opened and the ileo - caecal junction was found out. A small piece of ileal portion was cut, removed and placed in a dish
containing warm aerated Tyrode solution. The Lumen of the ileum was gently rinsed out by pushing Tyrode solution into it, 3 cms length segment was cut from this part of ileum and was tied with thread on both ends without closing the lumen and the tissue was mounted in the organ bath containing T grade solution maintained at 37°C bubbled with air by an oxygen tube.

First the drum was allowed to run for 1 minute from the base line. Drugs were given to study the inhibiting effect of Actyl-choline. 0.2ml (1 mg / ml) of Acetylcholine was added and allowed to run the drum for 30 seconds. Thus the tissue was standardised and then the drum was stopped and the Acetyl – choline was washed out.

Again the Tyrode solution was added to the organ bath till the lever comes to the base line. The drum was allowed to run for 1 minute.

To the organ bath 1 ml of test drug and 0.2 ml (1mg / ml) Acetyl – choline was simultaneously added and the drum was allowed to run for 30 seconds. The response was recorded. Then the drum was stopped and the Acetyl – choline solution and the test drug solutions were washed out. Then the above experiment was done for 0.2ml dose of Acetyl – choline. The drum was allowed to run for 30 seconds. The response was recorded.
Then 0.2ml of Atropine and 0.2ml of Acetyl–Choline was added and the drum was allowed to run for 30 seconds. There is no elevation in the graph. Then 0.2ml of Acetyl–choline was added to standardise the tissue. Then the tracing was labelled and fixed.

**Inference**

From the graph, it is inferred that the test drug doesn't antagonise the effect of Acetyl-choline when added together. So the drug does not possess Anti–spasmodic activity.
ANTI HISTAMINE STUDY OF AMAIODU PARPAM ON ISOLATED GUINEA PIG ILEUM

Aim

To study the anti – histamine effect of Amaiodu parpam on isolated Guinea pig ileum.

Preparation of the Test drug

100mg of Amaiodu parpam was dissolved in 10ml of water and boiled for 15 minutes. The filterate was used for the experiments.

Solutions required

Histamine - 1 in 100000 strength,
Anti Histamine (Pheniramine maleate 22.75 mg / ml)
Test drug - (Amaiodu parpam) 10 mg/ ml.

Nutrient Solution

Tyrode - 1 to 2 litres.

Tissue Used

Guinea Pig Ileum.

Apparatus Required

Student’s Organ bath.
Sherrinton rotating drum.
Procedure

An overnight fasted Guinea pig weighing about 400 grams was sacrificed by a blow on the head and by carotid bleeding. The abdomen was suddenly opened and ileocacal junction was found out. A small piece of ileal portion was cut and placed in a dish containing warm aerated Tyrode solution. The Lumen of the ileum was gently rinsed out by pushing Tyrode solution into it, 3cms length segment was cut from this part of ileum, and was tied with thread on both ends without closing the lumen and the tissue was mounted in the organ bath containing Tyrode solution maintained at 37°C and bubbled with air by an oxygen tube.

First the drum was allowed to run for 1 minute from the base line. Drugs were given to study the inhibiting effect of Histamine. 0.2 ml (10mg / ml) of Histamine was added and allowed to run the drum for 30 seconds. Thus the tissue was standardised and then the drum was stopped and the Histamine was washed out.

Again the Tyrode solution was added to the organ bath till the lever comes to the base line. The drum was allowed to run for 1 minute.

To the organ bath 1 ml of the test drug and 0.2ml (10 mg / ml) Histamine was simultaneously added and the drum was allowed to run for 30 seconds. The response was recorded. Then the drum was stopped and the histamine solution and test drug solutions washed out. Then the above experiment was done for 0.2ml dose of Histamine. The drum was allowed to run for 30 seconds. The response was recorded.
Then 0.2ml of Anti – histamine and 0.2 ml of histamine was added and the drum was allowed to run for 30 seconds. There is no elevation in the graph. Then 0.2 ml of histamine was added to standardise the tissue. Then the tracing was labelled and fixed.

Inference:

From the graph, it is inferred that the test drug doesn’t antagonise the effect of Acetyl choline, when added together. So the drug **does not possess Anti – Histaminic action.**
CLINICAL ASSESSMENT

Eraippu Erumal is a common disease and vexes mankind constantly. To assess the therapeutic efficacy of Amaiodu parpam, Eraippu Erumal patients of both sexes were selected and treated in both Inpatient and Outpatient department of Gunapadam, Government Siddha Medical College hospital, Palayamkottai.

For all cases full clinical data were recorded and they were diagnosed on the basis of Siddha basic principles i.e, Envagai thervugal etc. All the patients were undergone for hematological and radiological investigations in the corresponding sections of the hospital.

Clinically patients were selected as ‘Eraippu Erumal’ having the cardinal symptoms namely,

- Tightness of chest
- Dyspnoea
- Expiratory Wheezing - Rhonchi
- Cough with or without expectoration
- H/O previous attacks before etc.

To exclude Pulmonary tuberculosis & other Respiratory infections, patients with the following symptoms are omitted from the study.
- Evening rise of Temperature
- Haemoptysis
- Expectoration of large quantities of foul yellow coloured sputum.
- Emaciation of body
- Acute pyrexial illness with respiratory symptoms.

Respiratory system of patients was thoroughly examined clinically and exact cases of Eraippu Erumal were selected for the study. Accordingly 30 patients were selected and studied both in I.P and O.P wards.

Of those 20 patients were treated as Out patients and 10 were treated as In-Patients.

Patients who could not stay for enough number of days in I.P ward were requested to come to out patient Department after their discharge from in patient Department and their progress were watched without fail.

**Drug and Dosage**

The test drug Amaiodu parpam was given to the patients at the dose of 250mg two times a day with honey.
Diet and Medical Advice

- All patients were advised to avoid food which increases Kapha.
- They were strictly advised not to take meat, fish, chicken, Lemon, bitter guard, Leaves of agathi, Pumpkin and those vegetables which have cooling effects on body. (e.g: chow – chow, Raphanus)
- They were also advised not to take curd, butter milk, cold water for drinking.
- They were advised to avoid exposure to cold air, dust and sleeping in bare floor.
- The male patients who were having the habit of smoking were strictly advised to abstain from smoking.

**TABLE ILLUSTRATING THE IMPROVEMENT AND THEIR PERCENTAGES**

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Result</th>
<th>No. Of Patients</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Good relief</td>
<td>18</td>
<td>60%</td>
</tr>
<tr>
<td>2.</td>
<td>Fair relief</td>
<td>09</td>
<td>30%</td>
</tr>
<tr>
<td>3.</td>
<td>Poor relief</td>
<td>03</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30</td>
<td>100%</td>
</tr>
</tbody>
</table>

From the above table it can be observed that 60% of patients receiving the drug Amaiodu parpam had good relief, 30% had fair relief, and 10% had poor relief.
DISCUSSION

The basic abnormality in Eraippu Erumal is derangement of Kapha humour.

"¸Àò¾¢¨ÉÂýÈ¢ ¿¡º ÍÅ¡ºõ ¿¡½¡Ð".
- §¾Ãý §º¸ÃôÀ¡.

Thus the affected Kapha humour reflects the clinical symptoms like cough with expectoration scanty sputum and difficulty in breathing. The above signs and symptoms were partially relieved by administration of the drug Amaiodu parpam. The possible explanation is given below and the drug acts in such a way that.

Amaiodu has Expectorant action.

According to the basic principle of siddha, all these factors tend to the Pharmacological and clinical trails.

Bio-chemical analysis showed that it contains calcium, Sulphate, Chloride, Carbonate, Zinc,Phosphate , Ferrous Iron & Mercury.

They provide valuable nutritional support.

Pharmacological studies show that the Amaiodu parpam has not get significant Anti – Histamine and Anti Spasmodic Activity.

In the clinical assessment, 30 cases were selected, 18 cases showed good response, 9 cases showed fair response and 3 cases showed poor response.

During the course of study no adverse reactions were observed and there were no contra indications.
SUMMARY

Amaiodu parpam was taken for this study to establish its efficacy in Eraippu Erumal, as the important aspect of this dissertation work.

The dose of Amaiodu parpam is 250mgm two times a day with honey.

A review of literatures about the drug and its significance in medicine were collected.

