AN OPEN CLINICAL STUDY OF SIDDHA
DRUGS “THIRUTHARAKCHATHA CHOORANAM” (INTERNAL)
AND “ARUGANVER THYLAM (EXTERNAL) IN THE
TREATMENT OF “VIYAGULAUNMATHAM” (DEPRESSION)

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By
Dr.S.SIVA JOSYAA
PG Scholar
National Institute of Siddha, Chennai-47

Under the guidance of
Dr.N.J.MUTHUKUMAR, M.D (S),
Associate professor,
Head of the Department,
National Institute of Siddha, Chennai-47
Study Centre

Department of Sirappu Maruthuvam,
National Institute of siddha
Tambaram Sanatorium, Chennai – 47.

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INTRODUCTION

In the view of Siddhar Thirumoolar definition of medicine, that one who ensures ailments of physical, mental, preventive and also postpone the death. Siddha system of medicine is a unique traditional system of medicine in the world. It is also called Tamil Maruthuvam and commonly followed by Tamil people since time immemorial. According to Siddha system of medicine, perfect health is maintained by three uyirthathukkal (humours) namely Vaatham, Pitham, Kabam. Whenever there is derangement in these three uyirthathukkal, the resultant will be diseases. The salvation is the ultimate aim of Siddhars, so they are maintained their health physically and mentally.

Siddha system has the wonderful principle which is Panchapootham theory. According to Panchapootham theory the universe and the human body both are formed by five elements i.e. Space, Air, Fire, Water, and Earth. Likewise, the diseases and the medicines are also based on the Panchapootham theory. Siddhars believed in the concept that a healthy soul can developed only from a healthy body. So, they developed methods and medications to strengthen their physical body and thereby their souls.

Siddhars have listed the diseases of mankind as 4448 based on the Mukkutram i.e., Vali, Azhal, Iyyam. Among the 4448 diseases, the Psychological related diseases are classified into 18 varieties by Siddhar Agasthiyar. The other imperative Siddhars Yugi Munivar and Theraiyar have also described the psychiatric diseases in their texts.

The dissertation topic chosen by me Viyagula Unmatham which mostly correlated with the symptoms of Depression in Modern science.
Depression is a common mental disorder, characterised by sadness, loss of interest or pleasure, feeling guilt or low self-esteem, disturbed sleep, appetite, lethargy and poor concentration. A depressive disorder is a syndrome that reflects a sad and irritable mood exceeding normal sadness or grief. More specifically, the sadness mentality is characterized by a greater intensity, duration with severe symptoms and functional disabilities than normal.

In this condition, anxiety and depression due to lack of courage, sorrow, grief, paleness, loss of wealth and crying with tears are the symptoms of the diseases.

Depressive disorders are a huge public-health problem, due to its affecting millions of people. About 10% of adults up to 8% of teens and 2% of preteen children experience some kind of depressive disorder.

Ref: http://www.medicinenet.com/depression/article.htm

It is the most common psychiatric disorder; its life time prevalence is 17%. It is twice as prevalent in women as in men and the mean age of onset is around 40 years. It is commonly in divorced and separated persons.

Depression is also responsible for maximum DAILYs (disability adjusted life years) amongst all the psychiatric disorders. It is also the most common cause of suicide.

Ref: Review of psychiatry praveen Tripathi

A large population-based study from India to report on prevalence of depression and shows that among urban south Indians, the prevalence of depression was 15.1%. Age, female gender and lower socio-economic status are some of the factors associated with depression in this population. The overall prevalence of depression was 15.1% (age-adjusted, 15.9%) and was higher in females (females 16.3% vs. males 13.9%, p<0.0001). The odds ratio (OR) for depression in female subjects was 1.20 [Confidence Intervals (CI): 1.12–1.28, p<0.001] compared to male subjects. Depressed mood was the most common symptom (30.8%), followed by tiredness (30.0%) while more severe symptoms such as suicidal thoughts (12.4%) and speech and motor retardation (12.4%) were less common.

Ref: http://www.plosone.org/article/info:doi/10.1371/journal.pone.0007185
Yogam is a complete science of health, which deals with understanding of adequate functioning of all systems of the body and appropriate coordination between them, along with healthy functioning of our mind. The practice of yogam integrated the body with the mind and mind with the soul. Yogam prevents one from physical, mental and emotional imbalances due to various reasons in our day to day life. Yogam has the capacity to free the body from most of the diseases, it not only operates on the physical level but also had great benefits on mental worries and tensions. The Pranayamam helps to reduce the intensity of mental stress.

Every month, about 30-40 patients report to OPD of Ayothidoss Pandithar Hospital, National Institute of Siddha, Tambaram sanatorium, Chennai-47.

Even though there are vast collection of medicines in Siddha to treat the Mana noigal but there is very minimum number of research has been carried out on depression. So, the author chosen Thirutharakchatha chooranam internally and Aruganver thylam externally, the ingredients are perfect combination for to treat Viyagula unmatham, cost effective and easily can be prepared too. Yogam therapy is indicated for udal and ulanoigal. Hence the Yogam therapy also included in the study.
AIM AND OBJECTIVES

AIM:

To comparative clinical study of *THIRUTHARAKCHATHA CHOORANAM* (internally) and *ARUGAN VER THYLAM* (externally) with and without *yogam* therapy.

OBJECTIVE:

➢ To make a detailed clinical evaluation of the disease by careful examination of etiology, symptoms, complication, treatment and Prognosis

➢ To study the Siddha and Modern aspects of *Viyagula unmatham* (Depression)

➢ To study the Siddha basic principles towards the efficacy of trial medicines.

➢ To carry out the Biochemical analysis of trial medicine *THIRUTHARAKCHATHA CHOORANAM*

➢ To analyse the therapeutical efficacy of trial medicine (internal medicine) of *THIRUTHARAKCHATHA CHOORANAM* for depression.
In Siddha system, all psychiatric diseases are coming under the kirigai noigal. Kirigai maruthuvam, the psychiatry in Siddha system of medicine is propounded by several Siddhars of whom the most renowned are AGATHIYAR, YUGIMUNIVAR and THERAIYAR. Their descriptions are phenomenological. In Siddha system, the physiology of human body is dealt in 96 thatthuvangal (philosophy). Of the 96 thatthuvam, Manam (mind), Buththi (wisdom, decision making), Chittham(determination), Agangaram (accomplishment) are the responsible for the mental well-being. Agangaram is the innate character of manam. Manam(mind) is responsible for thinking, reasoning, planning and self-realization.

The mind and physique are inseparable and inter dependable. Manam is both receptive and executive. In-appropriate food, seasonal variations, somatic diseases, and drug abuse are some of the factors that influence the mind. This stimulates the three humours vali, azhal and iyam, especially deranges vali or azhal or often the predominance of azhal humour over the other two, thereby manifest mana noigal (mental disorders). Agathiyr maanidar kirigai nool and yogi chinthamani-800 are noteworthy psychiatric literature in Siddha system. They classified the clinical variety of mental illness, based on symptomatology. It’s absolutely correlates with modern psychiatric illness like depression, schizopernia, mania, convulsive disorders, neurotic illness, drug dependence and toxic psychosis etc.

VIYAGULA UNMATHAM(DEPRESSION):

Viyagula unmatham is a type of unmatham which is a psychiatric disease described in the texts of “Sirappu marythuvam” by Dr.R. Thiyagarajan and “Siddha Maruthuvam Pothu” by K. N. Kuppusami Muthaliyar and also “Noi Naadal Noi Muthal Naadal Thiraddu - Part - 2” by Dr. M. Shanmugavelu.)

UNMATHAM (DEFFECTED NORMAL MENTAL STATE):

Other name: veri noi, pithu noi, paithiya noi ,pitha noi, unmatham.

It is a psychic disorder, develops as changed normal mental state due to the vitiation of three humours viz vatham, pitham and kapham. Changed mental state, loss of intelligence, articulation defect, dancing, singing, continuous working mania, quarrelling and beating.
**Murkurigal:**

- Reduced mental function
- Excessive anger.
- Mood swings.
- Low pitched or high-pitched voice.
- Lethargy.
- Blabbering and whispering always.
- Abnormal behaviour.

**Noi varum vazhi:**

The disease occurs due to destruction physical and mental factors of the body. The reasons for this are,

- Increased intake of food,
- Excessive starvation,
- Drug abuse,
- Increased desires,
- Frighten,
- Frequent agitation.

Hence the disease can occur in association with vadha disease like *pakkavatham, valipu noi,* its also seen in persons those who were undergoing ailments for long time and also in postpartum ladies whose health is severely affected.

The disease can also occur due to wrong practice of yogam during the *thuriya avaththai* state. Since this disease occurs due to deranged *azhal kutram(piththam),* is called *paithiya noi.* The persons whose mental state is disturbed and who keeps on blabbering whatever he likes they are commonly called as *paithiyam.*

**TYPES OF UNMATHAM:**

*Unmatham* classified into 6 types,

- **Vatha Unmatham:**

  Affected mental state, articulation defect, dancing, singing, quarrelling and beating are the general symptoms of vatha unmatham.
• **Pitha unmatham:**
  
  Frightening others, abnormal body movements, interested in cold items.

• **Kapha unmatham:**
  
  Insomnia, frightening others, sexual indulgence, self-centeredness, possessiveness.

• **Mukkuttra unmatham:**
  
  The mixed signs and symptoms of vatham, pitham and kapham unmatham is called mukkuttra unmatham.

• **Viyagula unmatham:**
  
  Anxiety and depression due to bereavement, sorrow and grief, paleness, loss of wealth and weeping are the symptoms of this disease.

• **Nanju unmatham:**
  
  Toxicity of metals and others, which affects the brain, drug abuse, tiredness of extremities, sensory organs, blackish discoloration of the body, general debility, weakness of the body and perplexity are the symptoms of these diseases.

**COMMON SYMPTOMS:**

➢ Mental instability,
➢ Restlessness,
➢ Loss of control,
➢ Confined thoughts,
➢ Speaking loudly,
➢ Sleeplessness,
➢ Blabbering,
➢ Slurred speech,
➢ Lack of interest,
➢ Loss of strength.

**AETIOLOGY:**

In the text of agathiyar kirisa nithana nool,
In the text book of yugi maa munivar vaiththiya sinhthamani 800,

“அன்மையின் பிறப்பைப் படிக்க நேட்டும்
பல்லின் குண்டுகள் தோற்றுதலே


Vigara pitham:

“முனியைக் கூறியிற்குக் கோளத்து வருவது

தினமலப்புக் குண்டுகள் காணும் காலத்தான்


-)(yugi maa munivar vaiththiya sinhthamani 800
➢ Sleeplessness,
➢ Bitter taste in mouth,
➢ Hatredness,
➢ Redness of eyes.
➢ Pallor of body with body pain,
➢ Vomiting,
➢ Giddiness,
➢ Lack of vigilance,
➢ Dribbling of saliva.

Unmaatha pitham

“விலைவான் சேர்த்திழவதன் பெரிகழல் பொழுது
சேர்த்திழவதன் மூலம் மறுகீடு
சூழலில் குடிலைத்தோன்றாதன் கண்டுகொள்ளும்
துற்குழியில் மேல்கண்டாசீ விளை வந்து
பாத்தை விரைத்தும் மூளித்தை
சேர்த்திழவதன் மூலம் மறுகீடு நிறுத்தல்
செருக்குள் கொண்டுவரும் சார் மரும”

- (புராணம் கலாக்தியிய கிருட்ப்பகம்800)

➢ Generalised weakness,
➢ Increase appetite,
➢ Heaviness of head,
➢ Stillness,
➢ Mute,
➢ Sleeplessness,
➢ Dribbling of saliva,
➢ Discomfort in Chest.

Uratha pitham

“உறாக்கமான் விலைவான் பெரிகழல் பொழுது
சேர்த்திழவதன் மூலம் மறுகீடு நிறுத்து
சேர்த்திழவதன் மூலம் பெரிகழல் வந்து
பாத்தை விரைத்தும் மூளித்தை

-
Increased anger,
➢ Quarrelling,
➢ Flatulence,
➢ Lack of intelligence,
➢ Redness of eyes,
➢ Sleeplessness,
➢ Weight gaining.

**MUKKUTRA VERUPAADU:**

"... Azhal kutram is a condition where the body's functions are disturbed and it affects the overall health. It can lead to physical and mental abnormalities.

**NAADI NADAI:**

"..."

Due to food and activities of *azhal kutram* vitiated from its normal level and affects 7 physical constituents one by one that leads to emaciation of the body with mental abnormalities.
Thiruvalluvar says in "Thirukkural" about physician’s duty to study the disease, Study the cause, seek subsiding ways and do what is proper and effective.

In Siddha system of medicine, the main aim of the treatment is to cure Udalpini and Manapini. Treatment is not only for perfect healing but also for prevention and rejuvenation. In siddha system of medicine line of treatment are as follows,

➢ Neekam (Treatment)
➢ Niraivu (Rejuvenation)
➢ Kappu (Prevention)

1. Neekam (Treatment):
   • விளையாடல்
   • குற்றுமைத்தான்
Viresanam:

Siddha system of medicine is based on three humours and hence the treatment is mainly aimed to bring the three humours to equilibrium state and thereby restoring the physiological condition of the seven thathus.

Internal medicine:

The medicines which are taken internally are called as internal medicines. These are classified into 32 types, e.g. surasam, saaru, pittu, vadagam and chooranam, thylam

External medicine:

The medicines which are applied externally are called as external medicines. These also classified into 32 types, e.g. kattu, patru, otradam, vedhu and thokkanam.

Anubanam(vehicle):

"அருங்காலக் காலம் மற்றும் பிறக்கேறும் நூற்றுக்காலன
திருத்தல விகுரைவுடன் பயன்படுத்தும் சைத்தியான தம்புரையிலேயே
பொய்யான வாய்ப்பின்றி தீர்வுடன்"
- இக்குருமார் சிவகுருமார்

Pathiyam (Dietary Regimen):

In mild conditions of the disease, salt and tamarind can be taken in little quantities. When the condition is severe, tamarind should be avoided and salt must be consumed after frying.

"பாதிக்கிற ரோகங்களிலும் சிலர்களிலும் பயனுள்ள
பாதிப்புகள் சமர்க்கங்களிலும் பயிற்சிப்புடன்
பாதிக்கும் வழிக்கேள்வுகளில் பாதிக்கும் பாதிக்கும் சமயப்பாண்டு பாண்டு
- இக்குருமார்,

2. Niraivu (Rejuvenation):
Substances used for neutralising the three humours are:

"உண்ணால் மிகுந்த குடிநீரை பயாலங்களில்
கொல்லிக் கொரிலக்கோளோட் புருந்து கொல்லங்களில்
டிக்கி பரவு மாட்டு நூற்றாண்டு கொண்டு
பல்கோதிகள் கவக்காரோடு பல்கோதிகளில் நிற்கினே
- பகாத்ரை காசிக் குறிக்கும்

The patients are well motivated. The nature and course of the disease is explained to them, Life-style modification advised.

3. Kappu (Prevention):

Ideal measures mentioned in the Siddha classical text Pathartha guna chinthamani for healthy living as below,

"அதீரிகள் கொல்லிகளோடு பெருநீரோடு பிற்போதீரம
அவைகளிடம் அதிகிரிகளோடு பிற்போதீரம்
சுருக்கி பல்கோதிகளில் கவக்காரோடு புருந்து
சுருக்கி கொல்லிகளில் கொல்லங்களில் புருந்து
புருந்து கொல்லிகளோடு கொல்லங்களில் புருந்து
புருந்து கொல்லிகளோடு கொல்லங்களில் புருந்து
புருந்து கொல்லிகளோடு கொல்லங்களில் நிற்கினே

The disease occurs due to activities that increase azhal and consuming food that increases azhal, so in order to correct the diseases we have to normalize the deranged azhal and there by the other factors.

➢ Ghee based medicine, milk to be administered initially and take purgation and therapeutic vomiting may be advised.
➢ Medicine which improves the strength of the body.
➢ Yogam is the important kayakalpam to treat psychiatric diseases
Yogam is one of the kayalpam methods that preserve physical and mental health by preventing the approach of wrinkling physical and mental health. The practice of yoga integrated the body with the mind and the mind with the soul. Daily practices gradually bring about a change of thoughts, conduct, attitude, behaviour and personality. Ones feels a unique enthusiasm fearlessness, happiness, dedication, faith, self-confidence, courage, boldness, satisfaction, peace and contentment, culminating into physical fitness and mental stability and emotional quietness and ultimately a fruitful life.

“மணறும் விஞ்ஞானப்பட்டரம் மாற்றியும் செதுக்க வேண்டும்
மணறும் விஞ்ஞானப்பட்டரம் மறுமலர் சென்று வேண்டும்
மணறும் விஞ்ஞானப்பட்டரம் மறுமலர் சென்று வேண்டும்
மணறும் விஞ்ஞானப்பட்டரம் மறுமலர் செந்து வேண்டும்”

-நூற்றுப்போல்

Yogam helps to integrate all our five sense organs to react the ecstasy of life following a disciplined manner. There are 8 types,

“இயந்திரம் பலன்பெற்றியல் அத்தம
சுட்டுதல் பிரார்த்தனையால் பெறுகிற்பச்சையே
சென்றுக்கரண்டு ரீதியாக சமாதி
அவ்லோன் ஆர்த்திவை அறியும் அதிர்வை”

-நூற்றுப்போல்

➢ Iyamam
➢ Niyamam
➢ Aadhanam
➢ Pranayamam
➢ Prathiyaayamam
➢ Dharanai
➢ Dhiyanam
➢ Samadhi
These are called “attanga yogam” or sub conscious meditation, which is given in thirumanththiram.

**IYAMAM:**

“இயமம் ஆற்றுலளவின் கொலு தொன்று ஐந்து நாட்டுகளாக
நோக்கல் எதிர்த்து என்ற நடைமுட்டு
மூன்று பாறுகள் என்று சொல்லன பாது தொன்று கொலு
தொன்று கொலு மாற்றுவிசையாளா பாது கொலு”

-திருதாயம்

*Iyamam* means “learning discipline”, it is an internal practice of cleansing or purifying the mind.

**NIYAMAM:**

“நியமம் ஆற்றுலளவின் கொலு இயமமில்லையாக
நோக்கல் எதிர்த்து என்ற நடைமுட்டு
நோக்கல் எதிர்த்து இயமமில்லையாக காணாமலோ என்ற நடைமுட்டு
தொன்று கொலு மாற்றுவிசையாளா ஆலோ”

-திருதாயம்

The *niyamam* means “purity of action”. The *niyamas* are austerity, contentment, belief in god, charity, worship of god, listening to explain to doctrines, scriptures, modesty, having a discerning mind, repetition of prayers and sacrifice.

**AASANAM:**

“அசனம் ஆற்றுலளவின் கொலு ஐந்து
நோக்கல் எதிர்த்து என்ற நடைமுட்டு
நோக்கல் எதிர்த்து இயமமில்லையாக காணாமலோ
தொன்று கொலு மாற்றுவிசையாளா ஆலோ”

-திருதாயம்

The *aasanam* means posture or pose, that is, the position of our body with reference to space. All the aasanams prove to be a good training to both body and mind.

**PRANAYAMAM:**

“பிராணயம் ஆற்றுலளவின் கொலு ஐந்து அண்டு
பிராணயம் ஆற்றுலளவின் கொலு ஐந்து அண்டு
பிராணயம் ஆற்றுலளவின் கொலு ஐந்து அண்டு”

-திருதாயம்
The perfect and scientific art of controlling one’s breathing is called pranayamam.

**PIRATHIYAGARAM:**

“... the prathiyagaram is the method of withdrawal of sense organs from the external objects.

**DHARANAI:**

“... Dharanai is fixing the attention on a single object.

**DHIYAANAM:**

“... Dhiyaanam is intense contemplation of the nature of the object of meditation. Meditation on the elements, beginning with the “random” and ending with the “inner consciousness”, enable one to gain mastery over the perception.