In Bio-chemical analysis the drug has got Calcium, Sulohate, Carbonate, zinc, Ferrous Iron, Phosphate and Mercury.

Pharmacological analysis shows no significant anti-histamine and Anti spasmodic activity.

From the clinical study the drug had a moderate response in Eraippu Erumal.
CONCLUSION

It is concluded that the drug Amaiodu parpam has moderate effect in the treatment of Eraippu Erumal for reducing its severity and difficulties.
<table>
<thead>
<tr>
<th>1.Name:</th>
<th>Mr. Thangavel servai</th>
<th>Age:</th>
<th>75</th>
<th>Sex:</th>
<th>M</th>
<th>Ward:</th>
<th>MPGII</th>
<th>I.P.No</th>
<th>2359</th>
<th>Occupation:</th>
<th>Working in Rice mill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Admission</td>
<td>23.10.2006</td>
<td>Date of Discharge</td>
<td>01.11.06</td>
<td>No.of Days Treated</td>
<td>11 Days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug</td>
<td>Sadamanjil Ver Chooranam 1 gm TDS with hot water</td>
<td>Diagnosis</td>
<td>Eraippu Erumal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investigations Before Treatment</td>
<td>Investigations After Treatment</td>
<td>Response</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cough with expectoration sneezing on exposure to dust, cold etc., and difficulty in breathing since 2 years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BLOOD-</td>
<td>BLOOD-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TC -</td>
<td>9200 Cells/cu.mm</td>
<td>TC -</td>
<td>9000 Cells/cu.mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC - P 60% L 34% E 06%</td>
<td>DC - P 60% L 36% E 04%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESR ½ hr 20mm 1 hr 40mm.</td>
<td>ESR ½ hr 20mm 1 hr 40mm.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hb- 74%</td>
<td>Hb- 74%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bl. Sugar 83 mgs%</td>
<td>Bl. Sugar 83 mgs%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bl. Urea 25 mgs%</td>
<td>Bl. Urea 25 mgs%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serum Cholesterol 299 mgs%</td>
<td>Serum Cholesterol 295 mgs%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>URINE -</td>
<td>URINE -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albumin- Nil</td>
<td>Albumin- Nil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sugar - Nil</td>
<td>Sugar - Nil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposits - NAD</td>
<td>Deposits - NAD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEST X – RAY</td>
<td>CHEST X – RAY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic Bronchitis</td>
<td>Normal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPUTIM FOR AFB</td>
<td>SPUTIM FOR AFB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>Negative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MANTOUX</td>
<td>MANTOUX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>12</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cough</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>R</td>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breathlessness</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sputum Colour</td>
<td>W</td>
<td>W</td>
<td>W</td>
<td>W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>10 ml</td>
<td>8 ml</td>
<td>5 ml</td>
<td>2 ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhonchi</td>
<td>P</td>
<td>P</td>
<td>R</td>
<td>R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**P – Present**  **R – Reduced**  **W – Whitish**  **Y – Yellowish**  **Mild – +**  **Moderate – ++**  **Severe – +++**

**Good Response**: Significant amelioration of signs & symptoms
**Fair Response**: Partial amelioration of signs and symptoms
**Poor response**: In significant amelioration of signs and symptoms
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Admission: 28.8.06</td>
<td>Date of Discharge: 11.9.06</td>
<td>No. of Days Treated: 15 Days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug: Sadamanjil Ver Chooranam 1 gm TDS with hot water</td>
<td>Diagnosis: Eraippu Erumal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Complaints & Duration**
- Cough with expectoration difficulty in breathing since 1 year.

**Investigations Before Treatment**
- **BLOOD-**
  - TC - 9000 Cells/cu.mm
  - DC - P 60% L 36% E 04%
  - ESR ½ hr 30 mm 1 hr 68 mm

**Investigations After Treatment**
- **BLOOD-**
  - TC - 8500 Cells/cu.mm
  - DC - P 60% L 36% E 04%
  - ESR ½ hr 15 mm 1 hr 30 mm

**Response**
- Fair Response:
  - Significance amelioration of signs & symptoms

**Family History**
- Significant family history present.
- His father has similar episode.

**Investigations After Treatment**
- **BLOOD-**
  - TC - 8500 Cells/cu.mm
  - DC - P 60% L 36% E 04%
  - ESR ½ hr 15 mm 1 hr 30 mm

**Family History**
- Bl. Sugar: 79 mgs% → 80 mgs%
- Bl. Urea: 32 mgs% → 32 mgs%
- Serum Cholesterol: 157 mgs% → 157 mgs%

**URINE-**
- Albumin: Nil → Nil
- Sugar: Nil → Nil
- Deposits: few epithelial cells → NAD

**CHEST X- RAY**
- Normal

**SPUTUM FOR AFB**
- Negative

**MANTOUX**
- Negative

**Days**
- 1
- 3
- 6
- 9
- 12
- 15

**Cough**
- P
- P
- R
- R
- R
- R

**Breathlessness**
- ++
- ++
- +
- +
- +

**Sputum**
- Colour:
  - W
  - W
  - W
  - W
  - W

- Quantity:
  - 10 ml
  - 10 ml
  - 8 ml
  - 5 ml
  - 2 ml
  - 2 ml

**Rhonchi**
- P
- P
- R
- R
- R

**Good Response**: Significant amelioration of signs & symptoms
**Fair Response**: Partial amelioration of signs and symptoms
**Poor response**: In significant amelioration of signs and symptoms.
<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Investigations Before Treatment</th>
<th>Investigations After Treatment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough with expectoration, difficulty in breathing since 2 years, on exposure to cold air, dust etc.,</td>
<td>BLOOD-</td>
<td>BLOOD-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TC - 9000Cells/cu.mm</td>
<td>TC - 9000Cells/cu.mm</td>
<td></td>
</tr>
<tr>
<td>Family History</td>
<td>DC - P 58% L 40% E 02%</td>
<td>DC - P 55% L 43% E 02%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ESR ½ hr 10mm 1 hr 22mm</td>
<td>ESR ½ hr 10mm 1 hr 22mm</td>
<td></td>
</tr>
<tr>
<td>No significant family history present</td>
<td>Hb- 71%</td>
<td>Hb- 70%</td>
<td>Poor</td>
</tr>
<tr>
<td></td>
<td>Bl. Sugar 80mgs%</td>
<td>Bl. Sugar 85mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bl. Urea 20mgs%</td>
<td>Bl. Urea 20mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Serum Cholesterol 157mgs%</td>
<td>Serum Cholesterol 157mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>URINE -</td>
<td>URINE -</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Albumin - Nil</td>
<td>Albumin - NII</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sugar - Nil</td>
<td>Sugar - NII</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deposits - NAD</td>
<td>Deposits - NAD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CHEST X – RAY Chronic Bronchitis</td>
<td>CHEST X – RAY Chronic Bronchitis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SPUTUM FOR AFB - Negative</td>
<td>SPUTUM FOR AFB - Negative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MANTOUX - Negative</td>
<td>MANTOUX - MANTOUX</td>
<td></td>
</tr>
<tr>
<td>Days</td>
<td>1</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Cough</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
<tr>
<td>Breathlessness</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Sputum</td>
<td>Colour</td>
<td>W</td>
<td>W</td>
</tr>
<tr>
<td></td>
<td>Quantity</td>
<td>15ml</td>
<td>10ml</td>
</tr>
<tr>
<td>Rhonchi</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
</tbody>
</table>

P – Present          R – Reduced          W - Whitish         Y- Yellowish         Mild - +          Moderate - ++        Severe - +++

**Good Response**: Significant amelioration of signs & symptoms
**Fair Response**: Partial amelioration of signs and symptoms
**Poor response**: In significant amelioration of signs and symptoms
**4. Name:** Petchiammal  
**Age:** 70  
**Sex:** F  
**Ward:** FPGII  
**I.P.No:** 2497  
**Occupation:** Housewife

**Date of Admission:** 10.11.06  
**Date of Discharge:** 28.11.06  
**No.of Days Treated:** 19 Days

**Drug:** Sadamanjil Ver Chooranam 1 gm TDS with hot water  
**Diagnosis:** Eraippu Erumal

<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Investigations Before Treatment</th>
<th>Investigations After Treatment</th>
<th>Response</th>
</tr>
</thead>
</table>
| Coughing with expectoration chest tightness, difficulty in breathing since 4 years | **BLOOD-**  
TC - 8600 Cells/cu.mm | **BLOOD-**  
TC - 8000 Cells/cu.mm | Good |
| | **DC -** P 50% L 44% E 06%  
ESR ½ hr 15mm 1 hr 35mm | **DC -** P 50% L 44% E 06%  
ESR ½ hr 10mm 1 hr 20mm | |
| | Hb- 64% | Hb- 64% | |