**SAMAADHI:**

“... Samaadhi is to merging consciousness with the object of meditation.
Aasanam advised for *v iyagula unmatham*:

1. *Thamarai aasanam* (padmasanam):

    Technique:
    ❖ Put the right leg on the left thigh, keeping the right heel pressing the lower abdomen,
    ❖ Put the left leg on the right thigh keeping the left heel pressing the lower abdomen.

    Benefits:
    ❖ Mental concentration is increased.
    ❖ Prevents joint disorders in the old age.
    ❖ Increase the digestive function.
    ❖ Produces clarity of the mind and briskness.
2. *Mutrudal aasanam (sarvangasanam)*:

**Technique:**
- Lie down on our back with palms facing upwards adjoining the body and legs put together.
- Raise the legs straight upwards and raise the body supporting the hip with hands till the chin comes into contact with the chest.

**Benefits:**
- Increase the memory power.
- Strengthening the nervous system.
- Its beneficial to persons suffering from hypothyroidism.
3. Kalappai aasanam (halasanam):

Technique:

❖ Lie down and pressing the palms downwards, raise the legs up and flexing the hip and knees.
❖ Stretch the legs straight upwardly raise and flex the hip in the direction of the head.

Benefits:

❖ It strengthens the brain and spinal cord
❖ It stimulates thyroid gland and regulates its function.
❖ It strengthens the abdominal organs.
❖ The asana increases sexual indulgence.

4. Paambu aasanam (pujangaasanam):
Technique:

❖ Lie face downwards with leg stretched and chin rest on the floor.
❖ Raise the chest and head slowly and gradually as high as possible above the level of umbilicus

Benefits:

❖ Relives loss of sleep.
❖ Increases memory power.
❖ Relives constipation and increased appetite.
❖ Its prevents menstrual disorders and preventing discharge of semen during sleep.

5. Munvalaiyv aasanam(Patchimottaasanam):

![Diagram of Munvalaiyv aasanam(Patchimottaasanam)]

Technique:

❖ Sit down with the legs stretched forwards
❖ Bend forward to rest the face in between the knees and hold the feet with the hands of the stretched arm.

Benefits:

❖ sexual indulgence
❖ Increase the appetite
❖ Strengthens spinal cord and legs.
6. Savasanam (shanthi aasanam):

Technique:

❖ Lie down on the floor with an even surface.
❖ Palm facing upward and half a foot gap in between the heels, keep the legs in relax manner.

Benefits:

❖ Relieves physical and mental tiredness.
INTRODUCTION

Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, feelings of guilt or low self-esteem, disturbed sleep or appetite, low energy, and poor concentration. When these problems last for a short period of time, it may be called a passing case of “the blues.” But it’s likely to be a depressive disorder when they last for more than two weeks and interfere with regular daily activities.

Depressive disorders, also known as mood disorders, include three main types: major depression, persistent depressive disorder, and bipolar disorder. Depressive disorders can affect people of any age, including children, teenagers, adults, and older adults.

CAUSES

Depression varies person to person and occurs due to one or more reasons. Depression is most likely due to a combination of genetic, biological, environmental, and psychological factors. Occasionally it may appear for no obvious reason.

Life events

In many cases, the first time someone becomes depressed, it has been triggered by an unwelcome or traumatic event, such as being sacked, divorced, or physically or sexually assaulted.

Loss

Often events or experiences that triggers depression mainly associated with loss of something precious in life. It could be following the actual death of someone close, a major life
change (such as moving house or changing jobs), or simply moving from one phase of life into another, e.g. as you reach retirement, children leave home, or you come to realize that you may never have a family of your own.

It’s not just the negative experience that causes the depression, but how we deal with it. If the feelings provoked are not expressed or explored at the time, they fester and contribute towards depression.

Anger

In some cases, some people call depression ‘frozen anger’. You may have experienced something which left you feeling angry and helpless, and if you were unable to express your feelings at the time – perhaps because you were a child, or your feelings were unacceptable to others – the anger becomes internalized and is expressed as depression.

Childhood experiences

Traumatic event in childhood, or were abused physically or emotionally, or were not helped to learn good coping skills as you grew up, this can leave you less able to cope with difficulties as an adult.

Women who have been the victim of physical, emotional, or sexual abuse, either as a child or perpetrated by a romantic partner are vulnerable to developing a depressive disorder as well.

Physical conditions

All medical illnesses and their treatment can act as nonspecific stressors, which may lead to mood disorders in predisposed individuals. However, sometimes certain medical conditions are believed to play a more direct role in causing the mood disorder (e.g. brain disease, certain infections, including HIV, and endocrine disorders).

The following conditions may cause depression, but are sometimes overlooked because of the focus on their physical symptoms:

- conditions affecting the brain and nervous system
- hormonal problems, especially thyroid and parathyroid problems; symptoms relating to the menstrual cycle or the menopause
- low blood sugar
- sleep problems
Different neuropsychiatric illnesses seem to be associated with an overabundance or a lack of some of these neurochemicals in certain parts of the brain. For example, a lack of dopamine at the base of the brain causes Parkinson's disease. Alzheimer's dementia seems to be related to lower acetylcholine levels in the brain. The addictive disorders are under the influence of the neurochemical dopamine. That is to say, drugs and alcohol work by releasing dopamine in the brain. The dopamine causes euphoria, which is a pleasant sensation. Individuals with anxiety, attention deficit hyperactivity disorder (ADHD), substance abuse, and developmental disabilities may be more vulnerable to developing depression.

**Side effects of medication**

Certain medications used for a variety of medical conditions are more likely than others to cause depression as a side effect, for example, many people become depressed after a heart attack, and this may be more likely if they are taking beta blocker medicines as part of their treatment. Specifically, some medications that are used to treat high blood pressure, cancer, seizures, extreme pain, and to achieve contraception can result in depression. Even some psychiatric medications like some sleep aids and medications to treat alcoholism and anxiety can contribute to the development of depression.

**Diet**

Poor diet and general lack of fitness can both contribute to depression.

In addition, anecdotal evidence suggests that occasionally people become very depressed in response to some specific foods. Such a reaction is very individual, and people are often not aware of the particular food substance or drink that is causing the problem. But if you suddenly feel depressed for no apparent reason, it may be worth considering whether you have eaten or drunk something new, and whether this might have caused your sudden change of mood. If this is the cause, your mood should lift very quickly, so long as you don’t consume any more of the particular item.

**Street drugs and alcohol**

Alcohol is a depressant and will tend to make you feel worse overall. Some street drugs can also depress, especially if used repeatedly. Repeated use of drugs or alcohol, however, desensitizes the dopamine system, which means that the system gets used to the drugs and alcohol. Therefore, a person needs more drugs or alcohol to achieve the same high feeling.
Thus, the addicted person takes more substance but feels less and less high and increasingly depressed.

**Genetics**

Although no specific genes for depression, have been identified, it does seem to run in families to some extent, and some of us are more prone to depression than others. This could also be because we learn behavior and ways of responding from our ancestors, as well as inheriting our genes from them.

The effect of maternal-fetal stress on depression is currently an exciting area of research. It seems that maternal stress during pregnancy can increase the chance that the child will be prone to depression as an adult, particularly if there is a genetic vulnerability. It is thought that the mother's circulating stress hormones can influence the development of the fetus' brain during pregnancy. This altered fetal brain development occurs in ways that predispose the child to the risk of depression as an adult.

Major depression also seems to occur in generation after generation in some families, although not as strongly as in bipolar I or II. Indeed, major depression can also occur in people who have no family history of depression.

**Chemical changes in the brain:**

![Brain Diagram](image)

*(Medial prefrontal affected in depressive mood, which is to planning cognitive behaviour, personality expression, decision making and moderating social behaviour)*
Brain imaging technologies, such as magnetic resonance imaging (MRI), have shown that the parts of the brain involved in mood, thinking, sleep, appetite, and behavior of people who have depression function differently than those of people without it.

Because antidepressants work by changing brain chemistry, many people have assumed that depression must be caused by changes in brain chemistry that are then ‘corrected’ by the drugs. Some psychiatrists may explain you that you have a ‘chemical imbalance’ and need medication to correct it. But the evidence for this, apart from the effects of medication, is very weak, and if changes to brain chemistry occur, we don’t know whether these are the result of the depression or its cause. Although there are physical tests which are occasionally used in research on depression, they are not very accurate or consistent, and there are none that are done routinely to help make a diagnosis.

Monoamine pathways, particularly those involving noradrenaline and 5-hydroxytryptamine (5-HT), innervate cortical and subcortical brain regions thought to be involved in mood regulation. Hypothesis suggests that depressive disorder is due to an abnormality in a monoamine neurotransmitter system at one or more sites in the brain. Three monoamine transmitters have been implicated— serotonin (5-HT), noradrenaline, and dopamine. The latter two neurotransmitters are called *catecholamines*. Biochemical investigations in depressed patients have focused on the *monoamine neurotransmitters* because monoamine pathways appear to play an important role in the actions of effective antidepressant drugs.
Finally, the depressive disorders appear to be associated with altered brain serotonin and norepinephrine systems. Both of these neurochemicals may be lower in depressed people. Please note that depression is "associated with" instead of "caused by" abnormalities of these neurochemicals because we really don't know whether low levels of neurochemicals in the brain cause depression or whether depression causes low levels of neurochemicals in the brain.

**DEPRESSION SYMPTOMS:**

Depression symptoms include:

- Feelings of sadness or unhappiness
- Irritability or frustration, even over small matters
- Loss of interest or pleasure in normal activities
- Reduced sex drive
- Insomnia or excessive sleeping
- Changes in appetite — depression often causes decreased appetite and weight loss
- In some people it causes increased cravings for food and weight gain
- Agitation or restlessness — for example, pacing, hand-wringing or an inability to sit still
- Irritability or angry outbursts
- Slow thinking, speaking or body movements
- Indecisiveness, distractibility and decreased concentration
- Fatigue, tiredness and loss of energy — even small tasks may seem to require a lot of effort
- Feelings of worthlessness or guilt, fixating on past failures or blaming yourself when things aren't going right
- Trouble thinking, concentrating, making decisions and remembering things
- Frequent thoughts of death, dying or suicide
- Crying spells for no apparent reason
- Unexplained physical problems, such as back pain or headaches

**Depression symptoms in children and adolescent:**

Common symptoms of depression can be a little different in children and teens than they are in adults.
• In younger children, symptoms of depression may include sadness, irritability, hopelessness and worry.

• Symptoms in adolescents may include anxiety, anger and avoidance of social interaction.

• Changes in thinking and sleep are common signs of depression in adolescents and adults but are not as common in younger children.

• In children and teens, depression often occurs along with behavior problems and other mental health conditions, such as anxiety or attention-deficit/hyperactivity disorder (ADHD).

• Schoolwork may suffer in children who are depressed.

**Depression symptoms in older adults:**

Depression is not a normal part of growing older, and most seniors feel satisfied with their lives. However, depression can and does occur in older adults. Unfortunately, it often goes undiagnosed and untreated. Many adults with depression feel reluctant to seek help when they're feeling down.

• In older adults, depression may go undiagnosed because symptoms — for example, fatigue, loss of appetite, sleep problems or loss of interest in sex — may seem to be caused by other illnesses.

• Older adults with depression may have less obvious symptoms. They may feel dissatisfied with life in general, bored, helpless or worthless. They may always want to stay at home, rather than going out to socialize or doing new things.

• Suicidal thinking or feelings in older adults is a sign of serious depression that should never be taken lightly, especially in men. Of all people with depression, older adult men are at the highest risk of suicide.
1. A depressive disorder is a syndrome (group of symptoms) that reflects a sad and/or irritable mood exceeding normal sadness or grief. More specifically, the sadness of depression is characterized by a greater intensity and duration and by more severe symptoms and functional disabilities than is normal.

2. Depressive signs and symptoms are characterized not only by negative thoughts, moods, and behaviors but also by specific changes in bodily functions (for example, crying spells, body aches, low energy or libido, as well as problems with eating, weight, or sleeping). The functional changes of clinical depression are often called neurovegetative signs. This means that the nervous system changes in the brain cause many physical symptoms that result in diminished participation and a decreased or increased activity level.

3. Certain people with depressive disorder, especially bipolar depression (manic depression), seem to have an inherited vulnerability to this condition.

4. Depressive disorders are a huge public-health problem, due to its affecting millions of people. About 10% of adults, up to 8% of teens and 2% of preteen children experience some kind of depressive disorder.

The statistics on the costs due to depression in the United States include huge amounts of direct costs, which are for treatment, and indirect costs, such as lost productivity and absenteeism from work or school.

- Adolescents who suffer from depression are at risk for developing and maintaining obesity.
• In a major medical study, depression caused significant problems in the functioning of those affected more often than did arthritis, hypertension, chronic lung disease, and diabetes, and in some ways as often as coronary artery disease.

• Depression can increase the risks for developing coronary artery disease, HIV, asthma, and many other medical illnesses. Other complications of depression include its tendency to increase the morbidity (illness/negative health effects) and mortality (death) from these and many other medical conditions.

• Depression can coexist with virtually every other mental health illness, aggravating the status of those who suffer the combination of both depression and the other mental illness.

• Depression in the elderly tends to be chronic, has a low rate of recovery, and is often undertreated. This is of particular concern given that elderly men, particularly elderly white men have the highest suicide rate.

5. Depression is usually first identified in a primary-care setting, not in a mental-health practitioner's office. Moreover, it often assumes various disguises, which causes depression to be frequently underdiagnosed.

6. In spite of clear research evidence and clinical guidelines regarding therapy, depression is often undertreated. Hopefully, this situation can change for the better.

7. For full recovery from a mood disorder, regardless of whether there is a precipitating factor or it seems to come out of the blue, treatment with medication and/or electroconvulsive therapy (ECT) and psychotherapy are necessary.

**TYPES OF DEPRESSION:**

Depressive disorders are mood disorders that come in different forms, just as do other illnesses, such as heart disease and diabetes. Three of the most common types of depressive disorders are discussed below. However, remember that within each of these types, there are variations in the number, timing, severity, and persistence of symptoms. There are also differences in how individuals experience depression based on age.

**Major depression:**

Major depression is characterized by a combination of symptoms that last for at least two weeks in a row, including sad and/or irritable mood (see symptom list), that interfere with the ability to work, sleep, eat, and enjoy once pleasurable activities. Difficulties in sleeping or
eating can take the form of excessive or insufficient of either behavior. Disabling episodes of depression can occur once, twice, or several times in a lifetime.

**Dysthymia:**

Dysthymia is a less severe but usually more long-lasting type of depression compared to major depression. It involves long-term (chronic) symptoms that do not disable but yet prevent the affected person from functioning at "full steam" or from feeling good. Sometimes, people with dysthymia also experience episodes of major depression. This combination of the two types of depression is referred to as double-depression.

**Bipolar disorder (manic depression):**

Another type of depression is bipolar disorder, which encompasses a group of mood disorders that were formerly called manic-depressive illness or manic depression. These conditions show a particular pattern of inheritance. Not nearly as common as the other types of depressive disorders, bipolar disorders involve cycles of mood that include at least one episode of mania or hypomania and may include episodes of depression as well. Bipolar disorders are often chronic and recurring. Sometimes, the mood switches are dramatic and rapid, but most often they are gradual. When in the depressed cycle, the person can experience any or all of the symptoms of a depressive disorder. When in the manic cycle, any or all of the symptoms listed later in this article under mania may be experienced. Mania often affects thinking, judgment, and social behavior in ways that cause serious problems and embarrassment. For example, indiscriminate or otherwise unsafe sexual practices or unwise business or financial decisions may be made when an individual is in a manic phase. A significant variant of the bipolar disorders is designated as bipolar II disorder. (The usual form of bipolar disorder is referred to as bipolar I disorder.) Bipolar II disorder is a syndrome in which the affected person has repeated depressive episodes punctuated by what is called hypomania (mini-highs). These euphoric states in bipolar II do not fully meet the criteria for the complete manic episodes that occur in bipolar I.

**Postpartum depression:**

Postpartum depression (PPD) is a condition that describes a range of physical and emotional changes that many mothers can have after having a baby. PPD can be treated with medication and counseling. Talk with your health-care practitioner right away if you think you have PPD. There are three types of PPD women can have after giving birth.
1. The so-called "baby blues" happen in many women in the days right after childbirth. A new mother can have sudden mood swings, such as feeling very happy and then feeling very sad or angry. She may cry for no reason and can feel impatient, irritable, restless, anxious, lonely, and sad. The baby blues may last only a few hours or as long as one to two weeks after delivery. The baby blues do not always require treatment from a health-care provider. Often, joining a support group of new moms or talking with other moms helps.

2. Postpartum depression (PPD) can happen a few days or even months after childbirth. PPD can happen after the birth of any child, not just the first child. A woman can have feelings similar to the baby blues -- sadness, despair, anxiety, irritability -- but she feels them much more strongly than she would with the baby blues. PPD often keeps a woman from doing the things she needs to do every day. When a woman's ability to function is affected, this is a sure sign that she needs to see her healthcare provider right away. If a woman does not get treatment for PPD, symptoms can get worse and last for as long as one year. While PPD is a serious condition, it can be treated with medication and counseling.

3. Postpartum psychosis is a very serious mental illness that can affect new mothers. This illness can happen quickly, often within the first three months after childbirth. Women can experience psychotic depression, in that the depression causes them to lose touch with reality, have auditory hallucinations (hearing things that aren't actually happening, like a person talking), and delusions (seeing things differently from what they are in reality). Visual hallucinations (seeing things that aren't there) are less common. Other symptoms include insomnia (not being able to sleep), feeling agitated (unsettled) and angry, strange feelings and behaviors, as well as having suicidal or homicidal thoughts. Women who have postpartum psychosis need treatment right away and almost always need medication. Sometimes women are put into the hospital because they are at risk for hurting themselves or someone else, including their baby.

DEPRESSION DIAGNOSIS:

People who wonder if they should talk to their health professional about whether or not they have depression may consider taking a depression self-test, which asks questions about depressive symptoms. In thinking about when to seek medical advice about depression, the sufferer can benefit from considering if the sadness lasts more than two weeks or so or if the way they are feeling significantly interferes with their ability to function at home, school, or work and in their relationships with others. The first step to obtaining appropriate treatment is
accurate diagnosis, which requires a complete physical and psychological evaluation to determine whether the person may have a depressive illness, and if so, what type. As previously mentioned, certain medications, as well as some medical conditions, can cause symptoms of depression. Therefore, the examining physician should rule out (exclude) these possibilities through an interview, physical examination, and laboratory tests. Many primary-care doctors use screening tools, symptoms tests, for depression, which are usually questionnaires that help identify people who have symptoms of depression and may need to receive a full mental-health evaluation.

The doctor usually asks about alcohol and drug use and whether the patient has had thoughts about death or suicide. Further, the history often includes questions about whether other family members have had a depressive illness, and if treated, what treatments they received and which were effective.

A diagnostic evaluation also includes a mental status examination to determine if the patient's speech, thought pattern, or memory has been affected, as often happens in the case of a depressive or manic-depressive illness. As of today, there is no laboratory test, blood test, or X-ray that can diagnose a mental disorder. Even the powerful CT, MRI, SPECT, and PET scans, which can help diagnose other neurological disorders such as stroke or brain tumors, cannot detect the subtle and complex brain changes in psychiatric illness. However, these techniques are currently useful in research on mental health and perhaps in the future they will be useful for diagnosis as well.

**RISK FACTORS**

<table>
<thead>
<tr>
<th>Risk factors of depression</th>
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<tbody>
<tr>
<td>Lack of social support</td>
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<tr>
<td>Recent stressful life experience</td>
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<tr>
<td>Previous history of Depression</td>
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<tr>
<td>--------------------------------</td>
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<tr>
<td>Family history of Depression</td>
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<tr>
<td>Lower socioeconomic status</td>
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<tr>
<td>Underlying emotional or personality disorder</td>
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<tr>
<td>Chronic medical condition</td>
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<tr>
<td>Female sex</td>
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<td>Advanced age</td>
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</table>

**COMPLICATIONS:**

People who are depressed are more likely to use alcohol or illegal substances.