**Family History**

significant family history present

<table>
<thead>
<tr>
<th>Investigations Before Treatment</th>
<th>Investigations After Treatment</th>
<th>Response</th>
</tr>
</thead>
</table>
| Bl.Sugar 132mgs%  
Bl. Urea 22mgs%  
Serum Cholesterol 148mgs% | Bl.Sugar 110mgs%  
Bl. Urea 20mgs%  
Serum Cholesterol 148mgs% | |
| **URINE -**  
Albumin- Nil  
Sugar - Nil  
Deposits - 1-2puscells mgs% HPF | **URINE -**  
Albumin- Nil  
Sugar - Nil  
Deposits- NAD | |

**CHEST X – RAY**

Normal

**SPUTUM FOR AFB**

Negative

**MANTOUX**

Negative

**Days**

<table>
<thead>
<tr>
<th>1</th>
<th>3</th>
<th>6</th>
<th>9</th>
<th>12</th>
<th>15</th>
<th>18</th>
</tr>
</thead>
</table>

**Cough**

<table>
<thead>
<tr>
<th>P</th>
<th>P</th>
<th>P</th>
<th>R</th>
<th>R</th>
<th>R</th>
<th>R</th>
</tr>
</thead>
</table>

**Breathlessness**

<table>
<thead>
<tr>
<th>+++</th>
<th>+++</th>
<th>++</th>
<th>++</th>
<th>+</th>
<th>+</th>
<th>+</th>
</tr>
</thead>
</table>

**Sputum**

<table>
<thead>
<tr>
<th>Colour</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>20ml</td>
</tr>
<tr>
<td>W</td>
<td>18ml</td>
</tr>
<tr>
<td>W</td>
<td>18ml</td>
</tr>
<tr>
<td>W</td>
<td>10ml</td>
</tr>
<tr>
<td>W</td>
<td>5ml</td>
</tr>
<tr>
<td>W</td>
<td>3ml</td>
</tr>
<tr>
<td>W</td>
<td>2ml</td>
</tr>
</tbody>
</table>

**Rhonchi**

<table>
<thead>
<tr>
<th>P</th>
<th>P</th>
<th>P</th>
<th>R</th>
<th>R</th>
<th>R</th>
<th>R</th>
</tr>
</thead>
</table>

**P – Present**  
**R – Reduced**  
**W – Whitish**  
**Y – Yellowish**  
**Mild – +**  
**Moderate – ++**  
**Severe – +++**

**Good Response:** Significant amelioration of signs & symptoms  
**Fair Response:** Partial amelioration of signs and symptoms  
**Poor response:** In significant amelioration of signs and symptoms
5. Name: Mr. Krishnan  
Age: 64  
Sex: M  
Ward: MPGII  
I.P.No: 2538  
Occupation: Farmer  

- Date of Admission: 15.11.06  
- Date of Discharge: 27.11.06  
- No. of Days Treated: 13 Days  
- Drug: Sadamanjil Ver Chooranam 1 gm TDS with hot water  
- Diagnosis: Eraippu Erumal  

### Complaints & Duration

Cough with expectoration difficulty in breathing since 6 months, on exposure to cold air, dust etc.

### Investigations Before Treatment

| Blood - |  
| TC - | 10,000 Cells/cu.mm  
| DC - P | 70%  
| L | 28%  
| E | 02%  
| ESR | ½ hr 15mm 1 hr 42mm  
| Hb- | 71%  

### Investigations After Treatment

| Blood - |  
| TC - | 9,000 Cells/cu.mm  
| DC - P | 70%  
| L | 28%  
| E | 02%  
| ESR | ½ hr 10mm 1 hr 20mm  
| Hb- | 72%  

### Family History

No significant family history present

### Investigations After Treatment

| Bl. Sugar |  
| 88 mgs%  
| Bl. Urea | 18 mgs%  
| Serum Cholesterol | 146 mgs%  

### Investigations After Treatment

| Bl. Sugar |  
| 80 mgs%  
| Bl. Urea | 20 mgs%  
| Serum Cholesterol | 150 mgs%  

### URINE -

| Albumin- | Nil  
| Sugar - | Nil  
| Deposits - | 2-3 Pus cells  

### URINE -

| Albumin- | Nil  
| Sugar - | Nil  
| Deposits - | NAD  

### CHEST X - RAY

| Chronic bronchitis  
| Normal  

### SPUTUM FOR AFB

| Negative  
| Negative  

### MANTOUX

| Negative  
| Negative  

### Response

Good

### Days

| 1 | 3 | 6 | 9 | 12 | 15 |

### Cough

| P | P | P | R | R |

### Breathlessness

| ++ | ++ | ++ | ++ | ++ |

### Sputum

| Colour | W | W | W | W |
| Quantity | 15 ml | 10 ml | 8 ml | 5 ml | 2 ml |

### Rhonchi

| P | P | P | R | R |

**P** – Present  
**R** – Reduced  
**W** – Whitish  
**Y** – Yellowish  
**Mild** – +  
**Moderate** – ++  
**Severe** – +++

**Good Response**: Significant amelioration of signs & symptoms  
**Fair Response**: Partial amelioration of signs and symptoms  
**Poor Response**: In significant amelioration of signs and symptoms
<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Investigations Before Treatment</th>
<th>Investigations After Treatment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough with expectoration, breathlessness, chest tightness since 1 year on exposure to cold air, dust etc</td>
<td>BLOOD-</td>
<td>BLOOD-</td>
<td></td>
</tr>
<tr>
<td>TC - 7500 Cells/cu.mm</td>
<td>TC - 7500 Cells/cu.mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC - P 68% L 28% E 04%</td>
<td>DC - P 65% L 32% E 03%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESR ½ hr 37mm 1 hr 65mm</td>
<td>ESR ½ hr 15mm 1 hr 30mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hb- 68%</td>
<td>Hb- 68%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family History</td>
<td>URINE -</td>
<td>URINE -</td>
<td></td>
</tr>
<tr>
<td>Bl. Sugar 75mgs%</td>
<td>Bl. Sugar 78mgs%</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>Bl. Urea 24mgs%</td>
<td>Bl. Urea 24mgs%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serum Cholesterol 164mgs%</td>
<td>Serum Cholesterol 164mgs%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>URINE -</td>
<td>URINE -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albumin- Nil</td>
<td>Albumin- NIl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sugar - Nil</td>
<td>Sugar - Nil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposits - NAD</td>
<td>Deposits - NAD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEST X – RAY</td>
<td>CHEST X – RAY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic Bronchitis</td>
<td>Normal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPUTUM FOR AFB</td>
<td>SPUTUM FOR AFB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>Negative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MANTOUX</td>
<td>MANTOUX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>Negative</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Days</th>
<th>1</th>
<th>3</th>
<th>6</th>
<th>9</th>
<th>12</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Breathlessness</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Sputum</td>
<td>Colour</td>
<td>W</td>
<td>W</td>
<td>W</td>
<td>W</td>
<td>W</td>
</tr>
<tr>
<td>Quantity</td>
<td>10ml</td>
<td>8ml</td>
<td>5ml</td>
<td>2ml</td>
<td>2ml</td>
<td></td>
</tr>
<tr>
<td>Rhonchi</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>R</td>
<td>R</td>
</tr>
</tbody>
</table>

P – Present   R – Reduced   W - Whitish   Y- Yellowish   Mild - +   Moderate - ++   Severe - +++

**Good Response**: Significant amelioration of signs & symptoms
**Fair Response**: Partial amelioration of signs and symptoms
**Poor response**: In significant amelioration of signs and symptoms
<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Investigations Before Treatment</th>
<th>Investigations After Treatment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough with expectoration breathlessness since 3 months, on exposure to cold air, dust etc.,</td>
<td>BLOOD-</td>
<td>BLOOD-</td>
<td>Good</td>
</tr>
<tr>
<td>TC - 9200Cells/cu.mm</td>
<td>TC - 9200Cells/cu.mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC - P 60% L 35% E 5%</td>
<td>DC - P 60% L 35% E 05%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESR ½ hr 14mm 1 hr 30mm</td>
<td>ESR ½ hr 10mm 1 hr 20mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hb- 70%</td>
<td>Hb- 70%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family History**

No significant family history present

<table>
<thead>
<tr>
<th>Investigations Before Treatment</th>
<th>Investigations After Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bl.Sugar 83mgs%</td>
<td>Bl.Sugar 83mgs%</td>
</tr>
<tr>
<td>Bl. Urea 47mgs%</td>
<td>Bl. Urea 47mgs%</td>
</tr>
<tr>
<td>Serum Cholesterol 146mgs%</td>
<td>Serum Cholesterol 146mgs%</td>
</tr>
<tr>
<td>Albumin- Nil</td>
<td>Albumin- Nll</td>
</tr>
<tr>
<td>Sugar - Nil</td>
<td>Sugar - Nil</td>
</tr>
<tr>
<td>Deposits - few epithelia cells</td>
<td>Deposits - few epithelial cells HPF</td>
</tr>
</tbody>
</table>

**CHEST X – RAY**

Chronic Bronchitis

**CHEST X – RAY**

Normal

**SPUTIM FOR AFB** Negative

**MANTOUX** Negative

<table>
<thead>
<tr>
<th>Days</th>
<th>Cough</th>
<th>Breathlessness</th>
<th>Sputum</th>
<th>Rhonchi</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>P</td>
<td>++</td>
<td>W</td>
<td>P</td>
</tr>
<tr>
<td>3</td>
<td>P</td>
<td>+</td>
<td>W</td>
<td>P</td>
</tr>
<tr>
<td>6</td>
<td>R</td>
<td>+</td>
<td>W</td>
<td>R</td>
</tr>
<tr>
<td>9</td>
<td>R</td>
<td>+</td>
<td>W</td>
<td>R</td>
</tr>
<tr>
<td>12</td>
<td>R</td>
<td>+</td>
<td>W</td>
<td>R</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td>W</td>
<td>R</td>
</tr>
</tbody>
</table>

**P – Present**  **R – Reduced**  **W – Whitish**  **Y – Yellowish**  **Mild – +**  **Moderate – ++**  **Severe – +++**

**Good Response**: Significant amelioration of signs & symptoms

**Fair Response**: Partial amelioration of signs and symptoms

**Poor response**: In significant amelioration of signs and symptoms
<table>
<thead>
<tr>
<th>Name:</th>
<th>Mrs. Pitchammal</th>
<th>Age:</th>
<th>65</th>
<th>Sex:</th>
<th>F</th>
<th>Ward:</th>
<th>FPGII</th>
<th>I.P.No</th>
<th>2590</th>
<th>Occupation:</th>
<th>House wife</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Admission</td>
<td>23.10.2006</td>
<td>Date of Discharge</td>
<td>01.11.06</td>
<td>No.of Days Treated</td>
<td>11 Days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug</td>
<td>Sadamanjil Ver Chooranam 1 gm TDS with hot water</td>
<td>Diagnosis</td>
<td>Eraippu Erumal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Complaints & Duration

<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Investigations Before Treatment</th>
<th>Investigations After Treatment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough with expectoration chest tightness, difficulty in breathing since one month</td>
<td>BLOOD-</td>
<td>BLOOD-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TC -</td>
<td>9600 Cells/cu.mm</td>
<td>TC -</td>
</tr>
<tr>
<td></td>
<td>DC - P 62% L 34% E 04%</td>
<td>DC - P 62% L 34% E 04%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ESR ½ hr 45mm 1 hr 72mm</td>
<td>ESR ½ hr 15mm 1 hr 30mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hb- 70%</td>
<td>Hb- 70%</td>
<td></td>
</tr>
<tr>
<td>Family History</td>
<td>Blood-</td>
<td>Blood-</td>
<td></td>
</tr>
<tr>
<td>significant family history present</td>
<td>Bl. Sugar 88mgs%</td>
<td>Bl. Sugar 88mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bl. Urea 27mgs%</td>
<td>Bl. Urea 27mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Serum Cholesterol 159mgs%</td>
<td>Serum Cholesterol 159mgs%</td>
<td></td>
</tr>
<tr>
<td>Family History</td>
<td>URINE -</td>
<td>URINE -</td>
<td></td>
</tr>
<tr>
<td>significant family history present</td>
<td>Albumin- Nil</td>
<td>Albumin- Nil</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sugar - Nil</td>
<td>Sugar - Nil</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deposits - NAD</td>
<td>Deposits - NAD</td>
<td></td>
</tr>
<tr>
<td>CHEST X – RAY</td>
<td>Normal</td>
<td>Normal</td>
<td></td>
</tr>
<tr>
<td>SPUTIM FOR AFB</td>
<td>Negative</td>
<td>SPUTIM FOR AFB</td>
<td></td>
</tr>
<tr>
<td>MANTOUX</td>
<td>Negative</td>
<td>MANTOUX</td>
<td></td>
</tr>
</tbody>
</table>

### Investigations

<table>
<thead>
<tr>
<th>Days</th>
<th>1</th>
<th>3</th>
<th>6</th>
<th>9</th>
<th>12</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough</td>
<td>P</td>
<td>P</td>
<td>R</td>
<td>R</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breathlessness</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sputum</td>
<td>Colour</td>
<td>W</td>
<td>W</td>
<td>W</td>
<td>W</td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>15ml</td>
<td>10ml</td>
<td>5ml</td>
<td>2ml</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhonchi</td>
<td>P</td>
<td>P</td>
<td>R</td>
<td>R</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**P – Present**  **R – Reduced**  **W - Whitish**  **Y - Yellowish**  **Mild - +**  **Moderate - ++**  **Severe - +++**

**Good Response**: Significant amelioration of signs & symptoms

**Fair Response**: Partial amelioration of signs and symptoms

**Poor response**: In significant amelioration of signs and symptoms
Name: Alagumuthu  Age: 691  Sex: M  Ward: MPGII  I.P.No 2593  Occupation: Coolie
Date of Admission: 23.10.2006  Date of Discharge: 01.11.06  No.of Days Treated: 11 Days
Drug: Sadamanjil Ver Chooranam 1 gm TDS with hot water
Diagnosis: Eraippu Erumal

<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Investigations Before Treatment</th>
<th>Investigations After Treatment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough with expectoration, chest tightness breathlessness since 4 years on exposure to cold air, dust etc.,</td>
<td><strong>BLOOD-</strong></td>
<td><strong>BLOOD-</strong></td>
<td><strong>Good</strong></td>
</tr>
<tr>
<td></td>
<td>TC - 10800Cells/cu.mm</td>
<td>TC - 9600Cells/cu.mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DC - P 72% L 26% E 02%</td>
<td>DC - P 72% L 26% E 02%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ESR ½ hr 15mm 1 hr 32mm</td>
<td>ESR ½ hr 15mm 1 hr 32mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hb- 69%</td>
<td>Hb- 69%</td>
<td></td>
</tr>
<tr>
<td><strong>Family History</strong></td>
<td><strong>Bl.Sugar</strong> 80*mgs%</td>
<td><strong>Bl.Sugar</strong> 82mgs%</td>
<td><strong>Good</strong></td>
</tr>
<tr>
<td>significant family history present</td>
<td><strong>Bl. Urea</strong> 66mgs%</td>
<td><strong>Bl. Urea</strong> 42mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Serum Cholesterol</strong> 169mgs%</td>
<td><strong>Serum Cholesterol</strong> 169mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>URINE -</strong></td>
<td><strong>URINE -</strong></td>
<td><strong>Good</strong></td>
</tr>
<tr>
<td></td>
<td>Albumin- Nil</td>
<td>Albumin- Nil</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sugar - Nil</td>
<td>Sugar - Nil</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deposits - NAD</td>
<td>Deposits - NAD</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>CHEST X – RAY</strong></td>
<td><strong>CHEST X – RAY</strong></td>
<td><strong>Good</strong></td>
</tr>
<tr>
<td></td>
<td>SPUTIM FOR AFB Negative</td>
<td>SPUTIM FOR AFB Negative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MANTOUX Negative</td>
<td>MANTOUX</td>
<td><strong>Good</strong></td>
</tr>
<tr>
<td><strong>Days</strong></td>
<td>1</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td><strong>Cough</strong></td>
<td>P</td>
<td>P</td>
<td>R</td>
</tr>
<tr>
<td><strong>Breathlessness</strong></td>
<td>++</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td><strong>Sputum</strong></td>
<td><strong>Colour</strong></td>
<td>W</td>
<td>W</td>
</tr>
<tr>
<td></td>
<td><strong>Quantity</strong></td>
<td>10ml</td>
<td>8ml</td>
</tr>
<tr>
<td><strong>Rhonchi</strong></td>
<td>P</td>
<td>P</td>
<td>R</td>
</tr>
</tbody>
</table>