Complications of depression also include:

- Increased risk of physical health problems
- Suicide
Thoughts of Death or Suicide:

People suffering from depression often show distorted thinking. Everything looks bleak to them, and they hold extremely negative views about themselves, their situation, and the future. Trapped in their pessimism, they brood/obsess over their problems and blow them out of proportion. Feeling hopeless and helpless, they may even start to see suicide as their only way out.

Suicidal thoughts are a symptom of severe depression and must always be taken seriously. If someone you know is threatening suicide or talking of wanting to hurt him/herself, seek professional help right away.

PROGNOSTIC FACTORS:

The best predictor of the future course is the history of *previous episodes*. Not surprisingly, the risk of recurrence is much higher in individuals with a history of *several previous episodes*. Other factors that predict a higher risk of future episodes include the following:

- incomplete symptomatic remission
- early age of onset
- poor social support
- poor physical health
- substance abuse
- comorbid personality disorder

The various risk factors, particularly previous pattern of recurrence and the extent of current remission, have important implications for the use of longer-term maintenance treatments. In many patients, depressive disorders are best conceptualized as chronic relapsing conditions that require an integrated longterm treatment approach.

DIFFERENTIAL DIAGNOSIS OF DEPRESSIVE DISORDERS:

Depressive disorders have to be distinguished from the following:

- normal sadness
- adjustment disorder
- anxiety disorders
- schizophrenia
- organic brain syndromes.
PREVENTION:

Do not drink alcohol or use illegal drugs. These substances can make depression worse and might lead to thoughts of suicide.

Take your medication exactly as your doctor instructed. Ask your doctor about the possible side effects and what you should do if you have any. Learn to recognize the early signs that your depression is getting worse. The following tips might help you feel better:

- Do exercise
- Maintain good sleep habits
- Seek out activities that bring you pleasure
- Volunteer or get involved in group activities
- Talk to someone you trust about how you are feeling
INTERNAL DRUG:

THIRUTHARATCHATHA CHOORANAM:

Ingredients:

- Mundhiri (Anacardium occidentale) - 1 Palam
- Pericham (Phonex dactilifera) - 1 Palam
- Adhimaduram (Glycyrrhiza glabra) - 1 Palam
- Elam (Electaria cardamom) - 1 Palam
- Thippili (Piper longum) - 1 Palam
- Nerpori (Oryza sativa) - 1 Palam
- Krambu (Syzygium aromaticum) - 1 Palam
- Ilavanga Pathiri (Cinnamomum tammla) - 1 Palam
- Kodiveli (Plumbago indica) - 1 Palam
- Koogai Neeru (Maran arundingcea) - 1 Palam
- Muthakasu (Cyprus rotundus) - 1 Palam
- Mutkai Velai (Gynandropis gynandra) - 1 Palam
- Milagu (Piper nigram) - 1 Palam
- Kothumalli (Coriandrum sativam) - 1 Palam

Method of preparation:

Each drug in these ingredients are dried and made it into fine powder and add equal quantity of sugar.

Internal medicine: THIRUTHARAKCHATHA CHOORANAM

Dosage: 2 gm, twice a day

Vehicle: Ghee

Duration of treatment: 45 days

EXTERNAL MEDICINE

ARUGANVER THYLAM

Ingredients:

- Aruganver (Cynodan dactylon) - 8 pangu
- Karpogarisi (Psoraia corylifolia) - 1 kalanju
➢ *Vetti ver* (*Vettiveria zizanioides*) - 1 kalanju
➢ *Kostam* (*Costus specious*) - 1 kalanju
➢ *Nalennai* (*Sesamum indicum*) - 1 kalanju

**Method of preparation**

*Arugan ver kudineer* is prepare into 8:1 ratio. The extract is mix with gingely oil other ingredients are finely powder and added to it. The mixture is boiled and filtered.

**PROPERTIES OF TRIAL DRUGS**

1. **THIRUTHARAKCHATHA CHOORANAM (INTERNAL MEDICINE)**

   **1. Mundhiri**

   **Botanical Name** : *Anacardium occidentale*
   **English Name** : Cashew nut tree
   **Family** : Anacardaceae
   **Part used** : Nut

   **Organoleptic Characters**

   **Taste** : *Inippu*
   **Potency** : *Thadpam*
   **Division** : *Inippu*

   **General Property:**


**Chemical Constituents:**

➢ Cardol
➢ Anacardic acid
Action

➢ Tonic
➢ Aphrodisiac
➢ Diuretic

Medical uses

Latex substance from its bark used to heal the leprosy ulcer, an oil taken from the epidermis of the fruit heals foot fissure.

2. Pericham

Botanical Name : Phoenix dactilifera

English Name : Date palm

Family : Arecaaceae

Part used : Fruit, Gum

Organoleptic Characters

Taste : Inippu

Potency : Veppam

Division : Kaarpu

General Property

“அருக்கிட்டுக்காந்தியம் சூக்களை எருமையாக சிக்குவது”

“அருக்கிட்டுக்காந்தியம் சூக்களை முடிக்கும் முகழ்வாக சிக்குவது”

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-(அருக்கிட்டுக்காந்தியம்)

Chemical Constituents

The predominant mineral was Potassium and rich in sugar. They contained high concentration of aspartic acid, proline, alanine, glycine, valine and leucine. The sugars were glucose and fructose.
Action

➢ Tonic
➢ Stomachic
➢ Refrigerant
➢ Aphrodisiac

Medicinal uses

Its fruit cures dysentery, leucorrhoea, fever. The Gum when consumed along with water cures urinary tract infection and diarrhoea.

3. *Adhimadhuram*

**Botanical Name**: *Glycyrrhiza glabra*

**English Name**: Jequity

**Family**: Fabaceae

**Part Used**: Root

**Organoleptic Characters**

**Taste**: Inipu

**Potency**: Seetham

**Division**: Inipu

**General Property:**

"இனிபு முறையான கற்கல்லிலூம் காத்திரும் 
சிற்பந்த காயாக்கத் கொள்ளல்கள்

புத்துத் தாடுத்தும் கொண்டு மூன்றுக்கும்

காத்திரும் குறிப்பிட்டு முறையான கொள்ளல்கள்

புத்துத் தாடுத்தும் காயாக்கத் கொள்ளல்கள்

புத்துத் தாடுத்தும் காயாக்கத் கொள்ளல்கள்

அழுத்து போல் என்றும் காத்திருக்கும்

காயாக்காத் கொள்ளல்கள்

புத்துத் தாடுத்தும் காயாக்கத் கொள்ளல்கள்

அழுத்து போல் என்றும் காத்திருக்கும்

காயாக்காத் கொள்ளல்கள்

புத்துத் தாடுத்தும் காயாக்கத் கொள்ளல்கள்

அழுத்து போல் என்றும் காத்திருக்கும்

காயாக்காத் கொள்ளல்கள்

புத்துத் தாடுத்தும் காயாக்கத் கொள்ளல்கள்

அழுத்து போல் என்றும் காத்திருக்கும்

காயாக்காத் கொள்ளல்கள்

புத்துத் தாடுத்தும் காயாக்கத் கொள்ளல்கள்

அழுத்து போல் என்றும் காத்திருக்கும்

காயாக்காத் கொள்ளல்கள்

புத்துத் தாடுத்தும் காயாக்கத் கொள்ளல்கள்

அழுத்து போல் என்றும் காத்திருக்கும்

காயாக்காத் கொள்ளல்கள்

புத்துத் தாடுத்தும் காயாக்கத் கொள்ளல்கள்

அழுத்து போல் என்றும் காத்திருக்கும்
Chemical Constituents

Triterpenoid saponin-glycyrrhizin (2-20%), a mixture of potassium and calcium salts of glycyrrhizic (glycyrrhetinic) acid. Triterpene sterols, titerpenoid saponins, glycyrrhetol, isoglabridin A, B, herniarin.

Action

➢ Anti ulcer
➢ Anti hepatotoxic
➢ Estrogenic
➢ Anxiolytic
➢ Cytochrome p⁴⁵⁰⁴ inhibitory.

Medicinal uses

It cures cough bronchial asthma, reduces the effects of diseases like jaundice, vitiligo, mental disorder and eye diseases.

4.Elam

Botanical Name : Elettaria cardamomum
English Name : cardamom seeds
Family : Zingieraceae
Part used : Seed

Organoleptic Characters

Taste : Kaarpu
Potency : Veppam
Division : Kaarpu

General Property

“அங்கிய குரைசலான கரடும் காயத்தில்
துகற்றும் தோற்றம் கருவியாக விளையாடும்
ஏயனொரு மாற்றாக்கத்தில் கிளக்கியது

41
Chemical Constituents

It consists some terpenes like Cineol and Limonene

Action:

➢ Stimulant
➢ Carminative
➢ Stomachic

Medicinal uses:

It is used to treat wide range of Gastrointestinal disorders such as gastritis, peptic ulcers etc.

5. Thippili

Botanical Name : *Piper longum*

English Name : Long piper

Family : Piperaceae

Organoleptic Characters

Taste : *Inippu*

Potency : *Thatpam*

Division : *Inipu*

General Property

“குமரைதை விளக்குதல் கடினங்களண் வுருலங்களின்படி குழாய்விளக்குதலாக விளக்கும் குளிருத்தலால் முதிர்குகின்ற மெடைப்பரங்கள் முழுக்காக குழாய்விளக்கம் செய்து வருகின்றன...”

- (ஏமேசி)
Chemical Constituent

Piperine (4-5%) and volatile oil (1%) and piperlonguminine, piplartine, piperundecalidine, seasamin, resin, dihydrostigmasterol.

Action:

➢ Hepato protective
➢ Sedative
➢ Analgesic
➢ Cholagogue

Medicinal uses

It roots cures cough, bronchial asthma, peptic ulcer. The extract of Thippili with milk administer for muppini. It is also used as an Antidote.

6. Nerpori

Botanical Name : Oryza sativa

English Name : paddy

Family : Poaceae

Organoleptic Characters

Taste : Inipu

Potency : Thatpam

Division : Inipu

General Property

“நெர்பொரிக்குறியான் குழுக்கள் வென்றுக்கால் மாற்றம்
மாற்றுக்கால் வருடக் காலமாகத்
மீன் பன்முகம் பிற்புறக்கத் விளையாடுகின்றது
காற்று மையம் பற்றுகின்றது

- (அற்புதநெர்பொரிக்)

Chemical Constituents

Whole grain rice contains significant amounts of vitamin B1, B2, B6, E and Niacin.
Action

➢ Nutrient
➢ Demulcent
➢ Refrigerant

Medicinal uses

It has anti-inflammatory action when applied externally. Rice powder with turmeric powder reduces swelling in condition of muscle sprain or any injury.

7. Kirambu

Botanical Name : Syzigium aromaticum

English Name : Cloves

Family : Myrtaceae

Part used : Dried flower bud

Organoleptic characters

Taste : Karam

Potency : Veppam

Division : Kaarpu

General Property

“புழிய பெருமான் பையிலியாக வருப்புக்கூற்று
குண்டுக்கள் குழுப்பாக வெப்புப்பொருளின்-கொரைகற்கொள்ல
கோளக்கற்கள் வெள்ளையான கதறுறுக்கு குழுக்கொள்ள
மீன்புறிகொள்ள குழுக்கொள்ள.

காத்திரும் தியாகாத்து தியாகாத்து ஓகுருவரசான குழுக்கொள்ள.

கிராம்பு கோள குன்றுப் பொருளின் கொரைகற்கொள்ள

குழுக்கற்கள் வெள்ளையான கதறுறுக்கு கொரைகற்கொள்ள

- (அர்கோத்து சுருக்கம்)
Chemical Constituents

Volatile oil (15-20%) containing chiefly a phenol eugenol (55-85%) and beta caryophyllene (-10-20%) and eugenol acetate and derivatives of B-caryophyllene, acetophenone, benzyl salicylate, propylbenzoate.

Action

➢ Antispasmodic
➢ Carminative
➢ Stomachic
➢ Antioxidative
➢ Anti-thrombotic

Medicinal uses:

Its oil cures Gingivitis, sensitive tooth and tooth carries and was applied by dipped cotton. Its powder with water when applied on fore head and nasal ridge reduces sinus head ache.

8. Ilavanga Pathiri

Botanical Name : Cinnamomum tammla

English Name : cloves

Family : Lauraceae

Organoleptic Characters

Taste : Kaarpu, viruviruppu

Potency : Veppam

Division : Kaarpu

General Property

"எலுவில்கு சுத்தானத் திரையங்கள் செயல்படும்
நாட்டின்று முந்தியாள் மாநாட்டில் இங்கு உள்ள
வலுவில்கு சுத்தானது குறைந்தது விளக்கியும்
மலராயின் திரையங்கள் முன்னாள் குறல் இங்கு உள்ள
எலுவில்கு சுத்தானது

- (அனுதிதன் நூற்றாண்டு)
Action

➢ Antispasmodic
➢ Carminative
➢ Stomachic

Medicinal uses

Its leaf cures asthma, cough, excessive thirst, vomiting and fever.

9. Kodiveli

Botanical Name: Plumbago indica

English Name: Ceylon lead-wort

Family: Plumbaginaceae

Part Used: Root

Organoleptic Characters

Taste: Kaarpu

Potency: Veppam

Division: Kaarpu

General Property

“குருத்தோட்டு காப்பு கலந்து பாத்தருக்கு
அதை சுற்றிப் புரியவதற்கு வந்து
ஏனைய பாதுக! பெருங்கு குற்றமறை
வெண்தைகளும் புகைப்பெற்று வைப்பு

- (அதர்வியல் நோக்கமாகும்)

Chemical Constituents

Plumbagin, Tannin, Steroids, glucoside, triterpenes

Action

➢ Stimulant
➢ Rubefacient
Medicinal uses

Roots are used in the treatment of paralytic affections, ulcers, leprosy, enlarged spleen, piles, skin diseases and influenza. The plumbagin shows antimicrobial activity. Plumbagin is an important naphthoquinone which has anticancer activity, antibacterial, antifungal, antimitogenic, anti-inflammatory and insecticidal activities.

10. Koogai Neeru

**Botanical Name** : Maran arundinacea

**English Name** : East Indian arrow root

**Organoleptic Characters**

<table>
<thead>
<tr>
<th>Taste</th>
<th>Inippu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potency</td>
<td>Thatpam</td>
</tr>
<tr>
<td>Division</td>
<td>Inippu</td>
</tr>
</tbody>
</table>

**General Property**

“இயோரேனோ வர்க்க வியானியம் ஆரக்கியத்திற்கு  துறையில் நீர்ப்பு வியானியம்-கற்பங்கு
அண்மிய வியானியானை விளையாட்டுத் தொன்மைப்பற்று
சிவப்புவகையில் சிற்றெட்டுக் கலா

- அகரிபிட்டு (அகரிபிட்டு)

**Action**

- Refrigerant
- Demulcent
- Nutrient

**Medicinal uses**

Powdered root reduces stomach pain and diarrhoea in people with Irritable Bowel Syndrome.
11. Muthakasu

Botanical Name : Cyprus rotundus

English Name : nut grass

Family : Cyperaceae

Organoleptic Characters

Taste : Inipu

Potency : Thatpam

Division : Inipu

General Property

Chemical Constituents

Pinene, Cineole, Sesquiterpenes, Glycerol, Linolenic acid, Linoleic acid, Oleic acid.

Action

- Astringent
- Tonic
- Stimulant
- Demulcent
- Tonic
Medicinal uses

Its root used to cure Hypertension, Tuberculosis. Its root extract added in Nalangumavu preparation.

12. Nal Velai

Botanical Name : Gynandropis gynandra

English Name : dog mustard

Family : Caparaceae

Part Used : Leaf, Flower, Seed, Root

Organoleptic Characters

Taste : Kaarpu

Potency : Veppam

Division : Kaarppu

General Property

Beta carotene, Folic acid, ascorbic acid, calcium, Vit E and Iron.

Action:

- Antispasmodic
- Carminative
Medicinal uses

The leaves have anti oxidative properties and used in inflammatory diseases. Juice of the root is used to relieve scorpion stings.

### 13. Milagu

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>:</th>
<th>Piper nigrum</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Name</td>
<td>:</td>
<td>black pepper</td>
</tr>
<tr>
<td>Family</td>
<td>:</td>
<td>Piperaceae</td>
</tr>
<tr>
<td>Parts Used</td>
<td>:</td>
<td>Seed</td>
</tr>
</tbody>
</table>

**Organoleptic Characters**

<table>
<thead>
<tr>
<th>Taste</th>
<th>:</th>
<th>kaippu,kaarppu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potency</td>
<td>:</td>
<td>veppam</td>
</tr>
<tr>
<td>Division</td>
<td>:</td>
<td>kaarppu</td>
</tr>
</tbody>
</table>

**General Property**

- “நீரோப்பு மிலாள்க் திகம்பர் நம்பிக்கை
  வெப்பால் வெப்பர்க்கு (பசைக்கோட்டைக் குழந்தை)
  மிலாள்குறிக்காட்டு குரட்குறிக்காட்டு பசைக்கோட்டை
  அகுமியும் பொங்குப்பைக் கட்டம்

- (அதிகளாக்கலாமை)

**Chemical Constituent**

The drug contains volatile oil (1-2.5%). Alkaloids/amides (5-9%), and a resin.

- **Major**: A pungent alkaloid, piperine (2-5%).
- **Minor**: a number of alkaloids/amides ex: piperine, piperettine, piperanine, piperamides, pipericide, gunineensine, saramenttine, Propenylphenols viz., eugenol, myristicine, safrol e; mono and sequiterpenes.

**Action**

- Anti-convulsant properties
- CNS depressant
Analgesic
- Anti-oxidant
- Hepatoprotective

Medicinal uses

Fruits used in indigestion, asthma, fever, cough, arthritis and haemorrhoids.

14. Kothumalli

**Botanical Name** : Coriandrum sativam

**English Name** : coriander seeds

**Family** : Apiaceae

**Parts Used** : Leaf, Seed

**Organoleptic Characters**

**Taste** : kaarpu

**Potency** : setha veppam

**Division** : kaarpu

**General Property**

“அச்சுறுத்தியை மெய்ப்படுத்து காற்றின்போது பிளாக்கமையும்
குழுநிலையில் காற்றையும் காட்டியும், கொண்டாட்டு விலங்குகளின்
பரவல் வெப்பமையும் தரும்

- கார்பு (நூறு போன்றானை)

**Chemical Constituents**

Essential oil (-1%), the major component of which is S-(+)-linalool (60-70%), monoterpene hydrocarbons, thiazole, coriandrones A-E, flavonoids, phthalides, phenolic acids and sterols.

**Action**

- Hypolipidemic
- Preventive effect on lead deposition
- Insulin releasing
➢ Spasmolytic
➢ Stomantic
➢ Carminative

Medicinal uses

Its dried seed extract strengthens the heart, chewing its plain fruit reduces bad odour from mouth. It also used for indigestion, dehydration, vomiting.

EXTERNAL MEDICINE

ARUGANVER THYLM

1. Aruganver

Botanical Name : Cynodan dactylon
English Name : Barmuda Grass
Family : Poaceae
Parts Used : Grass, Root

Organoleptic Characters

Taste : Inippu
Potency : Thatpam
Division : Inippu

General Property

“அறுநோர் ஆற்றவசன வாழ்முன் விகைத்து என்று அறுநோர் ஆற்றவசன வாழ்முன் விகைத்து என்று அறுநோர் ஆற்றவசன வாழ்முன் விகைத்து என்று

- (அறுநோர் ஆற்றவசன வாழ்முன்)

Chemical constituent

Palmitic acid, arundoin, beta carotene, ergonovine

Action

➢ Emolient
➢ Astringent
➢ Duretic
➢ Styptic

**Medicinal uses**

Extract cures all bleeding disorders, scabies and tinea. It acts as an antidote for rat bite.