P – Present  R – Reduced  W - Whitish  Y- Yellowish  Mild - +  Moderate - ++  Severe - +++

**Good Response**: Significant amelioration of signs & symptoms
**Fair Response**: Partial amelioration of signs and symptoms
**Poor response**: In significant amelioration of signs and symptoms
<table>
<thead>
<tr>
<th>Date of Admission: 31.10.06</th>
<th>Date of Discharge: 27.11.06</th>
<th>No. of Days Treated: 28 Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: Muthuvel</td>
<td>Age: 40</td>
<td>Sex: M</td>
</tr>
<tr>
<td>Ward: MPGII</td>
<td>I.P.No: 2422</td>
<td>Occupation: Farmer</td>
</tr>
<tr>
<td>Drug: Sadamanjil Ver Chooranam 1 gm TDS with hot water</td>
<td>Diagnosis: Eraippu Erumal</td>
<td></td>
</tr>
</tbody>
</table>

### Complaints & Duration

- Cough with expectoration, breathlessness since 6 months, on exposure to dust, cold air etc
- Present

### Investigations Before Treatment

- **BLOOD-**
  - TC - 9600 Cells/cu.mm
  - DC - P 60% L 36% E 04%
  - ESR ½ hr 5mm 1 hr 11mm
- **Hb-** 72%

### Investigations After Treatment

- **BLOOD-**
  - TC - 9000 Cells/cu.mm
  - DC - P 60% L 36% E 04%
  - ESR ½ hr 5mm 1 hr 11mm
- **Hb-** 70%

### Family History

- No significant family history present

### Response

Good

### Chest X-ray

- Normal

### Sputum for AFB

- Negative

### Mantoux

- Negative

### Rhonchi

- Present

### Sputum

<table>
<thead>
<tr>
<th>Colour</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>20ml</td>
</tr>
<tr>
<td>W</td>
<td>20ml</td>
</tr>
<tr>
<td>W</td>
<td>18ml</td>
</tr>
<tr>
<td>W</td>
<td>15ml</td>
</tr>
<tr>
<td>W</td>
<td>15ml</td>
</tr>
<tr>
<td>W</td>
<td>10ml</td>
</tr>
<tr>
<td>W</td>
<td>5ml</td>
</tr>
<tr>
<td>W</td>
<td>5ml</td>
</tr>
<tr>
<td>W</td>
<td>3ml</td>
</tr>
<tr>
<td>W</td>
<td>2ml</td>
</tr>
</tbody>
</table>

### P – Present      R – Reduced      W – Whitish      Y – Yellowish      Mild - +      Moderate - ++      Severe - +++

**Good Response**: Significant amelioration of signs & symptoms

**Fair Response**: Partial amelioration of signs and symptoms

**Poor response**: In significant amelioration of signs and symptoms
<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Respiratory System</th>
<th>Examination</th>
<th>Investigations</th>
<th>Before Treatment</th>
<th>After Treatment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough with expectoration difficulty in breathing since one month</td>
<td>Cough</td>
<td>P</td>
<td>Cough</td>
<td>R</td>
<td>BLOOD-</td>
<td>Good</td>
</tr>
<tr>
<td></td>
<td>Sputum</td>
<td>W</td>
<td>Sputum</td>
<td>W</td>
<td>TC - 9000 Cells/cu.mm</td>
<td>TC - 9000 Cells/cu.mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DC - P 52%</td>
<td>DC - P 52%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L 46%</td>
<td>L 46%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>E 02%</td>
<td>E 02%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ESR ½ hr 5mm</td>
<td>ESR ½ hr 5mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 hr 12mm</td>
<td>1 hr 10mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bl. Sugar 75 mgs%</td>
<td>Bl. Sugar 70 mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bl. Urea 23 mgs%</td>
<td>Bl. Urea 25 mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Serum Cholesterol 153 mgs%</td>
<td>Serum Cholesterol 153 mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hb- 69%</td>
<td>Hb- 69%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bl. Urea 23 mgs%</td>
<td>Bl. Urea 25 mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Serum Cholesterol 153 mgs%</td>
<td>Serum Cholesterol 153 mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TC - 8000 Cells/cu.mm</td>
<td>TC - 8000 Cells/cu.mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DC - P 52%</td>
<td>DC - P 52%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L 35%</td>
<td>L 35%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>E 07%</td>
<td>E 07%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ESR ½ hr 15mm</td>
<td>ESR ½ hr 10mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 hr 32mm</td>
<td>1 hr 20mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bl. Sugar 70 mgs%</td>
<td>Bl. Sugar 60 mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bl. Urea 19 mgs%</td>
<td>Bl. Urea 20 mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Serum Cholesterol 223 mgs%</td>
<td>Serum Cholesterol 230 mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hb- 71%</td>
<td>Hb- 71%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bl. Urea 19 mgs%</td>
<td>Bl. Urea 20 mgs%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Serum Cholesterol 223 mgs%</td>
<td>Serum Cholesterol 230 mgs%</td>
<td></td>
</tr>
</tbody>
</table>

Good Response: Significant amelioration of signs & symptoms
Fair Response: Partial amelioration of signs and symptoms
Poor response: In significant amelioration of signs and symptoms
### Case 3
**Name:** Mrs. Lakshmi  
**Age:** 65  
**Sex:** F  
**O.P.No:** 39726  
**Drug:** Sadamanjil ver chooranam 1gm Three times a day with Hot water  
**Diagnosis:** Eraippu Erumal  
**Occupation:** Housewife

<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Respiratory System</th>
<th>Examination</th>
<th>Investigations</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough with expectoration</td>
<td>Before Treatment</td>
<td>After Treatment</td>
<td>Before Treatment</td>
<td>After Treatment</td>
</tr>
<tr>
<td><strong>Cough</strong></td>
<td>P</td>
<td>Cough</td>
<td>R</td>
<td><strong>BLOOD-</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TC -</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9100 Cells/cu.mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DC -</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P 70% L 28% E 02%</td>
</tr>
<tr>
<td>Sputum</td>
<td>W</td>
<td>Sputum</td>
<td>W</td>
<td></td>
</tr>
<tr>
<td>Breathlessness</td>
<td>++</td>
<td>Breathlessness</td>
<td>+</td>
<td><strong>ESR</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>½ hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>ESR</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>½ hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Hb-</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>68%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Bl. Sugar</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100 mgs%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Bi. Urea</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17 mgs%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Serum Cholesterol</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>165 mgs%</td>
</tr>
<tr>
<td>Rhonchi</td>
<td>P</td>
<td>Rhonchi</td>
<td>R</td>
<td><strong>URINE -</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Albumin-</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Sugar -</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Deposits -</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2-epithelial cells</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>CHEST X – RAY</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>SPUTIM FOR AFB</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>MANTOUX</strong></td>
</tr>
</tbody>
</table>