2. **Karpogarisi**

**Botanical Name** : *Psoraiea corylifolia*

**English Name** : Babchi Seeds

**Family** : Faaceae

**Parts Used** : Seed

**Organoleptic Characters**

**Taste** : *Kaippu*

**Potency** : *Veppam*

**Division** : *Kaarpu*

**General Property**

“கார்பொராயி பூக்களில் கல்லாக்கு கார்பொராயிக்குலை பெயர்கோரிப்புள் புருஷையும் பெயர்கோரிப்புள் பெயர்கோரிப்புள்

மாறு அமமைகோரிப் பெயர்கோரிப்புள் பெயர்கோரிப்புள்

தான் பெயர்கோரிப்புள் பெயர்கோரிப்பு வசை.

- (அகதிய்பொராயிக்குலை லை)

**Chemical constituent**

Psoralen, flavanoid, cowmarin, meroterpenes.

**Action**

➢ Laxative
➢ Stimulant

**Medicinal uses**

Acts as an antidote for snake bite, it cures ulcers, tinea and other skin disorders.
3. Vetti ver

Botanical Name : Vettiveria zizanioides
English Name : Cuscus root
Family : Poaceae
Parts used : Root

Organoleptic Characters

Taste : Inippu
Potency : Thatpam
Division : Inippu

General Property

- Inippu sindam kollu mithiramkum Kudummal
- Thatpam kollu kudummal kathana kudummal
- Inippu kollu amman puthavom kulam puthavom kollam kulam

Chemical constituent

Vetivene, khusimene, khusimone, furfura, benzoic acid

Action

➢ Tonic
➢ Stimulant
➢ Anti-spasmodic
➢ Emmenagouge

Medicinal uses

It cures hypertension, excessive thirst, fever and jaundice.

4. Kostam

Botanical Name : Costus specious
English Name : Costus Root
Family : Zingiberaceae
Organoleptic Characters

Taste : Kaippu, viruviruppu

Potency : Veppam

Division : Kaarpu

General Property

Chemical constituent

Succinic acid, beta sitosterol, tetra cosanoic acid, daucosterin.

Action

➢ Stomachic
➢ Expectorant
➢ Tonic
➢ Stimulant

Medicinal uses:

It is used in case of fever and haemorrhoids. It also acts as an antidote for snake and rat bite.

5. Nalennai

Botanical Name : Sesamum indicum

English Name : Gingelly oil plant

Parts Used : Leaf, Flower, Raw Seed
Family : Pedaliaceae

Organoleptic Characters

Taste : Inippu

Potency : Veppam

Division : Inippu

General Property

Vitamin E, Sesamin, Sesamolin, Phytosterol.

Action

➢ Laxative
➢ Nutrient
➢ Emolient

Medicinal uses:

It cures ulcers and other skin disorder, eye and ear disorder.
MATERIALS AND METHODS

STANDARD OPERATING PROCEDURE

Source of raw drugs

The required raw drugs for the trial medicine will be purchased from a well reputed country raw drug shop and drugs were authenticated by the competent authority Medicinal Botany and Gunapadam dept. After that the raw drugs will be purified as per siddha literatures then the trial drugs prepared in Gunapadam laboratory of National Institute of Siddha.

BOTANICAL AUTHENTICATION CERTIFICATE NO: NISMB3382018.

INTERNAL DRUG: THIRUTHARATCHATHA CHOORANAM

Ingredients

- Mundhiri(Anacardium occidentale)- 1 Palam
- Pericham(Phonex dactilifera) - 1 Palam
- Adhimadhuram(Glycyrrhiza glabra) - 1 Palam
- Elam(Electaria cardamomum) - 1 Palam
- Thippili(Piper longum) - 1 Palam
- Nerpori(Oryza sativa) )- 1 Palam
- Krambu(Syzigium aromaticum) - 1 Palam
- Ilavanga Pathiri(Cinnamonomum tammla) - 1 Palam
- Kodiveli(Plumbago indica) )- 1 Palam
- Koogai Neeru(Maran arundingcea) - 1 Palam
- Muthakasu(Cyprus rotundus) - 1 Palam
- Mukai Velai(Gynandropis gynandra) )- 1 Palam
- Milagu(Piper nigram) - 1 Palam
- Kothumalli(Coriandrum sativam) - 1 Palam

METHOD OF PURIFICATION OF RAW DRUGS:

Purification of Munthiri

Dust particles are removed and the cashews are roasted.

[Marunthu Sei iyalum kalayum: 286]

Purification of Ellam

Dust particles are removed and It is roasted.

[Ref: Sikicha Rathina Deepam Ennum Vaithiya Nool: 28]
Purification of Muthakaasu
Dust particles are removed and it is roasted.
[Ref: Marunthu Sei iyalam kalayum]

Purification of Milagu
Soak in the buttermilk for three hours then dried and powdered.
[Ref: Sikicha Rathina Deepam Ennum Vaithiya Nool page 28]

Purification of Thippili
Soak in juice of Lime for a period of time then allowed it to dry.
[Ref: Sarakugalin sutheemuraigal page 7]

Purification of Athimathuram
Removed the outer cover, cut into small pieces and dried it in shadow.
[Ref: Sighitcha Rathan Deepam Ennum Vaithiya Nool, Page: 29]

Purification of Lavangapathiri
Removed the flowerlets and dried in the shadow.
[Ref: Sighitcha Rathan Deepam Ennum Vaithiya Nool, Page: 29]

Purification of Kothamalli
Removed the dust particles and dried it in shadow.
[Ref: Sarakugalin suthee muraigal page 7]

Purification of Koogaineer
Dissolved and wash it in water for 7 times and dried it in shadow.
[Ref: Sikicha Rathina Deepam Ennum Vaithiya Nool, page 35]

Purification of Kirambu
Dust particles removed and its dried it in shadow.
[Ref: Sarakugalin suthee muraigal page : 6]

Purification of Kodivelli
Kodiveli ver (root of Plumbago indigo) Removed the inner nerve of the root and powder the outer part of root. Took a pot with milk and its mouth was covered with white
cloth then the powder over it and closed it with another vessel. It was heated it for 3 hours then dried and grinded.

[Ref: Sigicharathinatheepam:29]

METHOD OF PREPARATION

All the above-mentioned ingredients are taken in equal amount and dried, then made into fine powdered and add equal quantity of sugar. The powder is purified. Then the medicine stored in an air tight container.

Dosage : 2 gram twice a day with ghee

Duration : 48 days

EXTERNAL MEDICINE: ARUGANVER THYLAM

Ingredients

- Aruganver (Cynodan dactylon) - 8 pangu
- Karpogarisi (Psorlea corylifolia) - 1 kalanju
- Vetti ver (Vettiveria zizanioides) - 1 kalanju
- Kostam (Costus specious) - 1 kalanju
- Nalennai (Sesamum indicum) - 1 kalanju

METHOD OF PREPARATION

The purified Aruganver (350 gms) mixed with 10.7 litre of water and heated upto 1/8th ratio of water and take it as decoction. The extract is mixed with gingely oil and are finely powdered and added to it. The mixture is boiled till it attained the suitable consistency and filtered it.

Dosage: QS

Drug storage:

The trial drug Thirutharatchatha chooranam is stored in clean and dry container and Aruganver Thylam is stored in clean and dry narrow mouthed bottles.

DISPENSING:

- The Powder is given in packet (28 gram for one week)
- Oil is given in pet bottles (Q.S for oil bath).
THIPPILI

KORAIKIZHANGU

KOTHAMALLI

KODIVELI
ATHIMATHURAM

KIRAMBU

NERPORI

ILAVANGAPATHIRI
THIRUTHARAKCHATHA
CHOORANAM

ARUGANVER THYLAM
Experimental procedure

5 g of *THIRUTHARAKCHATHA CHOORANAM* was taken in a 250 ml of clean beaker and 50 ml of distilled water was added to it. Then it was boiled well for about 10 min. Then it is allowed to cool and filtered in a 100 ml volumetric flask and made up to 100 ml with distilled water. This preparation is used for the qualitative analysis of acidic/basic radicals and biochemical constituents in it.

Preparation of extract

5 gm of *THIRUTHARAKCHATHA CHOORANAM* was weighed accurately and placed in a 250ml clean beaker and 50ml of distilled water was added with it. Then it was boiled well for about 10 minutes. Then it was allowed to cool and filtered in a 100ml volumetric flask and made up to 100ml with distilled water. The bio-chemical analysis of *THIRUTHARAKCHATHA CHOORANAM* was done at Biochemistry lab, National Institute of siddha, Chennai-47.

Preliminary test for Copper, Sodium, Silicate and Carbonate

➢ **Test for Silicate**: a. A little (500mg) of the sample is shaken well with distilled water.
   b. A little (500mg) of the sample is shaken well with con. HCl/Con. H2So4.

➢ **Action of Heat**: A small amount (500mg) of the sample is taken in a dry test tube and heated gently at first and then strong.

➢ **Action of Heat**: A small amount (500mg) of the sample is taken in a dry test tube and heated gently at first and then strong.

➢ **Flame Test**: A small amount (500mg) of the sample is made into a paste with con. HCl in a watch glass and introduced into non-luminous part of the Bunsen flame.

➢ **Ash Test**: A filter paper is soaked into a mixture of sample and dil. cobalt nitrate solution and introduced into the Bunsen flame and ignited.

Test for Acid Radicals

➢ **Test for Sulphate**: 2ml of the above prepared extract was taken in a test tube and 2ml of 4% dil. ammonium oxalate solution was added.

➢ **Test for Chloride**: 2ml of the above prepared extracts was added with 2ml of dil-HNO3 until the effervescence ceases off. Then 2 ml of silver nitrate solution was added.
➢ **Test for Phosphate**: 2ml of the extract was treated with 2ml of con. HNo3 and 2ml of dil. ammonium molybdate solution.

➢ **Test for Carbonate**: 2ml of the extract was treated with 2ml dil. magnesium sulphate solution

➢ **Test for Nitrate**: 1gm of the substance was heated with copper turning and concentrated H2SO4 and viewed the test tube vertically down.

➢ **Test for Sulphide**: 1gm of the substance was treated with 2ml of con. HCL

➢ **Test for Nitrite**: 3drops of the extract was placed on a filter paper, on that-2 drops of dil. acetic acid and 2 drops of dil. Benzidine solution were placed.

### Test for Basic Radicals

➢ **Test for Lead**: 2ml of the extract was added with 2ml of dil. potassium iodine solution.

➢ **Test for Copper**: One pinch (50mg) of substance was made into paste with con. HCl in a watch glass and introduced into the non-luminous part of the flame.

➢ **Test for Aluminium**: In the 2ml of extract dil. sodium hydroxide was added in 5 drops to excess.

➢ **Test for Iron**: a. To the 2ml of extract add 2ml of dil. ammonium solution

➢ b. To the 2ml of extract 2ml thiocyanate solution and 2ml of con HNo3 is added

➢ **Test for Zinc**: In 2ml of the extract dil. sodium hydroxide solution was added in 5 drops to excess and dil. ammonium chloride was added.

➢ **Test for Calcium**: 2ml of the extract was added with 2ml of 4% dil. ammonium oxalate solution

➢ **Test for Magnesium**: In 2ml of extract dil. sodium hydroxide solution was added in drops to excess.

➢ **Test for Ammonium**: In 2ml of extract 1 ml of Nessler's reagent and excess of dil. sodium hydroxide solution were added.

➢ **Test for Potassium**: A pinch (25mg) of substance was treated with 2ml of dil. sodium nitrite solution and then treated with 2ml of dil. cobalt nitrate in 30% dil. glacial acetic acid.

➢ **Test for Sodium**: 2 pinches (50mg) of the substance was made into paste by using HCl and introduced into the blue flame of Bunsen burner.
➢ **Test for Mercury:** 2ml of the extract was treated with 2ml of dil. sodium hydroxide solution.

➢ **Test for Arsenic:** 2ml of the extract was treated with 2ml of dil. sodium hydroxide solution.

**Other constituents:**

➢ **Test for Starch:** 2ml of extract was treated with weak dil. iodine solution

➢ **Test for Reducing Sugar:** 5ml of Benedict's qualitative solution was taken in a test tube and allowed to boil for 2 minutes and added 8 to 10 drops of the extract and again boil it for 2 minutes.

➢ **Test for The Alkaloids:** a) 2ml of the extract is treated with 2ml of dil. potassium iodide solution. b) 2ml of the extract is treated with 2ml of dil. picric acid.

➢ **Test for Tannic Acid:** 2ml of extract was treated with 2ml of dil. ferric chloride solution

➢ **Test for Unsaturated Compound:** In the 2ml of extract 2ml of dil. Potassium permanganate solution was added.

➢ **Test for Amino Acid:** 2 drops of the extract were placed on a filter paper and dried well, and then 20ml of Burette reagent was added in it.

**CLINICAL STUDY**

**Clinical trail Approval Registration**

The clinical trail was approved by the Institutional Ethical Committee (IEC) of National Institute of Siddha, Chennai 47, [ NIS/IEC/2016/11-12/14.10.2016] and further registered Clinical Trail Registry of India [REG. NO. CTRI/2018/04/013421].

**Study type** : An open clinical trial

**Study place** : OPD of Ayothidoss Pandithar Hospital,
National Institute of Siddha
Tambaran sanatorium, Chennai-47

**Study period** : 2015-2018

**Sample size** : 30 Patients
SUBJECT SELECTION:

Patients reporting with symptoms of inclusion criteria will be subjected to screening test and documentation.

INCLUSION CRITERIA

➢ Age: between 20 years and 55 years
➢ Sex: Male and female
➢ Depressed mood
➢ Reduced level of interest
➢ Considerable loss or gain of weight
➢ Insomnia or hypersomnia
➢ Psychomotor agitation or retardation
➢ Fatigue
➢ Thoughts of extreme guilt
➢ Diminished ability to think or concentrate
➢ Suicidal thoughts
➢ Willing to participate in trial and signing consent by fulfilling the conditions of proforma
➢ Willing to give blood sample for analysis for laboratory investigations
  (If 8 – 10 criteria are positive, the patients will be included for the study)

EXCLUSION CRITERIA

➢ Pregnancy and lactation
➢ Diabetes mellitus
➢ Psychosomatic disorders
➢ Cardiac disease
➢ Any other serious systemic illness

WITHDRAWAL CRITERIA

➢ Intolerance to the drug and development of adverse reactions during drug trial.
➢ Poor patient compliance and defaulters.
➢ Patient turning unwilling to continue in the course of clinical trial.
➢ Occurrence of any serious illness
➢ Increase in the severity of the symptoms.
TESTS AND ASSESSMENTS

1. Clinical assessment
2. Siddha system assessment
3. Routine investigations

1. CLINICAL ASSESSMENT

➢ Depressed mood
➢ Reduced level of interest
➢ Considerable loss or gain of weight
➢ Insomnia or hypersomnia
➢ Anhedonia
➢ Fatigue
➢ Thoughts of extreme guilt
➢ Suicidal thoughts

GRADATION

HAMILTON DEPRESSION RATING SCALE (HAM-D)

The Hamilton Depression Rating Scale (HAM-D) has proven useful for many years as a way of determining a patient’s level of depression before, during, and after treatment. It should be administered by a clinician experienced in working with psychiatric patients.

Although the HAM-D form lists 21 items, the scoring is based on the first 17. It generally, takes 15-20 minutes to complete the interview and score the results. Eight items are scored on a 5-point scale, ranging from 0 = not present to 4 = severe. Nine are scored from 0-2.

Since its development in 1960 by Dr. Max.Hamilton of the University of Leeds, England, the scale has been widely used in clinical practice and become a standard in pharmaceutical trials.

HAMILTON DEPRESSION RATING SCALE (HAM-D)”

Patient’s Name

Date of Assessment

To rate the severity of depression in patients who are already diagnosed as depressed, administer this questionnaire. The higher the score, the more severe the depression.
For each item, write the correct number on the line next to the item. (Only one response per item)

1. DEPRESSED MOOD (Sadness, hopeless, helpless, worthless)
   0= Absent
   1= These feeling states indicated only on questioning
   2= These feeling states spontaneously reported verbally
   3= Communicates feeling states non-verbally—i.e., through facial expression, posture, voice, and tendency to weep
   4= Patient reports VIRTUALLY ONLY these feeling states in his spontaneous verbal and non- verbal communication

2. FEELINGS OF GUILT
   0= Absent
   1= Self-reproach, feels he has let people down
   2= Ideas of guilt or rumination over past errors or sinful deeds
   3= Present illness is a punishment. Delusions of guilt
   4= Hears accusatory or denunciatory voices and/or experiences threatening visual hallucinations

3. SUICIDE
   0 = Absent
   1 = Feels life is not worth living
   2 = Wishes he were dead or any thoughts of possible death to self
   3 = Suicidal ideas or gesture
   4 = Attempts at suicide (any serious attempt rates 4)

4. INSOMNIA EARLY
   0 = No difficulty falling asleep
   1 = Complains of occasional difficulty falling asleep—i.e., more than 1/2 hour
   2 = Complains of nightly difficulty falling asleep
5. INSOMNIA MIDDLE

0= No difficulty
1= Patient complains of being restless and disturbed during the night
2= Waking during the night—any getting out of bed rates 2 (except for purposes of voiding)

6. INSOMNIA LATE

0= No difficulty
1= Waking in early hours of the morning but goes back to sleep
2= Unable to fall asleep again if he gets out of bed

7. WORK AND ACTIVITIES

0= No difficulty
1= Thoughts and feelings of incapacity, fatigue or weakness related to activities; work or hobbies
2= Loss of interest in activity; hobbies or work—either directly reported by patient, or indirect in listlessness, indecision and vacillation (feels he has to push self to work or activities)
3= Decrease in actual time spent in activities or decrease in productivity
4= Stopped working because of present illness

8. RETARDATION: PSYCHOMOTOR (Slowness of thought and speech; impaired ability to concentrate; decreased motor activity)

0= Normal speech and thought
1= Slight retardation at interview
2= Obvious retardation at interview
3= Interview difficult
4= Complete stupor

9. AGITATION

0= None
1= Fidgetiness
2= Playing with hands, hair, etc.
3= Moving about, can't sit still
4= Hand wringing, nail biting, hair-pulling, biting of lips

10. ANXIETY (PSYCHOLOGICAL)
0= No difficulty
1= Subjective tension and irritability
2= Worrying about minor matters
3= Apprehensive attitude apparent in face or speech
4= Fears expressed without questioning

11. ANXIETY SOMATIC: Physiological concomitants of anxiety, (i.e., effects of autonomic overactivity, "butterflies," indigestion, stomach cramps, belching, diarrhea, palpitations, hyperventilation, paresthesia, sweating, flushing, tremor, headache, urinary frequency). Avoid asking about possible medication side effects (i.e., dry mouth, constipation)
0= Absent
1= Mild
2= Moderate
3= Severe
4= Incapacitating

12. SOMATIC SYMPTOMS (GASTROINTESTINAL)
0= None
1= Loss of appetite but eating without encouragement from others. Food intake about normal
2= Difficulty eating without urging from others. Marked reduction of appetite and food intake

13. SOMATIC SYMPTOMS GENERAL
0= None

1= Heaviness in limbs, back or head. Backaches, headache, muscle aches. Loss of energy and fatigability

2= Any clear-cut symptom rates 2

14. GENITAL SYMPTOMS (Symptoms such as: loss of libido; impaired sexual performance; menstrual disturbances)

0= Absent

1= Mild

2= Severe

15. HYPOCHONDRIASIS

0= Not present

1= Self-absorption (bodily)

2= Preoccupation with health

3= Frequent complaints, requests for help, etc.

4= Hypochondriacal delusions

16. LOSS OF WEIGHT

A. When rating by history:

0= No weight loss

1= Probably weight loss associated with present illness

2= Definite (according to patient) weight loss

3= Not assessed

17. INSIGHT

0= Acknowledges being depressed and ill

1= Acknowledges illness but attributes cause to bad food, climate, overwork, virus, need for rest, etc.

2= Denies being ill at all
18. **DIURNAL VARIATION**

   **A.** Note whether symptoms are worse in morning or evening. If NO diurnal variation, mark none
   
   0= No variation
   1= Worse in A.M.
   2= Worse in P.M.

   **B.** When present, mark the severity of the variation. Mark "None" if NO variation
   
   0= None
   1= Mild
   2= Severe

19. **DEPERSONALIZATION AND DEREALIZATION** (Such as: Feelings of unreality; Nihilistic ideas)

   0= Absent
   1= Mild
   2= Moderate
   3= Severe
   4= Incapacitating

20. **PARANOID SYMPTOMS**

   0= None
   1= Suspicious
   2= Ideas of reference
   3= Delusions of reference and persecution

21. **OBSESSIONAL AND COMPULSIVE SYMPTOMS**

   0= Absent
   1= Mild
   2= Severe
HAM-D Scoring Instructions:

Sum the scores from the first 17 items.

- 0-7 = Normal
- 8-13 = Mild Depression
- 14-18 = Moderate Depression
- 19-22 = Severe Depression
- ≥ 23 = Very Severe Depression


2. INVESTIGATIONS BASED ON SIDDHA SYSTEM:

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

3. INVESTIGATION:

BLOOD:

- Hb
- Total WBC Count
- DC
  - Polymorphs
  - Lymphocytes
  - Eosinophils
  - Monocytes
  - Basophils
- Total RBC count
• ESR
  ▪ ½ Hr: 1 Hr:
• Blood sugar
  ▪ Fasting: PP:
• Serum cholesterol

URINE
• Albumin
• Sugar(F) (PP)
• Deposits

RENAL FUNCTION TESTS
• Blood Urea
• Serum Creatinine
• Uric acid

LIVER FUNCTION TESTS
• Serum total bilirubin
• Direct bilirubin
• Indirect bilirubin
• Serum Alkaline phosphatases
• SGOT
• SGPT

PRIMARY OUTCOME:
• Reduction in the symptoms of Depression.

DATA COLLECTION:
Required information were collected from each patient by using the following forms

FORMS:
• FORM I - Screening and selection Proforma
• FORM II - Clinical assessment Proforma
• FORM III - Laboratory investigation Proforma
• FORM IV - Drug compliance form
• FORM V - Patient information sheet
STUDY ENROLLMENT:

➢ In this study, patients reporting at the OPD with symptoms of depressed mood, fatigue, loss of interest, suicidal thoughts, insomnia, hypersomnia were examined clinically for enrolling in the study based on inclusion and exclusion criteria.

➢ The patients who are enrolled were informed (Form VI) about the study, trial drug, possible outcomes and the objectives of the study in the language and terms understandable to them and the informed consent would be obtained in writing from them in the consent form (Form VI).

➢ All these patients were given unique registration card in which the patients Registration number of the study, Address, Phone number and Doctors phone number etc. will be given, so as to report easily should any complications arise.

➢ Complete clinical history, complaints, duration, examination findings and laboratory investigations -- were recorded in the prescribed Proforma.

➢ Screening Form- I were filled up: Form –II and Form –III were used for recording the patient’s history, clinical examination of symptoms, signs and laboratory investigations respectively. Patients were advised to take the trial drug and appropriate dietary advice would be given according to the patients’ perfect understanding.

CONDUCT OF THE STUDY:

➢ Three days before the treatment, purgation therapy had given with Meganatha Kulikai-2 in the early morning with Inji chaaru (ginger juice) for normalising the vital humours. Then the trial Medicines “Thirutharakchatha chooranam” (internal) and “Aruganver Thylam” (external) was given for 48 days.

➢ Among the 30 patients, 15 patients were received trial the medicines only and the remaining (randomised) 15 patients were received the prescribed Yogam therapy along with trial medicines.

➢ The patients are requested to visit the hospital OPD once in 7 days for 48 days. In each and every visit the patients received trial medicines and also underwent clinical assessment and the prognosis were recorded with the supervision of the Faculty member.
The each randomised selected 15 patients (2,5,7,8,10,13,14,18,19,21,23,26,27,29,30) were received the Yogam therapy for 3 times per week from the 2nd visit for the trial medicine to 7th visit.

Laboratory investigations were done before and after the trial. At the end of the trial, the patients were advised to visit the OPD for further 2 months for follow-up for any recurrence. Defaulters had not allowed to continue and withdrawn from the study with fresh case had being inducted.
PATIENT SCREENING
Inclusion/Exclusion

INCLUSION CRITERIA

INFORM ABOUT STUDY AND TRIAL DRUG

INFORMED CONSENT FORM

STUDY NUMBER

HISTORY TAKING

LAB INVESTIGATION

TRIAL DRUG

CLINICAL ASSESSMENT

OUTCOME

EXCLUSION CRITERIA

EXCLUDED FROM TRIAL

ADVICED TO TAKE TREATMENT IN OPD

ABNORMAL VALUES

ADVERSE REACTION

PHARMACOVIGILANCE DEPARTMENT

FURTHER MANAGEMENT OF ADVERSE DRUG REACTION
ADVERSE/SERIOUS EFFECTS MANAGEMENT:

➢ In this study, no adverse events were observed during the course of the treatment and follow-up periods.

DATA ANALYSIS:

➢ After enrolled the patients in the study, a separate file for each patient was maintained and all forms were kept in the file.
➢ Study number and patient’s number were entered on the top of the file for easy identification.
➢ Whenever the patients visit to OPD during the study period, the necessary entries were made at the assessment forms.
➢ The screening forms were filled separately.
➢ All forms were further scrutinized by Senior Research Officer (Statistics) for logical errors and incompleteness of data to avoid any bias.
➢ No modification in the results is permitted for unbiased reports. The software of SPSS will be used for data analysis.
RESULTS OF PRECLINICAL STUDY:

1) BIO-CHEMICAL AND ELEMENTAL ANALYSIS OF TRIAL MEDICINE

Qualitative Analysis

<table>
<thead>
<tr>
<th>S.NO</th>
<th>EXPERIMENT</th>
<th>OBSERVATION</th>
<th>INFERANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Appearance of the sample</td>
<td>Greenish Brown in Colour</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Solubility</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. A little of the sample is shaken well with distilled water.</td>
<td>Completely soluble</td>
<td>Absence of Silicate</td>
</tr>
<tr>
<td></td>
<td>b. A little of the sample is shaken well with con. Hcl Con. H2SO4.</td>
<td>Completely soluble</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A small amount of the sample is taken in a dry test tube and heated gently at first and then Strong.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Flame Test</td>
<td>White flame is appeared</td>
<td>Absence of Copper</td>
</tr>
<tr>
<td></td>
<td>A small amount of the sample is made into a paste with con. Hcl in a watch glass and introduced into non-luminous part of the Bunsen flame.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Ash Test</td>
<td>No Yellow colour flame</td>
<td>Absence of Sodium.</td>
</tr>
<tr>
<td></td>
<td>A filter paper is soaked into a mixture of sample and cobalt nitrate solution and introduced into the Bunsen flame and ignited</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PREPARATION OF EXTRACT

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

1. TEST FOR ACID RADICALS:

<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 Sulphate:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. 2 ml of the above prepared extract is taken in a test tube to this added 2ml of 4% ammonium oxalate solution.</td>
<td>Cloudy appearance present</td>
<td>presence of sulphate</td>
</tr>
<tr>
<td></td>
<td>b. 2ml of the above prepared extract is added with 2 ml of dilHCl is added until the effervescence ceases off. Then 2ml of Barium chloride solution is added.</td>
<td>A white precipitate insoluble in con. Hcl is obtained</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td><strong>Test for Chloride:</strong></td>
<td>No Cloudy appearance present (Mild trace element)</td>
<td>Absence of chloride</td>
</tr>
<tr>
<td></td>
<td>2 ml of the above prepared Extract is added with dil. HNO3 till the effervescence ceases. Then 2 ml of silver nitrate solution is added.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td><strong>Test for Phosphate:</strong></td>
<td>Cloudy yellow appearance</td>
<td>Presence of phosphate</td>
</tr>
<tr>
<td></td>
<td>2 ml of the extract is treated with 2ml of ammonium molybdate solution and 2 ml of con. HNO3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td><strong>Test for Carbonate:</strong></td>
<td>cloudy appearance</td>
<td>Presence of Carbonate.</td>
</tr>
<tr>
<td></td>
<td>2m1 of the extract is treated with 2ml magnesium sulphate solution</td>
<td>Brown gas is not evolved</td>
<td>Absence of nitrate</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>5. <strong>Test for Nitrate:</strong></td>
<td>1gm of the substance is heated with copper turnings and concentrated H2SO4 and viewed the test tube vertically down.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. <strong>Test for Sulphide:</strong></td>
<td>1 gm of the substance is treated with 2m1 of con. Hcl.</td>
<td>No rotten egg smelling gas evolved</td>
<td>Absence of sulphide</td>
</tr>
<tr>
<td>7. <strong>Test for Fluoride and oxalate:</strong></td>
<td>2 m1 of The Extract Is Added With 2m1 of Acetic Acid and 2 m1 calcium Chloride solution and heated.</td>
<td>No cloudy appearance</td>
<td>Absence of fluoride and oxalate</td>
</tr>
<tr>
<td>8. <strong>Test for Nitrate:</strong></td>
<td>3 drops of extract is placed on a filter paper, on that 2 drops of acetic Acid and 2 drops of benzidine solution is placed.</td>
<td>No characteristic changes</td>
<td>Absence of nitrate</td>
</tr>
<tr>
<td>9. <strong>Test for Borate:</strong></td>
<td>2 pinches of the substance are made into paste by using sulphuric acid and alcohol (95%) and introduced into the blue flame</td>
<td></td>
<td>Absence of borate</td>
</tr>
</tbody>
</table>
### II. TEST FOR BASIC RADICALS

<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 Lead:</strong>&lt;br&gt; 2 m1 of the extract is added with 2 m1 of potassium iodide solution.</td>
<td>No Yellow precipitate is obtained</td>
<td>Absence of Lead.</td>
</tr>
<tr>
<td>2.</td>
<td><strong>Test for Copper:</strong>&lt;br&gt; a. One pinch of substance is made into paste with con. Hcl in a watch glass and introduced into the non-luminous part of the flame.&lt;br&gt; b. 2 ml of extract is added with excess of ammonia solution.</td>
<td>Blue colour flame precipitate&lt;br&gt; No Blue colour precipitate</td>
<td>Presence of Copper.&lt;br&gt; Absence of Copper.</td>
</tr>
<tr>
<td>3.</td>
<td><strong>Test For Aluminium:</strong>&lt;br&gt; Take the 2 m1 of the extract sodium hydroxide is added in drops to excess.</td>
<td>No characteristic changes</td>
<td>Absence of Aluminium.</td>
</tr>
<tr>
<td>4.</td>
<td><strong>Test For Iron (Ferrous):</strong>&lt;br&gt; To the 2 ml of extract 2 m1 ammonium thiocyanate solution and 2 m1 of con. HNO3 is added.</td>
<td>Blood red colour appearance</td>
<td>Presence of Iron.</td>
</tr>
<tr>
<td>5.</td>
<td><strong>Test For Zinc:</strong>&lt;br&gt; To 2 m1 of the extract sodium hydroxide solution is added in drops to excess.</td>
<td>White precipitate is not Formed</td>
<td>Absence of Zinc.</td>
</tr>
<tr>
<td>6.</td>
<td><strong>Test For Calcium:</strong>&lt;br&gt; To 2 m1 of the extract is added with 2 m1 of 4% ammonium oxalate Solution.</td>
<td>Cloudy appearance and white precipitate is obtained</td>
<td>Presence of Calcium</td>
</tr>
<tr>
<td></td>
<td>Test For Magnesium:</td>
<td>White precipitate is not obtained.</td>
<td>Absence of Magnesium</td>
</tr>
<tr>
<td>---</td>
<td>-------------------</td>
<td>-----------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>7.</td>
<td>To 2ml of extract sodium hydroxide solution is added in drops to excess.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Test For Ammonium:</th>
<th>No brown colour appeared</th>
<th>Absence of Ammonium</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.</td>
<td>To 2ml of extract few ml of Nessler's reagent and excess of sodium hydroxide solution are added</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Test For Potassium:</th>
<th>Yellowish precipitate is obtained</th>
<th>Presence of Potassium</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>A pinch of substance is treated with 2ml of sodium nitrite solution and then treated with 2ml of cobalt nitrate in 30% glacial acetic acid.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Test For Sodium:</th>
<th>No Yellow Color Flame appeared.</th>
<th>Absence of Sodium.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.</td>
<td>2 pinches of the substance is made into paste by using HCL and introduced into the blue flame of Bunsen burner.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Test For Mercury:</th>
<th>Yellow precipitate is not obtained</th>
<th>Absence of Mercury.</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td>2 ml of the extract is treated with 2ml of sodium hydroxide solution.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>For Arsenic Test:</th>
<th>No brownish red Precipitate is obtained</th>
<th>Absence of Arsenic.</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.</td>
<td>2 ml of the extract is treated with 2ml of sodium hydroxide solution.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
III. MISCELLANEOUS:

<table>
<thead>
<tr>
<th>S.NO</th>
<th>EXPERIMENT</th>
<th>OBSERVATION</th>
<th>INFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Test for Starch: &lt;br&gt;2 ml of extract is treated with weak iodine solution.</td>
<td>blue colour developed</td>
<td>Presence of Starch.</td>
</tr>
<tr>
<td>2.</td>
<td>Test For Reducing Sugar: &lt;br&gt;5 ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 minutes and added 8 to 10 drops of the extract and again boil it for 2 minutes. The colour changes are noted.</td>
<td>Brick red colour developed</td>
<td>Presence of Reducing sugar.</td>
</tr>
<tr>
<td>3.</td>
<td>Test For The Alkaloids: &lt;br&gt;a. 2ml of the extract is treated with 2 ml of potassium Iodide solution. &lt;br&gt;b. 2ml of extract is treated with 2ml of picric acid. &lt;br&gt;c. 2ml of the extract is treated with 2ml of phosphotungstic acid.</td>
<td>Red colour developed Trace Yellow colour developed White precipitate developed</td>
<td>Presence of Alkaloid. Trace of Alkaloid present. Presence of Alkaloid.</td>
</tr>
<tr>
<td>4.</td>
<td>Test for Tannic Acid: 2 ml of extract is treated with 2ml of ferric chloride solution.</td>
<td>Black precipitate is obtained</td>
<td>Presence of tanin</td>
</tr>
<tr>
<td>5.</td>
<td>Test for Unsaturated Compound: &lt;br&gt;To the 2ml of extract 2ml of Potassium Permanganate solution is added.</td>
<td>Potassium Permanganate is not decolourised</td>
<td>Absence of Unsaturated Compound.</td>
</tr>
<tr>
<td>6.</td>
<td>Test For Amino Acid: &lt;br&gt;2 drops of the extract is placed on a filter paper and dried well and 2 ml of biuret reagent is added.</td>
<td>No Violet colour developed</td>
<td>Absence of Amino acids</td>
</tr>
<tr>
<td>7.</td>
<td>Test For type of Compound: 2ml of the extract is treated with 2 ml of ferric chloride solution.</td>
<td>Green colour developed</td>
<td>Presence of oxy quinole epinephrine and pyro catechol.</td>
</tr>
<tr>
<td>----</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>-------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>No Red colour developed</td>
<td></td>
<td>Anti pyrine, Aliphatic amino acids and Meconic acid are absent.</td>
</tr>
<tr>
<td></td>
<td>No Violet colour developed</td>
<td></td>
<td>Apomorphine, Salicylate and Resorcinol are absent.</td>
</tr>
<tr>
<td></td>
<td>No blue colour developed</td>
<td></td>
<td>Morphine, Phenol cresol and hydroquinone are absent</td>
</tr>
</tbody>
</table>

**Result:**

The bio chemical analysis of *Thirutharakchatha chooranam* shown the presents of sulphate, phosphate, carbonate, copper, aluminium, iron, calcium, potassium, starch, reducing sugar, alkaloids, tannic acid.
The observation and results were studied and tabulated under the following heading:

- Age and sex
- Occupational Status
- Family History
- Diet Habits
- Thinai Reference
- Kaalam Distribution
- Yakkai Ilakkanam (Physical Constitution)
- Gunam
- Duration of Illness
- Distributions of MuthThodam (Three Humours)
- Udal Kattukkal
- En Vagai Thervugal
- Neerkkuri, Neikkuri
- Haematology General report
- Haematology Biochemistry report
- Urine Analysis
- Result and Statistical Significance of HAM-D score
- Result and Statistical Significance of yogam
- Result and Statistical significance of trail medicine.

- No of cases screened: 128
- No of cases enrolled: 35
- No of cases included: 30
- No of cases excluded: 93
- Adverse effect reported: 0
- Depression
- No of cases withdrawal: 5
1. Age Distribution:

<table>
<thead>
<tr>
<th>S.NO</th>
<th>AGE</th>
<th>NO OF CASES</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>20-25</td>
<td>5</td>
<td>16.6%</td>
</tr>
<tr>
<td>2.</td>
<td>26-35</td>
<td>17</td>
<td>56.6%</td>
</tr>
<tr>
<td>3.</td>
<td>36-45</td>
<td>7</td>
<td>23.3%</td>
</tr>
<tr>
<td>4.</td>
<td>46-55</td>
<td>1</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

Observation: The patients were selected from all age groups as given above and the maximum numbers of patients 17(56.6%) were in the age groups between 26-35.

2. Sex:

<table>
<thead>
<tr>
<th>S.NO</th>
<th>SEX</th>
<th>NO OF CASES</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Female</td>
<td>13</td>
<td>43.3%</td>
</tr>
<tr>
<td>2.</td>
<td>Male</td>
<td>17</td>
<td>56.6%</td>
</tr>
</tbody>
</table>
Observation: Among the 30 patients selected for this study, 57% were males and 43% were females.

3. Occupational:

<table>
<thead>
<tr>
<th>S.NO</th>
<th>NATURE OF WORK</th>
<th>NO OF CASE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Students</td>
<td>2</td>
<td>6.6%</td>
</tr>
<tr>
<td>2.</td>
<td>Workers</td>
<td>15</td>
<td>50%</td>
</tr>
<tr>
<td>3.</td>
<td>Home maker</td>
<td>9</td>
<td>30%</td>
</tr>
<tr>
<td>4.</td>
<td>Un employed</td>
<td>4</td>
<td>13.3%</td>
</tr>
</tbody>
</table>

3. Occupation:

The majority of patients in this study were workers, homemaker, unemployed and students.

4. Family history:

<table>
<thead>
<tr>
<th>S.NO</th>
<th>CRITERIA</th>
<th>NO OF CASE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Family History (Relevant)</td>
<td>22</td>
<td>73.3%</td>
</tr>
<tr>
<td>2.</td>
<td>Family History (No relevant)</td>
<td>8</td>
<td>26.6%</td>
</tr>
</tbody>
</table>
Observation: In this study, 22 number (73.3%) of cases had positive family history.

5. Dietary habits:

<table>
<thead>
<tr>
<th>S.NO</th>
<th>Dietary habits</th>
<th>NO OF CASE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Vegetarian</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>2.</td>
<td>Non-vegetarian</td>
<td>27</td>
<td>90%</td>
</tr>
</tbody>
</table>

Observation: In this study only 90% of Patients were Non. Vegetarian.