**Mild - +**  
**Moderate - ++**  
**Severe - +++**  
**P – Present**  
**R – Reduced**  
**W - Whitish**  
**Y - Yellowish**  
**Good Response:** Significant amelioration of signs & symptoms  
**Fair Response:** Partial amelioration of signs and symptoms  
**Poor response:** In significant amelioration of signs and symptoms
<table>
<thead>
<tr>
<th>5. Name: Mrs. Alima</th>
<th>Age: 65</th>
<th>Sex: F</th>
<th>O.P.No 39964</th>
<th>No. of Days Treated: 40 Days</th>
<th>From: 05.07.06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug</td>
<td>Sadamanjil ver chooranam 1gm Three times a day with Hot water</td>
<td>Diagnosis</td>
<td>Eraippu Erumal</td>
<td>Occupation: Housewife</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Respiratory System</th>
<th>Examination</th>
<th>Investigations</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough with expectoration, Breathlessness since 1½ months</td>
<td>Cough</td>
<td>R</td>
<td>Before Treatment</td>
<td>After Treatment</td>
</tr>
<tr>
<td>Sputum</td>
<td>W</td>
<td>After Treatment</td>
<td>W</td>
<td>Investigations</td>
</tr>
<tr>
<td>Breathlessness ++</td>
<td>Breathlessness +</td>
<td>Before Treatment</td>
<td>After Treatment</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diagnoses</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLOOD-</td>
<td>Good</td>
</tr>
<tr>
<td>TC - 9000Cells/cu.mm</td>
<td></td>
</tr>
<tr>
<td>DC - P 65% L 30% E 05%</td>
<td></td>
</tr>
<tr>
<td>ESR ½ hr 16mm</td>
<td></td>
</tr>
<tr>
<td>Bl. Sugar 88mgs%</td>
<td></td>
</tr>
<tr>
<td>Bl. Urea 23mgs%</td>
<td></td>
</tr>
<tr>
<td>Serum Cholesterol 148mgs%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diagnoses</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>URINE -</td>
<td>Nil</td>
</tr>
<tr>
<td>Sugar - Nil</td>
<td></td>
</tr>
<tr>
<td>Deposits - 1NAD</td>
<td></td>
</tr>
<tr>
<td>CHEST X – RAY</td>
<td>Normal</td>
</tr>
<tr>
<td>SPUTIM FOR AFB</td>
<td>Negative</td>
</tr>
<tr>
<td>MANTOUX</td>
<td>Negative</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Name: Velayudham</th>
<th>Age: 58</th>
<th>Sex: M</th>
<th>O.P.No 40157</th>
<th>No. of Days Treated: 49 Days</th>
<th>From: 06.07.06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug</td>
<td>Sadamanjil ver chooranam 1gm Three times a day with Hot water</td>
<td>Diagnosis</td>
<td>Eraippu Erumal</td>
<td>Occupation: coolie</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Respiratory System</th>
<th>Examination</th>
<th>Investigations</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough with expectoration, difficulty in breathing on exposure to cold air, dust etc., Since 6 months</td>
<td>Cough</td>
<td>R</td>
<td>Before Treatment</td>
<td>After Treatment</td>
</tr>
<tr>
<td>Sputum</td>
<td>W</td>
<td>After Treatment</td>
<td>W</td>
<td>Investigations</td>
</tr>
<tr>
<td>Breathlessness ++</td>
<td>Breathlessness +</td>
<td>Before Treatment</td>
<td>After Treatment</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diagnoses</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLOOD-</td>
<td>Good</td>
</tr>
<tr>
<td>TC - 8800Cells/cu.mm</td>
<td></td>
</tr>
<tr>
<td>DC - P 63% L 23% E 04%</td>
<td></td>
</tr>
<tr>
<td>ESR ½ hr 30mm</td>
<td></td>
</tr>
<tr>
<td>Bl. Sugar 83mgs%</td>
<td></td>
</tr>
<tr>
<td>Bl. Urea 33mgs%</td>
<td></td>
</tr>
<tr>
<td>Serum Cholesterol 151mgs%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diagnoses</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>URINE -</td>
<td>Nil</td>
</tr>
<tr>
<td>Sugar - Nil</td>
<td></td>
</tr>
<tr>
<td>Deposits - occult puscells</td>
<td></td>
</tr>
<tr>
<td>CHEST X – RAY</td>
<td>Chronic Bronchitis</td>
</tr>
<tr>
<td>SPUTIM FOR AFB</td>
<td>Negative</td>
</tr>
<tr>
<td>MANTOUX</td>
<td>Negative</td>
</tr>
</tbody>
</table>

Mild - + Moderate - ++ Severe - +++
P – Present R – Reduced
W- Whitish Y - Yellowish

**Good Response**: Significant amelioration of signs & symptoms
**Fair Response**: Partial amelioration of signs and symptoms
**Poor response**: In significant amelioration of signs and symptoms
### 7. Gomathy
- **Age:** 57
- **Sex:** F
- **Drug:** Sadamanjil ver chooranam 1gm
- **Diagnosis:** Eraippu Erumal
- **Occupation:** Housewife

#### Complaints & Duration
- **Cough:** Present
- **Difficulty in breathing:** Reduced

#### Examination
- **Sputum:** Whitish

#### Investigations
- **Blood:**
  - TC: 8400 Cells/cu.mm (P)
  - DC: 60% P, 36% L, 04% E (P)
  - ESR: 14 mm/hr (R)
- **Sputum:**
  - Bl. Sugar: 166 mgs%
  - Bl. Urea: 29 mgs%

#### Response
- **Cough:** Partial amelioration
- **Breathlessness:** Significant amelioration
- **Rhonchi:** Significant amelioration
- **Response:** Good

### 8. Jafar
- **Age:** 31
- **Sex:** M
- **Drug:** Sadamanjil ver chooranam 1gm
- **Diagnosis:** Eraippu Erumal
- **Occupation:** Coolie

#### Complaints & Duration
- **Cough:** Present
- **Difficulty in breathing:** Reduced
- **Breathlessness:** Significant

#### Examination
- **Sputum:** Whitish

#### Investigations
- **Blood:**
  - TC: 9700 Cells/cu.mm (P)
  - DC: 70% P, 27% L, 03% E (P)
  - ESR: 2 mm/hr (R)
- **Sputum:**
  - Bl. Sugar: 89 mgs%
  - Bl. Urea: 22 mgs%

#### Response
- **Cough:** Partial amelioration
- **Breathlessness:** Significant amelioration
- **Rhonchi:** Significant amelioration
- **Response:** Good

---

**Mild** - +  **Moderate** - ++  **Severe** - +++

P – Present  R – Reduced  
W - Whitish  Y - Yellowish

**Good Response** : Significant amelioration of signs & symptoms
**Fair Response** : Partial amelioration of signs and symptoms
**Poor response** : In significant amelioration of signs and symptoms
<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Respiratory System</th>
<th>Examination</th>
<th>Investigations</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9. Name:</strong> Mrs. Shankari</td>
<td>Age: 45</td>
<td>Sex: F</td>
<td>O.P.No 41758</td>
<td>No. of Days Treated: 47</td>
</tr>
<tr>
<td>Cough with expectoration</td>
<td><strong>Before Treatment</strong></td>
<td><strong>After Treatment</strong></td>
<td><strong>Before Treatment</strong></td>
<td><strong>After Treatment</strong></td>
</tr>
<tr>
<td>Cough</td>
<td>P</td>
<td>Cough</td>
<td>R</td>
<td>Cough</td>
</tr>
<tr>
<td>Breathlessness</td>
<td>++</td>
<td>Breathlessness</td>
<td>+</td>
<td>Breathlessness</td>
</tr>
<tr>
<td>Sputum</td>
<td>W</td>
<td>Sputum</td>
<td>W</td>
<td>Sputum</td>
</tr>
<tr>
<td>Blood</td>
<td>Fair</td>
<td>BLOOD-</td>
<td>BLOOD-</td>
<td>BLOOD-</td>
</tr>
<tr>
<td>TC</td>
<td>9000Cells/cu.mm</td>
<td>TC</td>
<td>8500Cells/cu.mm</td>
<td>TC</td>
</tr>
<tr>
<td>DC</td>
<td>P</td>
<td>L</td>
<td>40%</td>
<td>E</td>
</tr>
<tr>
<td>ESR</td>
<td>½ hr</td>
<td>13mm</td>
<td>1 hr</td>
<td>28mm</td>
</tr>
<tr>
<td>Bl.Sugar</td>
<td>88mgs%</td>
<td>Bl.Sugar</td>
<td>87mgs%</td>
<td>Bl.Urea</td>
</tr>
</tbody>
</table>

**Response:**
- **Good Response:** Significant amelioration of signs & symptoms
- **Fair Response:** Partial amelioration of signs and symptoms
- **Poor response:** In significant amelioration of signs and symptoms