6. Thinai reference:

<table>
<thead>
<tr>
<th>S.NO</th>
<th>THINAI</th>
<th>NO OF CASE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Kurinji (Hill Area)</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2.</td>
<td>Mullai (Forest Area)</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3.</td>
<td>Marutham (Fertile Land)</td>
<td>4</td>
<td>13.3%</td>
</tr>
</tbody>
</table>
Observation: In this study 86.6% of the patients were from Neithal, 13.3% were from Marutham.

7. KALAM DISTRIBUTION:

<table>
<thead>
<tr>
<th>S.NO</th>
<th>KALAM</th>
<th>NO OF CASE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Kaar kaalam</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2.</td>
<td>Koothir kaalam</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>3.</td>
<td>Munpani kaalam</td>
<td>12</td>
<td>40%</td>
</tr>
<tr>
<td>4.</td>
<td>Pinpani kaalam</td>
<td>14</td>
<td>46.6%</td>
</tr>
<tr>
<td>5.</td>
<td>Elavenil kaalam</td>
<td>2</td>
<td>6.6%</td>
</tr>
<tr>
<td>6.</td>
<td>Muthuvenil kaalam</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>
Observation: Among 30 patients, 65% of patients were comes in Pinpani kaalam 46.6% and 40% of patients comes in munpani kaalam and 10% of patients in koothir kaalam.

8. Yaakai Ilakkanam (Physical Constitution):

<table>
<thead>
<tr>
<th>S.NO</th>
<th>YAKKAI ILAKKANAM</th>
<th>NO OF CASE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Vadha udal</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2.</td>
<td>Pitha udal</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3.</td>
<td>Kapha udal</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>4.</td>
<td>Thontha udal</td>
<td>30</td>
<td>100%</td>
</tr>
</tbody>
</table>

Observation: All the patients (100%) had ThonthaUdal

9. Gunam (Quality and Characters):

<table>
<thead>
<tr>
<th>S.NO</th>
<th>GUNAM</th>
<th>NO OF CASE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sathuva gunam</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Rajo gunam</td>
<td>30</td>
<td>100%</td>
</tr>
<tr>
<td>3.</td>
<td>Thamo gunam</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
Observation: All of the patients 30(100 %) had “Rajo Gunam”

10. Duration of Illness:

<table>
<thead>
<tr>
<th>S.NO</th>
<th>DURATION OF ILLNESS</th>
<th>NO OF CASE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Below one year</td>
<td>9</td>
<td>30%</td>
</tr>
<tr>
<td>2.</td>
<td>Above 1-2 years</td>
<td>8</td>
<td>26.6%</td>
</tr>
<tr>
<td>3.</td>
<td>Above 2-3 years</td>
<td>9</td>
<td>30%</td>
</tr>
<tr>
<td>4.</td>
<td>Above 3 years</td>
<td>5</td>
<td>16.6%</td>
</tr>
</tbody>
</table>

Observation: Among 30 patients 30% of cases were suffering in the duration of below one year and 2-3 year, 26.6% of cases suffering in the duration of 1-2 year, 16.6% were in the duration of above 3 years.

11. Distribution of Mukkutram:

The derangements of Vatham, Piththam and Kabam in viyagula unmatham are as follows
VATHAM:

<table>
<thead>
<tr>
<th>S.NO</th>
<th>CLASSIFICATION OF VATHAM</th>
<th>NO OF CASE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pranan</td>
<td>30</td>
<td>100%</td>
</tr>
<tr>
<td>2.</td>
<td>Abanan</td>
<td>20</td>
<td>66.6%</td>
</tr>
<tr>
<td>3.</td>
<td>Udhanan</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>4.</td>
<td>Samanan</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>5.</td>
<td>Viyanan</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>6.</td>
<td>Naagan</td>
<td>30</td>
<td>100%</td>
</tr>
<tr>
<td>7.</td>
<td>Koorman</td>
<td>10</td>
<td>33.3%</td>
</tr>
<tr>
<td>8.</td>
<td>Kirukaran</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>9.</td>
<td>Devathaththan</td>
<td>30</td>
<td>100%</td>
</tr>
<tr>
<td>10.</td>
<td>Danajeyan</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

**Observation:** Among the 30 cases, pranan, naagan, devathathan were 100% affected, 65.6% cases were affected abanan and 33.3% cases were affected koorman.

PITHAM:

<table>
<thead>
<tr>
<th>S.NO</th>
<th>CLASSIFICATION OF MPITHA</th>
<th>NO OF CASE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Analagam</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2.</td>
<td>Ranjagam</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3.</td>
<td>Sadhagam</td>
<td>30</td>
<td>100%</td>
</tr>
<tr>
<td>4.</td>
<td>Prasagam</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>5.</td>
<td>Alosagam</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>
Observation: All of the patients 30(100%) had “sadhagam” affected

KAPHAM:

<table>
<thead>
<tr>
<th>S.NO</th>
<th>CLASSIFICATION OF KAPHAM</th>
<th>NO OF CASES</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Avalambagam</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2.</td>
<td>Kilethagam</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3.</td>
<td>Tharpagam</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>4.</td>
<td>Pothagam</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>5.</td>
<td>Santhigam</td>
<td>16</td>
<td>53.3%</td>
</tr>
</tbody>
</table>

Observation: Among the 30 patients, santhigam were affected 53.3%.

12. UDAL KATTUGAL:

<table>
<thead>
<tr>
<th>S.NO</th>
<th>UDAL KATTUGAL</th>
<th>NO OF CASE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Saram</td>
<td>30</td>
<td>100%</td>
</tr>
<tr>
<td>2.</td>
<td>Seneer</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3.</td>
<td>Oon</td>
<td>20</td>
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<td>4.</td>
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<tr>
<td>5.</td>
<td>Enbu</td>
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</tr>
<tr>
<td>6.</td>
<td>Moolai</td>
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<tr>
<td>7.</td>
<td>Sukkilam/suronitham</td>
<td>10</td>
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**Observation:** Among 30 patients, Saaram, oon and sukkilam, suronitham were affected in all the cases.

### 13. EN VAGAI THERVUGAL:

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<th>S.NO</th>
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<td>1.</td>
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</tr>
<tr>
<td></td>
<td>Pitha vatham</td>
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<tr>
<td></td>
<td>Kapha pitham</td>
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<td>Kapha vatham</td>
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<td>Mozhi</td>
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<td>Vizhi</td>
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<td>7.</td>
<td>Malam</td>
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8th examination discussed separately.
Observation: In Envagai thervugal, the Naadinadai seen in Viyagula unmatham patients were Pithavaatham was affected in 16 (53.3%), Vaathapitham was affected in 14 (46.6%), malam were affected in 20 (66.6%) cases. The rest of the other elements of Envagai thervukal were not affected.

14. NEER KURI & NEI KURI:

A. NEERKURI:

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<th>NO OF CASE</th>
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<td>1.</td>
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B. NEI KURI:

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<td>Kapham (muththothu nindrathu)</td>
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INVESTIGATIONS BEFORE AND AFTER TREATMENT (HEMATOLOGY)

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<th>ESR (mm/hr)</th>
<th>Total WBC (cells/cu.mm)</th>
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**INVESTIGATIONS BEFORE AND AFTER TREATMENT (HEMATOLOGY)**
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<th>Age/ Sex</th>
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<th>AT</th>
<th>SGPT BT</th>
<th>AT</th>
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### INVESTIGATIONS BEFORE AND AFTER TREATMENT (LIVER FUNCTION TEST)

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## INVESTIGATIONS BEFORE AND AFTER TREATMENT (LIVER FUNCTION TEST)

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## INVESTIGATIONS BEFORE AND AFTER TREATMENT (RENAL FUNCTION TEST)

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## INVESTIGATIONS BEFORE AND AFTER TREATMENT (RENAL FUNCTION TEST)

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19. RESULTS AND STATISTICAL ANALYSIS:

All collected data were entered into MS Excel software using different columns as variables and rows as patients. SPSS software was used to perform statistical analysis. Basic descriptive statistics include frequency distributions and cross-tabulations were performed. The quantity variables were expressed as Mean ± Standard Deviation and qualitative data as percentage. A probability value of <0.05 was considered to indicate as statistical significance. Paired ‘t’ test was performed for determining the significance between before and after treatment.

**Yogam improvement before and after treatment:**

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<td>Good</td>
</tr>
<tr>
<td>11.</td>
<td>J92947</td>
<td>32/M</td>
<td>16</td>
<td>9</td>
<td>Moderate</td>
</tr>
<tr>
<td>12.</td>
<td>K15768</td>
<td>26/M</td>
<td>17</td>
<td>9</td>
<td>Moderate</td>
</tr>
<tr>
<td>13.</td>
<td>K03174</td>
<td>40/M</td>
<td>16</td>
<td>9</td>
<td>Moderate</td>
</tr>
<tr>
<td>14.</td>
<td>J91207</td>
<td>42/M</td>
<td>18</td>
<td>16</td>
<td>Mild</td>
</tr>
<tr>
<td>15.</td>
<td>H81102</td>
<td>43/F</td>
<td>16</td>
<td>6</td>
<td>Good</td>
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</table>

**RESULTS**

<table>
<thead>
<tr>
<th>RESULTS</th>
<th>NO OF CASES</th>
<th>PERCENTAGE</th>
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<tbody>
<tr>
<td>1. Good improvement</td>
<td>6</td>
<td>40%</td>
</tr>
<tr>
<td>2. Moderate improvement</td>
<td>7</td>
<td>46.66%</td>
</tr>
<tr>
<td>3. Mild improvement</td>
<td>2</td>
<td>13.33%</td>
</tr>
<tr>
<td>4. Nil improvement</td>
<td>0</td>
<td>0%</td>
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**statistical significant of yogam Before Treatment and After Treatment:**

<table>
<thead>
<tr>
<th></th>
<th>Mean ± SD</th>
<th>t Value</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before treatment</td>
<td>15.87±2.61</td>
<td>9.8885</td>
<td>&gt; 0.0001</td>
</tr>
<tr>
<td>After treatment</td>
<td>8.4±3.13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Observation:** The mean ± standard deviation of yogam therapy before and after treatment were 15.87±2.61 and 8.4±3.13 respectively which is statistically significant (p > 0.0001). There is a significant difference between before and after treatment on yogam therapy i.e. 47.69% reduction in yogam therapy after the trial.

**21. Observation of Trial Medicine before and after treatment:**

<table>
<thead>
<tr>
<th>S.NO</th>
<th>OP. NO</th>
<th>AGE/SEX</th>
<th>BT</th>
<th>AT</th>
<th>RESULTS</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>J24573</td>
<td>36/M</td>
<td>18</td>
<td>10</td>
<td>Moderate</td>
</tr>
<tr>
<td>2.</td>
<td>J20109</td>
<td>20/F</td>
<td>14</td>
<td>8</td>
<td>Moderate</td>
</tr>
<tr>
<td>3.</td>
<td>J16543</td>
<td>29/M</td>
<td>14</td>
<td>10</td>
<td>Moderate</td>
</tr>
<tr>
<td>4.</td>
<td>J65938</td>
<td>26/F</td>
<td>16</td>
<td>11</td>
<td>Moderate</td>
</tr>
<tr>
<td>5.</td>
<td>J80464</td>
<td>33/F</td>
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<td>6</td>
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</tr>
<tr>
<td>6.</td>
<td>J86767</td>
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<td>11</td>
<td>Moderate</td>
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<tr>
<td>7.</td>
<td>J45831</td>
<td>38/M</td>
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<td>9</td>
<td>Moderate</td>
</tr>
<tr>
<td>8.</td>
<td>J27240</td>
<td>24/M</td>
<td>16</td>
<td>13</td>
<td>Moderate</td>
</tr>
<tr>
<td>9.</td>
<td>J97649</td>
<td>55/F</td>
<td>15</td>
<td>3</td>
<td>Good</td>
</tr>
<tr>
<td>10.</td>
<td>K00391</td>
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</table>
statistical significant of trial medicine(internally&externally) Before Treatment and After Treatment:

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<td>Before treatment</td>
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<td>7.9955</td>
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<tr>
<td>After treatment</td>
<td>8.866±3.661</td>
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Observation: The mean± standard deviation of medicines before and after treatment were 15.6±2.354 and 8.866±3.661 respectively which is statistically significant (P > 0.0001). There is a significant difference between before and after treatment on trial medicine i.e. 43.20% reduction in medicine after the trial.
## HAM-D Score Before and After Treatment:

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<th>OP. NO</th>
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<th>BT</th>
<th>AT</th>
<th>RESULTS</th>
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</thead>
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<td>J20109</td>
<td>20/F</td>
<td>14</td>
<td>8</td>
<td>Moderate</td>
</tr>
<tr>
<td>4</td>
<td>J16543</td>
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<td>14</td>
<td>10</td>
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<td>J30889</td>
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<td>Moderate</td>
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<tr>
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<td>G61704</td>
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<tr>
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<td>J80464</td>
<td>33/F</td>
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<td>Good</td>
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<td>J89702</td>
<td>25/M</td>
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<td>11</td>
<td>J86767</td>
<td>45/F</td>
<td>18</td>
<td>11</td>
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<tr>
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<td>J45831</td>
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<td>18</td>
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<td>Mild</td>
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<tr>
<td>15</td>
<td>J27240</td>
<td>24/M</td>
<td>16</td>
<td>13</td>
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</tr>
<tr>
<td>16</td>
<td>J97649</td>
<td>55/F</td>
<td>15</td>
<td>3</td>
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<td>17</td>
<td>K00391</td>
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</tr>
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<td>J99581</td>
<td>35/F</td>
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<td>32/M</td>
<td>16</td>
<td>9</td>
<td>Moderate</td>
</tr>
<tr>
<td>28</td>
<td>K12113</td>
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<td>29</td>
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<td>9</td>
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Paired Sample Statistics (HAM-D Score Before Treatment and After Treatment) :

<table>
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<th>Mean ± SD</th>
<th>t Value</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before treatment</td>
<td>15.60± 2.54</td>
<td>11.4698</td>
<td>&gt;0.0001</td>
</tr>
<tr>
<td>After treatment</td>
<td>8.63±3.36</td>
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<td></td>
</tr>
</tbody>
</table>

Observation The mean± standard deviation of HAM-D score at before and after treatment were -15.60± 2.54 and 8.63±3.36 respectively which is statistically significant (p> 0.0001). There is a significant difference between before and after treatment on HAM-D Score i.e. 44.68 % reduction in HAM-D Score after the tria
DISCUSSION

The Depression is one of the most important psychological problems more common among the population. Majority of them are not seeking the help to proper health care providers due to social stigma in related with psychological illness. Large numbers of patients perceive even the natural physiological function as abnormal. The Depression is rampant among the Indian population and leads to large number of physical and psychological symptoms. Majority of these individuals visit self-claimed psychiatrist and traditional faith healers. The contact with these health providers not only strengthen their misconception and false beliefs, but also compel the patients to pay huge cost of investigations and drugs which are not only non-effective but also hazardous. This may lead them as a patient in physically and mentally. In general practice, most of focus the physicians they attending their patients may missed the underlying psychiatric problems. Hence these kinds of patients get more worsened with their problems and become a mentally affected patient.

The trial drugs were prepared in Gunapadam lab of National Institute of Siddha after the authentication of the raw drugs by Assistant professor of Medicinal botany NIS, Chennai. The trial drug was prepared by Standard Operating Procedure as mentioned in the Protocol.

The Bio chemical analysis was done at the biochemistry lab of NIS and the results were documented. The Bio-chemical analysis of Thirutharakchatha chooranam had shown the presence of sulphate, chloride, phosphate, carbonate, calcium, aluminium, zinc, magnesium, reducing sugars, iron, tannic acid, starch and alkaloids. The clinical study was conducted with a well-defined protocol and a proper proforma after the approval of Institutional Ethical Committee. For this dissertation study, 30 patients were selected and patients were treated in the OP Department of Sirappu Maruthuvam, in Ayothidoss Pandithar Hospital - National Institute of Siddha, Tambaram Sanatorium, Chennai –600 047.

Based on various criteria, the data were collected and tabulated. The criteria were family history, age distribution, occupation, dietary habits and incidence of the disease with reference to thinai, seasonal variation, clinical manifestations and assessment of the improvement in the prognosis of the disease with the trial drug.

In Siddha System, it is necessary to bring the vitiated humours to equilibrium. Hence before the treatment Meganatha Kulikai with Inji charu (Zingiber officinale) juice was given
for *Viresanam* (Purgation) in the early morning to normalize the vitiated humours. During the treatment, the patients were advised to follow *pathiyam* (Dietary regimen).

**Internal Drug**: *Thirutharakchatha chooranam* - 2gm two times per day with ghee

**External Drug**: *Aruganver Thylam* for oil bath 2 times per week

**Duration of Drug**: 48 days

30 patients were enrolled for this study, among 30 patients, age group 20 to 25 years were in number 5 (16.6%), patients between 26 to 35 were in number 17 (56.6 %), patients between 36 to 45 years were in number 7 (23.3 %), patients between 45 to 55 years, 1 (3.3%).

*Viyagula unmatham* commonly appears at young and middle age. In this present study, considerable numbers of patients were reported (17 patients) between the age of 26-35 among study sample.

Among the 30 patients, male cases were reported in number 17(56.6%) and female cases were reported in number 13(43.3%). Usually the studies carried out on depression, proves that female were affected more than male. But the study revealed that, the occurrence more in male than the female due to social stigma and lack of awareness on mental health and cultural practice in the society.

The majority of patients in this study were common workers 15 (50 %), homemakers 9(30%), unemployed 4(13.3%) and students 2(6.6%). Inference of this study shows that, in current scenario employed people are highly exposed to stress often, which is the root cause of depressive disorders.

The most of patients in this study were Non-vegetarian 27 (90%) remaining 3 (10%) patients were vegetarian. Inference of this study, shows that people who are consuming high non-vegetarian diet, gets aggressive behaviour which leads to psychiatric disorders.

In this present study shows, considerable numbers of patients were reported from *neithal* (26 patients), *marutham* (4 patients).

Highest number of patients 14 (46.6%) were studied during *Pinpani Kaalam*, 12 patients (40%) were studied during *Munpani Kaalam*, 3 patients (10%) were studied during *Koothir kaalam* and 2 patients were studied during *Ilavenil kaalam*.

Most of patients 9(30%) were affected in duration of below one year and above 2 to 3 years, 8 (26.6%) patients were affected by the illness from 1 to 2 years, above 3 years were in...
same number 5 (12.5%). Laboratory investigations were done for all the cases before and after treatment. There were no variations in hepatic, renal and other parameters.

Among the 30 patients randomized selected 15 patients (2,5,7,8,10,13,14,18,19,21,23,26,27,29,30) received yogam along with trial medicines (internally & externally). This yogam results shown 6 patients (40% %) is good improvement, 7 patients (46.66%) shown moderate improvement and 2 patients(13.3%) shown mild improvement. Patients who have lot of sadness, lack of concentration and sleep exposed to very poor result and respond, may be this is the effect of thookkaminmai (Insomnia) and more stressful life style. Based on Siddha Literature the one who not maintain the Naal ozhukkam (Daily regimen) haven’t maintain their good health, this may reflect in this patient.

Remaining 15 patients received only trial medicines (Internally & Externally), without yogam. This trial medicine shown results as 4 patients(26.66%) shown good improvement and 9 patients(60%) shown moderate improvement and 2 patients (13.3%) shown mild improvement.

The outcome of this study was clinically observed by HAM-D Score, which showed encouraging results of good improvement in 10 patients (33.3%), moderate improvement in 16 patients (53.3%) and mild improvement in 4 cases (13.3%).

Patients who were received both treatments (yogam & trial medicine) had revealed good result and better revealment than the trial medicine taken alone. Based on this it is shown Medicine combined with Yogam therapy is more effective and appropriate to treat the Viyagula Unmatham (Depression).