---

<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Respiratory System</th>
<th>Examination</th>
<th>Investigations</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10. Name:</strong> Jebas</td>
<td>Age: 82</td>
<td>Sex: M</td>
<td>O.P.No 41781</td>
<td>No. of Days Treated: 48</td>
</tr>
<tr>
<td>Cough with expectoration chest tightness, breathless during winter season since 1 year</td>
<td><strong>Before Treatment</strong></td>
<td><strong>After Treatment</strong></td>
<td><strong>Before Treatment</strong></td>
<td><strong>After Treatment</strong></td>
</tr>
<tr>
<td>Cough</td>
<td>P</td>
<td>Cough</td>
<td>R</td>
<td>Cough</td>
</tr>
<tr>
<td>Breathlessness</td>
<td>++</td>
<td>Breathlessness</td>
<td>+</td>
<td>Breathlessness</td>
</tr>
<tr>
<td>Sputum</td>
<td>W</td>
<td>Sputum</td>
<td>W</td>
<td>Sputum</td>
</tr>
<tr>
<td>Blood</td>
<td>Good</td>
<td>BLOOD-</td>
<td>BLOOD-</td>
<td>BLOOD-</td>
</tr>
<tr>
<td>TC</td>
<td>9400Cells/cu.mm</td>
<td>TC</td>
<td>9000Cells/cu.mm</td>
<td>TC</td>
</tr>
<tr>
<td>DC</td>
<td>P</td>
<td>L</td>
<td>32%</td>
<td>E</td>
</tr>
<tr>
<td>ESR</td>
<td>½ hr</td>
<td>10mm</td>
<td>1 hr</td>
<td>22mm</td>
</tr>
<tr>
<td>Bl.Sugar</td>
<td>86mgs%</td>
<td>Bl.Sugar</td>
<td>86mgs%</td>
<td>Bl.Urea</td>
</tr>
</tbody>
</table>

**Response:**
- **Good Response:** Significant amelioration of signs & symptoms
- **Fair Response:** Partial amelioration of signs and symptoms
- **Poor response:** In significant amelioration of signs and symptoms

---

Mild - +  Moderate - ++  Severe - +++
P – Present  R – Reduced  W- Whitish  Y - Yellowish

**Good Response:** Significant amelioration of signs & symptoms
**Fair Response:** Partial amelioration of signs and symptoms
**Poor response:** In significant amelioration of signs and symptoms
### Table 11: Adhimoolam

<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Respiratory System</th>
<th>Examination</th>
<th>Investigations</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough</td>
<td>Before Treatment</td>
<td>After Treatment</td>
<td>Before Treatment</td>
<td>After Treatment</td>
</tr>
<tr>
<td>Cough</td>
<td>P</td>
<td>Cough</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>Sputum</td>
<td>W</td>
<td>Sputum</td>
<td>W</td>
<td></td>
</tr>
<tr>
<td>Breathlessness</td>
<td>++</td>
<td>Breathlessness</td>
<td>+</td>
<td></td>
</tr>
</tbody>
</table>

**Drug**: Sadamanjil ver chooranam 1gm Three times a day with Hot water  
**Diagnosis**: Eraippu Erumal  
**Occupation**: Farmer  

### Table 12: Subbulakshmi

<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Respiratory System</th>
<th>Examination</th>
<th>Investigations</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough</td>
<td>Before Treatment</td>
<td>After Treatment</td>
<td>Before Treatment</td>
<td>After Treatment</td>
</tr>
<tr>
<td>Cough</td>
<td>P</td>
<td>Cough</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>Sputum</td>
<td>W</td>
<td>Sputum</td>
<td>W</td>
<td></td>
</tr>
<tr>
<td>Breathlessness</td>
<td>++</td>
<td>Breathlessness</td>
<td>+</td>
<td></td>
</tr>
</tbody>
</table>

**Drug**: Sadamanjil ver chooranam 1gm Three times a day with Hot water  
**Diagnosis**: Eraippu Erumal  
**Occupation**: Housewife

### Mild - +  Moderate - ++  Severe - +++
- **P** – Present
- **R** – Reduced
- **W** - Whitish
- **Y** - Yellowish

**Good Response**: Significant amelioration of signs & symptoms

**Fair Response**: Partial amelioration of signs and symptoms

**Poor response**: In significant amelioration of signs and symptoms
### Complaints & Duration

<table>
<thead>
<tr>
<th>Respiratory System</th>
<th>Before Treatment</th>
<th>After Treatment</th>
<th>Investigations</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cough</strong></td>
<td>P</td>
<td>Cough</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td><strong>Sputum</strong></td>
<td>-</td>
<td>Sputum</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Breathlessness</strong></td>
<td>++</td>
<td>Breathlessness</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><strong>Rhonchi</strong></td>
<td>P</td>
<td>Rhonchi</td>
<td>R</td>
<td></td>
</tr>
</tbody>
</table>

#### Diagnoses
**Eraippu Erumal**

#### Occupation
Labourer

#### Blood Investigation
<table>
<thead>
<tr>
<th>Before Treatment</th>
<th>After Treatment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TC</strong> - 9800Cells/cu.mm</td>
<td><strong>TC</strong> - 9000Cells/cu.mm</td>
<td></td>
</tr>
<tr>
<td><strong>DC</strong> P 66%</td>
<td>L 30%</td>
<td>E 04%</td>
</tr>
<tr>
<td><strong>DC</strong> P 60%</td>
<td>L 36%</td>
<td>E 04%</td>
</tr>
</tbody>
</table>

#### ESR
<table>
<thead>
<tr>
<th>Before Treatment</th>
<th>After Treatment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ESR ½ hr</strong> 40mm</td>
<td><strong>ESR ½ hr</strong> 20mm</td>
<td></td>
</tr>
<tr>
<td><strong>1 hr</strong> 85mm</td>
<td><strong>1 hr</strong> 40mm</td>
<td></td>
</tr>
</tbody>
</table>

#### Investigations
<table>
<thead>
<tr>
<th>Before Treatment</th>
<th>After Treatment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bl.Sugar</strong> 91mgs%</td>
<td><strong>Bl.Sugar</strong> 90mgs%</td>
<td></td>
</tr>
<tr>
<td><strong>Serum Cholesterol</strong> 153mgs%</td>
<td><strong>Serum Cholesterol</strong> 153mgs%</td>
<td></td>
</tr>
<tr>
<td><strong>Hb-</strong> 75%</td>
<td><strong>Hb-</strong> 75%</td>
<td></td>
</tr>
<tr>
<td><strong>BLOOM-</strong></td>
<td><strong>BLOOD-</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Bl. Urea</strong> 19mgs%</td>
<td><strong>Bl. Urea</strong> 20mgs%</td>
<td></td>
</tr>
</tbody>
</table>

### Additional Information
- **Good Response**: Significant amelioration of signs & symptoms
- **Fair Response**: Partial amelioration of signs and symptoms
- **Poor response**: In significant amelioration of signs and symptoms

---

**Mild - +  Moderate - ++  Severe - +++**

**P – Present  R – Reduced  W- Whitish  Y - Yellowish**
### 15. Name: Mariappan  
Age: 60  
Sex: M  
O.P.No 61628  
No. of Days Treated 27 Days  
From 26.10.06

<table>
<thead>
<tr>
<th>Drug</th>
<th>Sadamanjil ver chooranam 1gm Three times a day with Hot water</th>
<th>Diagnosis</th>
<th>Eraippu Erumal</th>
<th>Occupation: Farmer</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Respiratory System</th>
<th>Examination</th>
<th>Investigations</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Treatment</td>
<td>After Treatment</td>
<td>Before Treatment</td>
<td>After Treatment</td>
<td></td>
</tr>
<tr>
<td><strong>Cough</strong></td>
<td>P</td>
<td>Cough</td>
<td>R</td>
<td><strong>BLOOD-</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TC - 8600Cells/cu.mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DC - P 56% L 40% E 04%</td>
</tr>
<tr>
<td><strong>Sputum</strong></td>
<td>W</td>
<td>Sputum</td>
<td>W</td>
<td><strong>BLOOD-</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TC - 8000Cells/cu.mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DC - P 56% L 40% E 04%</td>
</tr>
<tr>
<td><strong>Breathlessness</strong></td>
<td>++</td>
<td>Breathlessness</td>
<td>+</td>
<td><strong>ESR</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>½ hr 20mm 1 hr 42mm</td>
</tr>
<tr>
<td><strong>Rhonchi</strong></td>
<td>P</td>
<td>Rhonchi</td>
<td>R</td>
<td><strong>Hb-</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>71%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bl. Sugar 75%</td>
</tr>
<tr>
<td><strong>Sputum</strong></td>
<td>W</td>
<td></td>
<td></td>
<td><strong>Bl. Urea</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19%</td>
</tr>
<tr>
<td><strong>Breathlessness</strong></td>
<td>++</td>
<td></td>
<td></td>
<td><strong>Serum Cholesterol</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>153%</td>
</tr>
<tr>
<td><strong>Rhonchi</strong></td>
<td>P</td>
<td></td>
<td></td>
<td><strong>Albumin-</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Sugar -</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Deposits -</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1-2puscells</td>
</tr>
<tr>
<td><strong>CHEST X – RAY</strong></td>
<td>Normal</td>
<td></td>
<td></td>
<td><strong>URINE -</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>SPUTIM FOR AFB</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>MANTOUX</strong></td>
</tr>
</tbody>
</table>