In this study, no adverse events were observed during the course of the treatment. After the study period, all the patients were advised to attend Out Patient Department of Sirappu Maruthuvam of NIS for further follow-up of 6 months.
The disease *Viyagula Unmatham* was taken for the clinical study with *Thirutharakchatha chooranam* as internal medicine and *Aruganver Thylam* for external application for oil bath 2 times per week, for the clinical study, 30 cases were selected based on the approved protocol.

The raw drugs were authenticated by the competent authority Medicinal Botany and Gunapadam dept, Botanical Authentication Certificate no: NISMB3382018.

This study has been approved by IEC of NIS [Date of IEC Approval& its number: NIS/IEC/2016/11-12/14.10.2016]. The study is safely executed on patients and there were no adverse drug reactions noted during the study period and further registered Clinical Trail Registry of India [REG. NO. CTRI/2018/04/013421].

Out of 30 cases treated at OPD, of Ayothisoss Pandithar Hospital of National Institute of Siddha, Chennai-47. Randomly selected 15 cases(2,5,7,8,10,13,14,18,19,21,23,26,27,29,30) were received *Yogam* therapy. The detailed study on *Viyagula unmatham* with reference to its aetiology, pathogenesis, investigations, clinical features, diagnosis and treatment with trial drugs was done.

The results were observed by HAM-D score. Among the 30 cases treated, 33.3 % cases had shown good improvement, 53.3 % cases had shown moderate improvement and 13.3% cases had shown mild improvement. Randomised selected 15 patients were received additionally *Yogam* therapy. This revealed 80% of the patients showed more than 50% improvement. Combined trial medicine and *yogam* therapy shown more significant improvements.
The present clinical study confirms the efficacy of the trial drug *Thirutharakchatha chooranam* (internal medicine) and *Aruganver thylam* (external medicine) which is Siddha poly herbal formulation. It was found to be better resulting on *Viyagula unmatham* patients in reducing clinical symptoms like depressive mood, loss of sleep and appetite, weight loss, lack of concentration, anhedonia, suicidal thoughts etc. The literature evidence for this drug *Agathiyar Vaithiya Ratna Surukam* page no 45, *Publication of Tanjavur Magaraja Sarabojini Saraswathy Mahal Noolagam*. The quantitative outcome of HAM-D score shows significant reduction between before and after treatment. The qualitative outcome shows there is 33.3 % of cases had shown good improvement and the rest 53.3 % of cases had shown moderate improvement and 13.3% of cases mild improvement. Further the *Yogam* had shown more impressive result of reduction of symptoms of *Viyagula unmatham* (Depression). It shows the better improvement more than 50 % was 26 (86.6 %) patients.

According to this result it could be observed that *yogam* therapy is further given as support to improve the condition of *Viyagula unmatham* (Depression). The Modern Medical concept of Anxiety related somatic complaints or Culture bound syndrome also has to be proven. The clinical trial conducted in selected patients was satisfactory and the results were encouraging. However, a study with large number of patients is required to find out the ideal dose response.

The costs of the trial medicines are comparatively low. The trail medicines are cost effective.

From the above results, the trial drugs “*Thirutharakchatha chooranam*” (Internal Medicine) and “*Aruganver Thylam*” (External Medicine) are responded well in the treatment of *Viyagula unmatham*. 
COMPARATIVE CLINICAL STUDY OF *THIRUTHARAKCHATHA CHOORANAM* (INTERNAL), *ARUGANVER THYLAM* (EXTERNAL) IN THE TREATMENT OF *VIYAGULA UNMATHAM* (DEPRESSION) WITH AND WITHOUT YOGAM THERAPY

Principal Investigator: Dr. S. Siva Josyaa

**SCREENING & SELECTION PROFORMA**

1. SERIAL NO: ……………………………… 2. OP/IP NO: ………………………
3. NAME: …………………………………… 4. AGE/GENDER: …………………
5. OCCUPATION: ………………………… 6. INCOME: ………………………

**INCLUSION CRITERIA**

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</tr>
<tr>
<td>Sex: Both male and female</td>
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</tr>
<tr>
<td>Depressed mood</td>
<td></td>
</tr>
<tr>
<td>Reduced level of interest</td>
<td></td>
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<tr>
<td>Considerable loss or gain of weight</td>
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<tr>
<td>Insomnia or hypersomnia</td>
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<tr>
<td>Psychomotor agitation or retardation</td>
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</tr>
<tr>
<td>Fatigue</td>
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<td>Thoughts of extreme guilt</td>
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</tr>
<tr>
<td>Diminished ability to think or concentrate</td>
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<tr>
<td>Suicidal thoughts</td>
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<tr>
<td>Willing to participate in trial and signing consent by fulfilling the conditions of proforma</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Willing to give blood sample for analysis for laboratory investigations</td>
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If 8 - 10 criteria are positive, the patients will be included for the study.
**EXCLUSION CRITERIA:**

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<td>Psychosomatic disorders</td>
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<td>Cardiac disease</td>
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<td>Any other serious systemic illness</td>
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**TRIAL**

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<td>Serial NO:</td>
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</table>

Date:

Station:

**Signature of the Investigator:**

**Signature of the Lecturer:**

**Signature of the HOD**
COMPARATIVE CLINICAL STUDY OF *THIRUTHARAKCHATHA CHOORANAM* (INTERNAL), *ARUGANVER THYLAM* (EXTERNAL) IN THE TREATMENT OF *VIYAGULA UNMATHAM* (DEPRESSION) WITH AND WITHOUT *YOGAM* THERAPY

Principal Investigator: Dr. S. Siva Josyaa

**FORM II-A – HISTORY TAKING PROFORMA**

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| RELIGION: H / C / M / O. | |
|--------------------------| |
|                         | |

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<tr>
<th>OCCUPATION:</th>
<th>INCOME:</th>
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<table>
<thead>
<tr>
<th>MARITAL STATUS:</th>
<th>1. Married</th>
<th>2. Unmarried</th>
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</thead>
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| DATE OF INITIAL ASSESSMENT: | |
|-----------------------------| |
|                             | |

| COMPLAINTS & DURATION: | |
|------------------------| |
|                        | |
PERSONAL HISTORY:

<table>
<thead>
<tr>
<th>PERSONAL HABITS</th>
<th>YES</th>
<th>NO</th>
<th>IF YES SPECIFY DURATION</th>
<th>AMOUNT</th>
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<tbody>
<tr>
<td>Smoking</td>
<td></td>
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</tr>
<tr>
<td>Tobacco Chewing</td>
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</tr>
<tr>
<td>Alcohol</td>
<td></td>
<td></td>
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<tr>
<td>Narcotic Drug Addiction</td>
<td></td>
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</tbody>
</table>

HISTORY OF PREVIOUS ILLNESS AND TREATMENT TAKEN:

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

If yes, mention the relationship of affected person(s)
1._________________
2._________________

DIETARY STYLE:
1. Vegetarian 2. Non-vegetarian

MENSTURAL AND OBSTETRIC HISTORY:

FORM II B

<table>
<thead>
<tr>
<th>S.NO</th>
<th>GENERAL EXAMINATION</th>
<th>BEFORE TREATMENT</th>
<th>AFTER TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body weight [Kg]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Height [cms]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Body Temperature [F]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4 Blood Pressure (mm/Hg)  
5 Pulse Rate /min  
6 Heart Rate / min  
7 Respiratory Rate /min.  
8 Pallor  
9 Jaundice  
10 Clubbing  
11 Cyanosis  
12 Pedal Oedema  
13 Lymphadenopathy  
14 Jugular venous pulsation  

**SYSTEMIC EXAMINATION**

1 Cardiovascular system  
2 Respiratory system  
3 Gastro-intestinal system  
4 Central Nervous system  
5 Urogenital system  
6 Endocrine system  

**SIDDHA SYSTEM OF EXAMINATION**

1. **THEGI (BODY CONSTITUTION):**
   1. Vatha udal  
   2. Pitha udal  
   3. Kaba udal  
   4. Thontha udal  

2. **NILAM (LAND WHERE THE PATIENT LIVED MOST):**
   1. Kurinji (Hilly terrain)  
   2. Mullai (Forest range)  
   3. Marutham (Plains)  
   4. Neithal (Coastal belt)  
   5. Paalai (Arid region)
3. KAALAM:
1. Kaar kaalam (Aavani-Purattasi) □
2. Koothir kaalam (Ippasi-Kaarthigai) □
3. Munpani kaalam (Maargazhi-Thai) □
4. Pinpani kaalam (Maasi-Panguni) □
5. Ilavenil kaalam (Chithirai-Vaigasi) □
6. Muthuvenil kaalam (Aani-Aadi) □

4. GUNAM:
1. Sathuvam □
2. Rasatham □
3. Thamasam □

5. PORIPULANGAL (SENSORY ORGANS):

<table>
<thead>
<tr>
<th></th>
<th>Before treatment</th>
<th>After treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mei (Skin)</td>
<td>Normal / Affected</td>
<td>Normal / Affected</td>
</tr>
<tr>
<td>Vai (Tongue)</td>
<td>Normal / Affected</td>
<td>Normal / Affected</td>
</tr>
<tr>
<td>Kann (Eye)</td>
<td>Normal / Affected</td>
<td>Normal / Affected</td>
</tr>
<tr>
<td>Mooku (Nose)</td>
<td>Normal / Affected</td>
<td>Normal / Affected</td>
</tr>
<tr>
<td>Sevi (Ear)</td>
<td>Normal / Affected</td>
<td>Normal / Affected</td>
</tr>
</tbody>
</table>

6. KANMENDRIYAM (MOTOR ORGANS):

<table>
<thead>
<tr>
<th></th>
<th>Before treatment</th>
<th>After treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kai (Upper limb)</td>
<td>Normal / Affected</td>
<td>Normal / Affected</td>
</tr>
<tr>
<td>Kaal (Lower limb)</td>
<td>Normal / Affected</td>
<td>Normal / Affected</td>
</tr>
<tr>
<td>Vai (Oral cavity)</td>
<td>Normal / Affected</td>
<td>Normal / Affected</td>
</tr>
<tr>
<td>Eruvai (Anal region)</td>
<td>Normal / Affected</td>
<td>Normal / Affected</td>
</tr>
<tr>
<td>Karuvai (Uro-Genital region)</td>
<td>Normal / Affected</td>
<td>Normal / Affected</td>
</tr>
</tbody>
</table>
7. KOSANGAL (SHEATH):

<table>
<thead>
<tr>
<th></th>
<th>Before treatment</th>
<th>After treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annamaya kosam</td>
<td>Normal /Affected</td>
<td>Normal /Affected</td>
</tr>
<tr>
<td>Pranamaya kosam</td>
<td>Normal /Affected</td>
<td>Normal /Affected</td>
</tr>
<tr>
<td>Manomaya kosam</td>
<td>Normal /Affected</td>
<td>Normal /Affected</td>
</tr>
<tr>
<td>Vignanamaya kosam</td>
<td>Normal /Affected</td>
<td>Normal /Affected</td>
</tr>
<tr>
<td>Ananthamaya kosam</td>
<td>Normal /Affected</td>
<td>Normal /Affected</td>
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</tbody>
</table>

8. SEVEN UDAL THAATHUKKAL (SEVEN SOMATIC COMPONENTS)

<table>
<thead>
<tr>
<th></th>
<th>Before treatment</th>
<th>After treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saaram</td>
<td>Normal /Affected</td>
<td>Normal /Affected</td>
</tr>
<tr>
<td>Senneer</td>
<td>Normal /Affected</td>
<td>Normal /Affected</td>
</tr>
<tr>
<td>Oon</td>
<td>Normal /Affected</td>
<td>Normal /Affected</td>
</tr>
<tr>
<td>Kozhuppu</td>
<td>Normal /Affected</td>
<td>Normal /Affected</td>
</tr>
<tr>
<td>Enbu</td>
<td>Normal /Affected</td>
<td>Normal /Affected</td>
</tr>
<tr>
<td>Moolai</td>
<td>Normal /Affected</td>
<td>Normal /Affected</td>
</tr>
<tr>
<td>Sukkilam / Suronitham</td>
<td>Normal /Affected</td>
<td>Normal /Affected</td>
</tr>
</tbody>
</table>

9. UYIR THAATHUKKAL: [THREE HUMORS] (VALI/ AZHAL/ IYYAM)

A) VALI

<table>
<thead>
<tr>
<th></th>
<th>1st day</th>
<th>8th day</th>
<th>15th day</th>
<th>22nd day</th>
<th>29th day</th>
<th>36th day</th>
<th>43rd day</th>
<th>49th day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Praanan</td>
<td></td>
<td></td>
<td></td>
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<tr>
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<tr>
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<td></td>
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<tr>
<td>Koorman</td>
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<tr>
<td>Kirukaran</td>
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B) AZHAL

<table>
<thead>
<tr>
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<th>29th day</th>
<th>36th day</th>
<th>43rd day</th>
<th>49th day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analakam</td>
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<td>Ranjakam</td>
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<tr>
<td>Saathakam</td>
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<tr>
<td>Prasakam</td>
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C) IYYAM

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Avalambagam</td>
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<tr>
<td>Pothagam</td>
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</table>
10. ENVAGAI THERVU: [EIGHT TYPES OF EXAMINATION]

I. NAADI: [PULSE PERCEPTION]

<table>
<thead>
<tr>
<th>NAADI</th>
<th>1st day</th>
<th>8th day</th>
<th>15th day</th>
<th>22nd day</th>
<th>29th day</th>
<th>36th day</th>
<th>43rd day</th>
<th>49th day</th>
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</table>

II. SPARISAM: [PALPATION]

<table>
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<tr>
<th>Day</th>
<th>SPARISAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st day</td>
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<tr>
<td>8th day</td>
<td></td>
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<tr>
<td>15th day</td>
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<td>22nd day</td>
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<td>29th day</td>
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<td>36th day</td>
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<tr>
<td>43rd day</td>
<td></td>
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<tr>
<td>49th day</td>
<td></td>
</tr>
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</table>

III. NAA: [TONGUE]

<table>
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<tr>
<th>NAA</th>
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<th>8th day</th>
<th>15th day</th>
<th>22nd day</th>
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<th>36th day</th>
<th>43rd day</th>
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</thead>
<tbody>
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<td></td>
</tr>
</tbody>
</table>
IV. NIRAM: [COMPLEXION]
1. Vadham
2. Pitham
3. Kabam

V. MOZHI: [VOICE]
1. High Pitched
2. Low Pitched
3. Medium Pitched

VI. VIZHI: [EYES]

<table>
<thead>
<tr>
<th>VIZHI</th>
<th>1st day</th>
<th>8th day</th>
<th>15th day</th>
<th>22nd day</th>
<th>29th day</th>
<th>36th day</th>
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</tbody>
</table>

VII. MALAM: [BOWEL HABITS / STOOLS]

<table>
<thead>
<tr>
<th></th>
<th>Before treatment</th>
<th>After treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIRAM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRUGAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ILAGAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
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</table>

VIII. MOOTHIRAM [URINE EXAMINATION]
NEERKKURI:

<table>
<thead>
<tr>
<th>Neerkkuri</th>
<th>Before treatment</th>
<th>After treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIRAM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MANAM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDAI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NURAI</td>
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<td></td>
</tr>
<tr>
<td>ENJAL</td>
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</tbody>
</table>
NEIKKURI:

<table>
<thead>
<tr>
<th>Neikkuri</th>
<th>Before treatment</th>
<th>After treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aravana neendathu/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snake like pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Azhipol paraviyathu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annular/Ringed pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muththothu ninrathu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearl beaded pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other patterns</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Date:  
Station:  
Signature of the Investigator:  
Signature of the Lecturer:  
Signature of the HOD
COMPARATIVE CLINICAL STUDY OF THIRUTHARAKCHATHA CHOORANAM (INTERNAL), ARUGANVER THYLAM (EXTERNAL) IN THE TREATMENT OF VIYAGULA UNMATHAM (DEPRESSION) WITH AND WITHOUT YOGAM THERAPY.

Principal Investigator : Dr.S.Siva josyaa

1. SERIAL NO:  
2. OP/IP NO:  
3. NAME:  
4. AGE/GENDER:

FORM-III - LABORATORY INVESTIGATIONS

<table>
<thead>
<tr>
<th>BLOOD INVESTIGATION</th>
<th>NORMAL VALUES</th>
<th>BEFORE TREATMENT (WITH DATE)</th>
<th>AFTER TREATMENT (WITH DATE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hb (gm/dl)</td>
<td>M:12-15</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>W:11.5-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T.WBC (cells/cu.mm)</td>
<td>4000-11000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIFFERENTIAL COUNT (%)</td>
<td>Polymorphs 40-75</td>
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<tr>
<td></td>
<td>Lymphocytes 20-40</td>
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</tr>
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<td></td>
<td>Monocytes 2-10</td>
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<tr>
<td></td>
<td>Eosinophils 1-6</td>
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<td></td>
<td>Basophils 0-1</td>
<td></td>
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</tr>
<tr>
<td>Blood Investigations</td>
<td>Normal Values</td>
<td>Before Treatment (WITH DATE)</td>
<td>After Treatment (WITH DATE)</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------</td>
<td>-----------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td><strong>Blood glucose (mg/dl)</strong></td>
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<tr>
<td>Fasting</td>
<td>70-110</td>
<td></td>
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</tr>
<tr>
<td>PP</td>
<td>80-140</td>
<td></td>
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</tr>
<tr>
<td>Random</td>
<td>80-120</td>
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</tr>
<tr>
<td><strong>RFT (mg/dl)</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Blood urea</td>
<td>16-50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serum creatinine</td>
<td>0.6-1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LFT (mg/dl)</td>
<td>Total bilirubin</td>
<td>(0.2-1.2)</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Direct bilirubin</td>
<td>(0.1-1.2)</td>
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</tr>
<tr>
<td></td>
<td>Indirect bilirubin</td>
<td>(0.2-0.7)</td>
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<td>SGOT</td>
<td>(0-40)</td>
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<td>SGPT</td>
<td>(0-35)</td>
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<tr>
<td></td>
<td>Alkaline phosphatase</td>
<td>(80-290)</td>
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<td>RA FACTOR</td>
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<tr>
<td>CRP</td>
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Signature of the Investigator:  
Signature of the Lecturer:  
Signature of the HOD
COMPARATIVE CLINICAL STUDY OF THIRUTHARAKCHATHA CHOORANAM (INTERNAL), ARUGANVER THYLAM (EXTERNAL) IN THE TREATMENT OF VIYAGULA UNMATHAM (DEPRESSION) WITH AND WITHOUT YOGAM THERAPY

Principal Investigator: Dr.S.Siva josyaa

**FORM –VI- DRUG COMPLIANCE FORM**

**SERIAL NO:**

**NAME:**

**DRUG NAME:**

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**Date:**

**Station:**

**Signature of the Investigator:**

**Signature of the Lecturer:**

**Signature of the HOD**
COMPARATIVE CLINICAL STUDY OF THIRUTHARAKCHATHA CHOORANAM (INTERNAL), ARUGANVER THYLAM (EXTERNAL) IN THE TREATMENT OF VIYAGULA UNMATHAM (DEPRESSION) WITH AND WITHOUT YOGAM THERAPY

Principal Investigator : Dr.S.Siva josyaa

FORM V – PATIENT INFORMATION SHEET

Name of Principal Investigator: Dr.S.Siva josyaa
Guide: Dr.N.J.Muthukumar
Name of the institute: National Institute of Siddha, Tambaram Sanatorium, Chennai-47.

INFORMATION SHEET FOR PATIENTS PARTICIPATING IN THE CLINICAL TRIAL.

I, Dr.S.Siva josyaa studying M.D (Siddha) at National Institute of Siddha, Tambaram Sanatorium is doing a trial on ‘VIYAGULA UNMATHAM (DEPRESSION). It is a most common dermatological problem, occurring throughout the world. In this regard, I am in a need to ask you few questions. I will maintain confidentiality of your comments and data obtained. There will be no risk of disclosing your identity and no physical, psychological or professional risk is involved by taking part in this study. Taking part in this study is voluntary. No compensation will be paid to you for taking part in this study.