Mild - +  Moderate - ++  Severe - +++  
P – Present  R – Reduced  
W- Whitish  Y - Yellowish  

**Good Response** : Significant amelioration of signs & symptoms  
**Fair Response** : Partial amelioration of signs and symptoms  
**Poor response** : In significant amelioration of signs and symptoms

---

### 16. Name: Balasubramanian  
Age: 62  
Sex: M  
O.P.No 61737  
No. of Days Treated 28 Days  
From 26.10.06

<table>
<thead>
<tr>
<th>Drug</th>
<th>Sadamanjil ver chooranam 1gm Three times a day with Hot water</th>
<th>Diagnosis</th>
<th>Eraippu Erumal</th>
<th>Occupation: Housewife</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Complaints &amp; Duration</th>
<th>Respiratory System</th>
<th>Examination</th>
<th>Investigations</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Treatment</td>
<td>After Treatment</td>
<td>Before Treatment</td>
<td>After Treatment</td>
<td></td>
</tr>
<tr>
<td><strong>Cough</strong></td>
<td>P</td>
<td>Cough</td>
<td>R</td>
<td><strong>BLOOD-</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TC - 8600Cells/cu.mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DC - P 64% L 32% E 04%</td>
</tr>
<tr>
<td><strong>Sputum</strong></td>
<td>W</td>
<td>Sputum</td>
<td>W</td>
<td><strong>BLOOD-</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TC - 8000Cells/cu.mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>DC - P 60% L 36% E 04%</td>
</tr>
<tr>
<td><strong>Breathlessness</strong></td>
<td>++</td>
<td>Breathlessness</td>
<td>+</td>
<td><strong>ESR</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>½ hr 10mm 1 hr 30mm</td>
</tr>
<tr>
<td><strong>Rhonchi</strong></td>
<td>P</td>
<td>Rhonchi</td>
<td>R</td>
<td><strong>Hb-</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>71%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bl. Sugar 70mgs%</td>
</tr>
<tr>
<td><strong>Sputum</strong></td>
<td>W</td>
<td></td>
<td></td>
<td><strong>Bl. Urea</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>23mgs%</td>
</tr>
<tr>
<td><strong>Breathlessness</strong></td>
<td>++</td>
<td></td>
<td></td>
<td><strong>Serum Cholesterol</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>154mgs%</td>
</tr>
<tr>
<td><strong>Rhonchi</strong></td>
<td>P</td>
<td></td>
<td></td>
<td><strong>Albumin-</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Sugar -</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Deposits -</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1-2puscells</td>
</tr>
<tr>
<td><strong>CHEST X – RAY</strong></td>
<td>Normal</td>
<td></td>
<td></td>
<td><strong>URINE -</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>SPUTIM FOR AFB</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>MANTOUX</strong></td>
</tr>
</tbody>
</table>

**Good Response** : Significant amelioration of signs & symptoms  
**Fair Response** : Partial amelioration of signs and symptoms  
**Poor response** : In significant amelioration of signs and symptoms
<table>
<thead>
<tr>
<th>Complain &amp; Duration</th>
<th>Respiratory System Examination</th>
<th>Investigations</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before Treatment</strong></td>
<td><strong>After Treatment</strong></td>
<td><strong>Before Treatment</strong></td>
<td><strong>After Treatment</strong></td>
</tr>
<tr>
<td><strong>Cough</strong></td>
<td>P Cough</td>
<td>R Cough</td>
<td>BLOOD-TC - 11200 Cells/cu.mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DC - P 68% L 20% E 12%</td>
</tr>
<tr>
<td><strong>Sputum</strong></td>
<td>W Sputum</td>
<td>W Sputum</td>
<td>ESR ½ hr 3mm 1 hr 6mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hb- 71%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bl. Sugar 94mg%</td>
</tr>
<tr>
<td><strong>Breathlessness</strong></td>
<td>++ Breathlessness</td>
<td>+ Breathlessness</td>
<td>Bl. Urea 27mg%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Serum Cholesterol 194mg%</td>
</tr>
<tr>
<td><strong>Rhonchi</strong></td>
<td>P Rhonchi</td>
<td>R Rhonchi</td>
<td>Albumin- Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sugar - Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Deposits - 2-3pucells</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CHEST X – RAY Chronic bronchitis</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SPUTIM FOR AFB Negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MANTOUX Negative</td>
</tr>
</tbody>
</table>

**Good Response**: Significant amelioration of signs & symptoms

**Fair Response**: Partial amelioration of signs and symptoms

**Poor Response**: Insignificant amelioration of signs and symptoms
### Patient 19: Jeyalaxmi
- **Name:** Jeyalaxmi  
- **Age:** 30  
- **Sex:** F  
- **O.P.No:** 62329  
- **No. of Days Treated:** 25  
- **Drug:** Sadamanjil ver chooranam 1gm Three times a day with Hot water  
- **Diagnosis:** Eraippu Erumal  
- **Occupation:** Housewife  
- **Complaints & Duration:**
  - **Respiratory System:**
    - Before Treatment: Cough, Sputum, Breathlessness  
    - After Treatment: Cough, Sputum, Breathlessness  
    - **Examination:**
      - **Cough:** P  
      - **Sputum:** W  
      - **Breathlessness:** ++  
    - **Investigations:**
      - **BLOOD-** TC - 8000Cells/cu.mm  
      - **ESR** ½ hr 7mm  
      - **Hb-** 66%  
      - **Bl. Sugar** 92mgs%  
      - **Bl. Urea** 20mgs%  
      - **Serum Cholesterol** 159mgs%  
      - **URINE -** Albumin- Nil  
      - **Albumin** Nil  
      - **Sugar** - Nil  
      - **CHEST X – RAY** Normal  
      - **SPUTUM FOR AFB** Negative  
      - **MANTOUX** Negative  
- **Response:** **Fair**  

### Patient 20: Shankarasubbu
- **Name:** Shankarasubbu  
- **Age:** 63  
- **Sex:** M  
- **O.P.No:** 62937  
- **No. of Days Treated:** 34  
- **Drug:** Sadamanjil ver chooranam 1gm Three times a day with Hot water  
- **Diagnosis:** Eraippu Erumal  
- **Occupation:** Labourer  
- **Complaints & Duration:**
  - **Respiratory System:**
    - Before Treatment: Cough, Sputum, Breathlessness  
    - After Treatment: Cough, Sputum, Breathlessness  
    - **Examination:**
      - **Cough:** P  
      - **Sputum:** W  
      - **Breathlessness:** ++  
    - **Investigations:**
      - **BLOOD-** TC - 10500Cells/cu.mm  
      - **ESR** ½ hr 4mm  
      - **Hb-** 70%  
      - **Bl. Sugar** 92mgs%  
      - **Bl. Urea** 17mgs%  
      - **Serum Cholesterol** 164mgs%  
      - **URINE -** Albumin- Nil  
      - **Albumin** Nil  
      - **Sugar** - Nil  
      - **CHEST X – RAY** Normal  
      - **SPUTUM FOR AFB** Negative  
      - **MANTOUX** Negative  
- **Response:** **Good**  

---

Mild - +  Moderate - ++  Severe - +++  
P – Present  R – Reduced  
W- Whitish  Y - Yellowish  

**Good Response** : Significant amelioration of signs & symptoms  
**Fair Response** : Partial amelioration of signs and symptoms  
**Poor response** : In significant amelioration of signs and symptoms
Mild  - P  Moderate - + R  Severe - ++ Y

Good Response : Significant amelioration of signs & symptoms
Fair Response : Partial amelioration of signs and symptoms
Poor response : Insignificant amelioration of signs and symptoms

P – Present  R – Reduced
W - Whitish  Y - Yellowish