You can choose not to take part. You can choose not to answer a specific question. There is no specific benefit for you if you take part in the study. However, taking part in the study may be of benefit to the community, as it may help us to understand the problem of defaulters and potential solutions.

If you agree to be a participant in this study, you will be included in the study primarily by signing the consent form and then you will be given the internal medicine “THIRUTHARATCHATHA CHOORANAM (INTERNAL MEDICINE), 2gm bds,
ARUGANVER THYLAM (EXTERNAL MEDICINE) for 48 days. The information I am collecting in this study will remain between you and the principal investigator (myself). I will ask you few questions through a questionnaire. I will not write your name on this form. Your name won’t be mentioned in the lab investigation form instead a code will be used.

The questionnaire will take approximately 20 minutes of your time.

If you want to know more about this study before taking part, you can ask me all the questions you want or contact Dr. S. SIVA JOSYAA, PG Scholar cum principal investigator of this study, National Institute of Siddha, Chennai-47, Ph no 9677454003. You can also contact the Member-secretary of Ethical committee, National Institute of Siddha, Chennai 600047, Tel.No: 91-44-22380789, for rights and participation in the study.

ক্ষারম প্রস্তাবনা

ছোটো নিয়ম বাধ্যতামূলক 30 দিন।

বিশেষত কর্তৃক নির্দেশিত 47

আমার প্রস্তাবনায় অনুসরণে যাতে কোন সন্দেহ নেই, আপনার সহায়তায় আমি এই প্রস্তাবনাকে প্রতীক্ষা করিয়ে থাকি।

প্রথমে আমি আমার প্রস্তাবনাকে বার-বার পুনরাবৃত্তি করে তাঁদের জ্ঞাতি হয়েচ। পরবর্তীতে আমি তাঁদের সাথে কথা কথিয়ে তাঁদের সমর্থন প্রার্থনা করি।

আমি অঙ্গনাইক ও সহকারী সহকারী হিসেবে কাজ করি। আমি এই প্রস্তাবনাকে তাঁদের সাথে একাধিক পর্যায়ে তাঁদের সাথে কথা কথিয়ে তাঁদের সমর্থন প্রার্থনা করি।

আমি অঙ্গনাইক ও সহকারী সহকারী হিসেবে কাজ করি। আমি এই প্রস্তাবনাকে তাঁদের সাথে একাধিক পর্যায়ে তাঁদের সমর্থন প্রার্থনা করি।

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இன்று அலக்பராயின் இளாகமிடை வெளிப்புற வருவாயுக்கு முன் பொதுவாக விளக்கம்படுத்த விற்கி வந்தால் பொருளாதாரத்தில் விளக்கும் முக்கியத்துவம் வாய்ந்தது ஆகிய தோற்றங்கள்.

இன்று அலக்பராயின் பதவிகாரியாளர் பதவிகாரியாளர்கள் பாதுகாப்பு குழுவின் மேலாண்மையில் யாரும் பாதுகாப்பு குழுவின் செயல்கள் பொருளாதார விளக்கத்திற்கு (முதல் பதவிகாரியாளர் பாதுகாப்பு குழுவின் தலைவர்) அறிமுகம். கூடுதல் வந்த 9677454003

இன்று அலக்பராயின் இளாகமிடை IEC காலத்தில் விளக்கமிடித்துள்ளது. இன்று பாதுகாப்பு பாதுகாப்பு குழுவின் (முதல் பதவிகாரியாளர்) விளக்கத்திற்கு விளக்கமிடித்துள்ளது. இன்று பாதுகாப்பு பாதுகாப்பு குழுவின் (விளக்கமிடித்துள்ளது) முதல் பதவிகாரியாளர் தலைவர் இளாகமிடித்துள்ளது. இன்று பாதுகாப்பு பாதுகாப்பு குழுவின் (முதல் பதவிகாரியாளர்) தலைவர் இளாகமிடித்துள்ளது. இன்று பாதுகாப்பு பாதுகாப்பு குழுவின் (முதல் பதவிகாரியாளர்) தலைவர் இளாகமிடித்துள்ளது.
COMPARATIVE CLINICAL STUDY OF THIRUTHARAKCHATHA CHOORANAM (INTERNAL), ARUGANVER THYLAM (EXTERNAL) IN THE TREATMENT OF VIYAGULA UNMATHAM (DEPRESSION) WITH AND WITHOUT YOGAM THERAPY.

Principal Investigator: Dr. S. Siva Josyaa

FORM-V – INFORMED CONSENT FORM

“I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction.

I consent voluntarily to participate as a participant in this study and understand that I have the right to withdraw from the study at any time without in any way it affecting my further medical care”.

"I have received a copy of the information sheet/consent form”.

Date:
Signature of the participant

In case of illiterate participant

“I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm individual has given consent freely.”

Date:
Signature of a witness

(Selected by the participant bearing no connection with the survey team)
Left thumb Impression of the Participant

FORM VI

Participant's Signature

Date: 

Name: 

Identification Details

Note: The participant's signature is essential for the validity of the document. The signature should be clear and legible, and any changes or alterations should be avoided.
COMPARATIVE CLINICAL STUDY OF *THIRUTHARAKCHATHA CHOORANAM* (INTERNAL), *ARUGANVER THYLAM* (EXTERNAL) IN THE TREATMENT OF *VIYAGULA UNMATHAM* (DEPRESSION) WITH AND WITHOUT YOGAM THERAPY.

Principal Investigator: Dr. S. Siva Josyaa

**FORM VII - A- WITHDRAWAL FORM**

1. SERIAL NO OF THE CASE: ....................
2. OP / IP NO: ......................................
3. NAME: .................................
4. AGE: ..............
5. GENDER:..................
6. DATE OF TRIAL COMMENCEMENT: .................
7. DATE OF WITHDRAWAL FROM TRIAL: ...............  
8. REASONS FOR WITHDRAWAL:
   - Long absence at reporting: Yes/ No
   - Irregular treatment: Yes/ No
   - Shift of locality: Yes/No
   - Increase in severity of symptoms: Yes/No
   - Development of severe adverse drug reactions: Yes/No
   - Development of adverse event: Yes/No
     (If YES, give the details of adverse reaction in Form VII - B – Adverse Reaction Form / Pharmaco Vigilance Form)

Date:
Station:
Signature of the Investigator:
Signature of the Lecturer:  
Signature of the HOD
COMPARATIVE CLINICAL STUDY OF THIRUTHARAKCHATHA CHOORANAM (INTERNAL), ARUGANVER THYLAM (EXTERNAL) IN THE TREATMENT OF VIYAGULA UNMATHAM (DEPRESSION) WITH AND WITHOUT YOGAM THERAPY.

Principal Investigator : Dr.S.Siva josyaa
காரிலிப்

(புல்லிக் குமாரியம் மற்றும் முதலில், கால்பாலிக்கால், கோவில்வாழ்க்கால்.

அவர்கள்:

(கால்பாலிக்கால் வரும், குறுகுப் பல்கால்.

பதின்பெரும்:

பரத்த நோய்க்கப்பட்டு

புத்தாண்டுக்கு போக்கும்:

(புல்லிக் குமாரியம், முதலில், முதலில், குமாரியம், தென்பதினுடைய வரும், குறுக்குப் பல்கால், புல்லிக் குமாரியம், குறுக்குப் பல்கால், புல்லிக் குமாரியம், முதலில், குறுக்குப் பல்கால், புல்லிக் குமாரியம், குறுக்குப் பல்கால்,
THE HAMILTON RATING SCALE FOR DEPRESSION

SERIAL NO:

OP/IP NO

NAME  AGE:  GENDER:

To rate the severity of depression in patients who are already diagnosed as depressed, administer this questionnaire. The higher the score, the more severe the depression.

For each time, write the correct number on the line next to the item. (Only one response per item)

1. DEPRESSED MOOD (Sadness, hopeless, helpless, worthless)

   0 = Absent
   1 = These feeling states indicated only on questioning
   2 = These feeling states spontaneously reported verbally
   3 = Communicates feeling states non-verbally- i.e., through facial expression, posture, voice and tendency to weep
   4 = Patient reports virtually only these feeling states in his spontaneous verbal and non verbal communication

2. FEELINGS OF GUILT

   0 = Absent
   1 = Self reproach, feels he has let people down
   2 = Ideas of guilt or rumination over past errors or sinful deeds
   3 = Present illness is a punishment. Delusions of guilt
   4 = Hears accusatory or denunciatory voices and/or experiences threatening visual hallucinations

3. SUICIDE

   0 = Absent
   1 = Feels life is not worth living
   2 = Wishes he were dead or any thoughts of possible death to self
   3 = Suicidal ideas or gesture
   4 = Attempts at suicide (any serious attempt rates 4)
4. INSOMNIA EARLY

0 = No difficulty falling asleep
1 = Complaints of occasional difficulty falling asleep - i.e., more than ½ hour
2 = Complaints of nightly difficulty falling asleep

5. INSOMNIA MIDDLE

0 = No difficulty falling asleep
1 = Patient complaints of being restless and disturbed during the night
2 = Walking during the night – any getting out of bed rates 2 (except for purposes of voiding)

6. INSOMNIA LATE

0 = No difficulty
1 = Waking in early hours of the morning but goes back to sleep
2 = Unable to fall asleep again if he gets out of bed

7. WORK AND ACTIVITIES

0 = No difficulty
1 = Thoughts and feelings of incapacity, fatigue or weakness related to activities: work or hobbies
2 = Loss of interest in activity: hobbies or work- either directly reported by patient or indirect in listlessness, indecision and vacillation (feels he has to push self to work or activities)
3 = Decrease in actual time spent in activities or decrease in productivity
4 = Stopped working because of present illness

8. RETARDATION: PSYCHOMOTOR (Slowness of thought and speech: impaired ability to concentrate: decreased motor activity)

0 = Normal speech and thought
1 = Slight retardation at interview
2 = Obvious retardation at interview
3 = Interview difficult
4 = Complete stupor
9. AGITATION

0 = None
1 = Fidgetiness
2 = Playing with hands, hair, etc
3 = Moving about, can’t sit still
4 = Hand wringing, nail biting, hair pulling, biting of lip

10. ANXIETY (PSYCHOLOGICAL)

0 = No difficulty
1 = Subjective tension and irritability
2 = Worrying about minor matters
3 = Apprehensive attitude apparent in face or speech
4 = Fears expressed without questioning

11. ANXIETY SOMATIC: Physiological concomitants of anxiety, (i.e., effects of autonomic overactivity, “butterflies,” indigestion, stomach cramps, belching, diarrhoea, palpitations, hyperventilation, paresthesia, sweating, flushing, tremor, headache, urinary frequency). Avoid asking about possible medication side effects (i.e., dry mouth, constipation)

0 = Absent
1 = Mild
2 = Moderate
3 = Severe

12. SOMATIC SYMPTOMS (GASTROINTESTINAL)

0 = None
1 = Loss of appetite but eating without encouragement from others. Food intake about normal
2 = Difficulty eating without urging from others. Marked reduction of appetite and food intake

13. SOMATIC SYMPTOMS GENERAL

0 = None
1 = Heaviness in limbs, back or head. Backaches, headache, muscle aches. Loss of energy and fatigability
2 = Any clear-cut symptom rates 2
14. GENITAL SYMPTOMS (Symptoms such as: loss of libido; impaired sexual performance; menstrual disturbances)
   0 = Absent
   1 = Mild
   2 = Severe

15. HYPOCHONDRIASIS
   0 = Not present
   1 = Self – absorption (bodily)
   2 = Preoccupation with health
   3 = Frequent complaints, requests for help, etc
   4 = Hypochondrial delusions

16. LOSS OF WEIGHT
   A. When rating by history:
      0 = No weight loss
      1 = Probably weight loss associated with present illness
      2 = Definite (according to patient) weight loss

17. INSIGHT
   0 = Acknowledges being depressed and ill
   1 = Acknowledges illness but attributes causes to bad food, climate, overwork, virus, need for rest, etc.
   2 = Denies being ill at all

18. DIURNAL VARIATION
   A. Note whether symptoms are worse in morning or evening. If NO diurnal variation, mark none
      0 = No variation
      1 = Worse in A.M.
      2 = Worse in P.M.
   B. When present, mark the severity of the variation. Mark “None” if NO variation
      0 = None
      1 = Mild
      2 = Severe
19. **DEPERSONALIZATION AND DECREALIZATION** (Suchas: Feelings of unreality: Nihilistic ideas)
   
   0 = Absent  
   1 = Mild  
   2 = Moderate  
   3 = Severe  

20. **PARANOID SYMPTOMS**

   0= None  
   1= Suspicious  
   2= Ideas of reference  
   3= Delusions of reference and persecution  

21. **OBSESSIONAL AND COMPULSIVE SYMPTOMS**

   0 = Absent  
   1 = Mild  
   2 = Severe  

   Total score __________

**HAM- D Scoring Instructions:**

**Sum the scores from the first 17 items.**

0-7 = Normal  
8-13 = Mild Depression  
14-18 = Moderate Depression  
19-22 = Severe Depression  
≥ 23 = Very Severe Depression  

Date:  
Station:  
Signature of the Investigator:  
Signature of the Lecturer:  
Signature of the HOD
CERTIFICATE

Address of Ethics Committee: National Institute of Siddha, Tambaram Sanatorium, Chennai-600047, Tamil Nadu, India

Principal Investigator: Dr. S. Siva Josyaa – I year, Dept. of Sirappu Maruthuvam

Protocol Title: Comparative clinical study of Thirutharachatha Chooranam (Internal), Aruganver thylam (External) in the treatment of Vyagula unmatham (Depression) with and without yogam therapy.

Documents filed

| 1) Protocol, 2) Data Collection forms |

Clinical trial Protocol (others - Specify)

Yes-(M.D-Dissertation)

Informed consent documents

Yes

Any other documents


Date of IEC approval & its number


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

The Institutional Ethics Committee expects to be informed about the progress of the study, any SAE occurring in the course of the study.

(Dr. V. Subramaniam)
Chairman

(Prof. Dr. V. Banumathi)
Member Secretary
VICE CHANCELLOR

PROF. DR. S. GEETHA LAKSHMI, M.D., P.H.D.

REGISTRAR U/L

PROF. DR. PARMVUGAM, M.D., P.H.D.

DEPT. OF SIDDHA

DR. N. KABLAN

PROF & HEAD

The Tamil Nadu Dr. M.G.R. Medical University From 25th to 29th April 2016.

Organized by the Department of Siddha

For AVUSH Post Graduates & Researchers

"THE RESEARCH METHODOLOGY & BIOSTATISTICS"

For Participating as Resource Person / Delegate in the Tweny First Workshop on

This Certificate is awarded to DR/MRS.

SIVAGANAYAN

69, Anna Salai, Guindy, Chennai - 600 032.

THE CHENNAI MEDICAL COLLEGE (T.M.C.)
Certified that the following plant drugs used in the Siddha formulation “Thirutharakaththa chooranam” (Internal) and “Aruganver Thylam” (External) taken up for Post Graduation Dissertation studies by Dr. SivaJyothish M.D.(S), III year, Department of Strappu Maruthuvam, 2018, are identified through Visual inspection, Experience, Education & Training, Organoleptic characters, Morphology and Taxonomical methods as:

- Anacardium occidentale (Anacardiaceae), Nut
- Phoenix dactylifera Linn. (Arecaceae), Dried fruit
- Glycerrhiza glabra Linn. (Labiaceae), Root
- Elelaria cardamomum Maton (Zingiberaceae), Seed
- Piper longum Linn. (Piperaceae), Fruit
- Ocimum sanctum Linn. (Oleaceae), Flattened Seed
- Syzygium aromaticum (Linn.) Merr. & F. M. Perry (Myrtaceae), Flower bud
- Cinnamomum tamala Nees & Ehrm. (Lauraceae), Leaf
- Plumbago zeylanica Linn. (Plumbaginaceae), Root
- Maranta arundinacea Linn. (Marantaceae), Rhizome
- Cyperus rotundus Linn. (Cyperaceae), Tubber
- Tephrosia spinosa Pers. (Fabaceae), Root
- Piper nigrum Linn. (Piperaceae), Fruit
- Coriandrum sativum Linn. (Apiaceae), Fruit
- Cynodon dactylon (Linn.) Pers. (Poaceae), Root
- Phyllanthus emblica Linn. (Euphorbiaceae), Seed
- Vetiveria zizaniodes (Linn.) Nash (Poaceae), Root
- Costus speciosus (Koen.) Sm. (Costaceae), Root
- Sesamum indicum Linn. (Pedaliaceae), Seed oil

Certificate No: NISMIB382018
22.06.2018

Authorized Signatories

Dr. D. ARAVIND, M.D.(S),M.Sc.,
Assistant Professor
Department of Medicinal Botany
National Institute of Siddha
Chennai-600047, INDIA
## Clinical Trial Details

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</table>
### Exclusion Criteria

| Details | 1 Pregnancy and lactation  
|         | 2 diabetes mellitus  
|         | 3 psychosomatic disorder  
|         | 4 cardiac diseases  
|         | 5 any other systemic illness |

### Method of Generating Random Sequence
Not Applicable

### Method of Concealment
Case Record Numbers

### Blinding/Masking
Open Label

### Primary Outcome

<table>
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<th>Outcome</th>
<th>Timepoints</th>
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<td>Reduction in the symptoms of Depression.</td>
<td>45 days</td>
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### Secondary Outcome

<table>
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<th>Timepoints</th>
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<td>To enhance the good health.</td>
<td>48 days</td>
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### Target Sample Size

- Total Sample Size = 30
- Sample Size from India = 30

### Phase of Trial
Phase 2

### Date of First Enrollment (India)
25/04/2018

### Date of First Enrollment (Global)
No Date Specified

### Estimated Duration of Trial

- Years = 1
- Months = 0
- Days = 0

### Recruitment Status of Trial (Global)
Not Applicable

### Recruitment Status of Trial (India)
Not Yet Recruiting

### Publication Details
not yet

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**Brief Summary**

A depressive disorder is a syndrome (group of symptoms) that reflects a sad and/or irritable mood exceeding normal sadness or grief. More specifically, the sadness of depression is characterized by a greater intensity and duration and by more severe symptoms and functional disabilities than is normal.

Depressive disorders are a huge public-health problem, due to its affecting millions of people. About 10% of adults, up to 8% of teens and 2% of preteen children experience some kind of depressive disorder.

Siddha system of medicine has mentioned a lot about Mana noigal like Madha azivu, Madha noi, Kirigai, Unmadham. Siddhars also had mentioned about the treatment aspects for Mana noigal. The symptoms of mana noigal include hallucinations, lack of interest in all activities, fatigue,
depressed mood, insomnia etc.

This is the largest population-based study from India to report on prevalence of depression and shows that among urban south Indians, the prevalence of depression was 15.1%. Age, female gender and lower socio-economic status are some of the factors associated with depression in this population. The overall prevalence of depression was 15.1% (age-adjusted, 15.9%) and was higher in females (females 16.3% vs. males 13.9%, p<0.0001). The odds ratio (OR) for depression in female subjects was 1.20 [Confidence Intervals (CI): 1.12–1.28, p<0.001] compared to male subjects. Depressed mood was the most common symptom (30.8%), followed by tiredness (30.0%) while more severe symptoms such as suicidal thoughts (12.4%) and speech and motor retardation (12.4%) were less common.

Every month, about 7 to 9 patients report to OPD Of Ayothiso Pandithar Hospital, National Institute of Siddha, Tamharam sanatorium, Chennai-47. In the Modern era, Depression is a major problem among people. We feel that THIRUTHARATCHATHA CHOORANAM AND ARUGANVER THYLAM will reduce the symptoms of Depression and it is cost effective too.


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60. Sikicha Rathina Deepam Ennum Vaithiya Nool, Tanjavur Magaraja Sarabojini Saraswathy Mahal Noolagam.